

DESCRIPTION

Sheet No.		Station No.	D-A604 (NS-05)	
Location	Saing			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9795.430.56	297.632.97	43.28
	Auxiliary point			43.96
Measurement	Type	NNS Observation		
	Date	Sep. 5, 1983		
Measurement	Organization	J.I.C.A.		
Remark	KAB. Barito Selatan			
	KEC. Dusun Tengah			
Location				
Guide map				
			<p>Profile (ANT. H = 1.24)</p>	
Aerial photograph	C-11A No. 5		N ↑ E	C-11A No. 6

DESCRIPTION

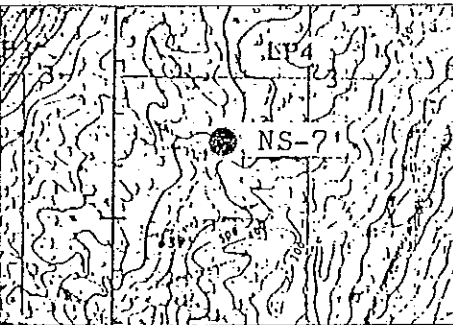
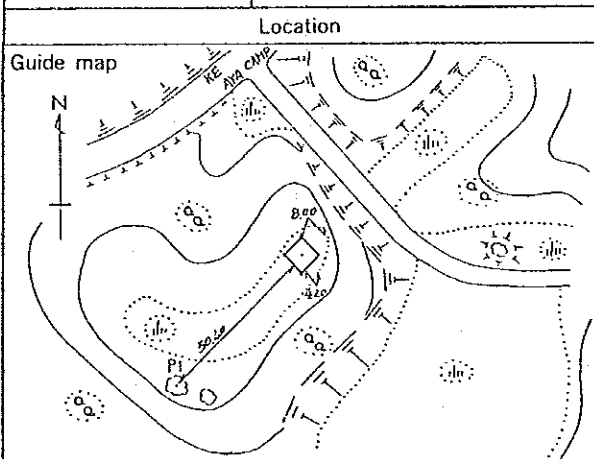
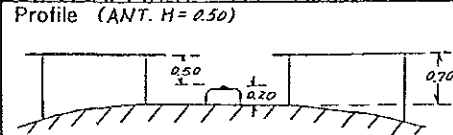
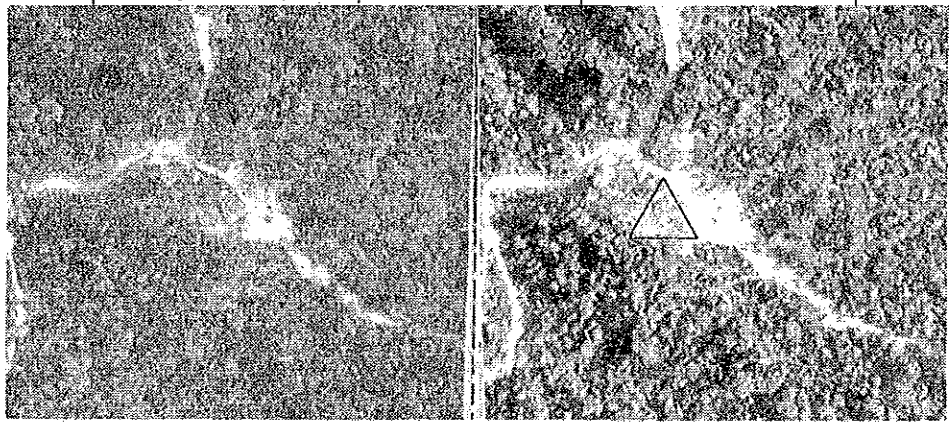
Sheet No.		Station No.	D-A605(NS-06)	
Location	Tulus			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9815.705 . 25	363.001 . 47	78.84
	Auxiliary point			79.29
Measurement	Type	NNSS Observation		
Measurement	Date	Aug. 31, 1983		
	Organization	J.I.C.A.		
Remark	KAB. Pasir-tanah Grogot			
	KEC. Muara Kuman			
Location		LP6		
Guide map				
	C-7 No. 23	N ↑ E	C-7 No. 24	
Aerial photograph				

DESCRIPTION

Sheet No.		Station No.	D-A606(NS-07)	
Location	Dambung / km 38 Bintot			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9796.686 . 64	322.248 . 67	185.88
	Auxiliary point			186.18
Measurement	Type	NNS Observation		
Measurement	Date	Sep. 7, 1983		
	Organization	J.I.C.A.		
Remark	KAB. Tabalong			
	KEC. Haruai			

Location	
<p>Guide map</p>	<p>Profile (ANT H= 0.50)</p>
<p>Aerial photograph</p>	

DESCRIPTION

Sheet No.		Station No.	D-A607(NS-07)	
Location	km 93			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9827.865 · 07 ✓	337.001 · 10 ✓	729.99 ✓
	Auxiliary point			730.49 ✓
Measurement	Type	NNSS Observation		
Measurement	Date	Sep. 15, 1983		
	Organization	J. I. C. A.		
Remark	KAB. Tabalong			
	KEC. Haruai			
Location				
Guide map				
				
Aerial photograph	C-6 No. 15		C-6 No. 17	
				

DESCRIPTION

Sheet No.		Station No.	D-A608(NS-08)	
Location	Bidak Kali			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9826.985 . 74	295.286 . 80	47.12
	Auxiliary point	9827.105 . 71	295.245 . 96	47.63
Measurement	Type	NNSS Observation		
Measurement	Date	Aug. 24, 1983		
	Organization	J.I.C.A.		
Remark	KAB. Barito Selatan			
	KEC. Bintang Auai			
Location		Profile		
C-6 No. 5		N ↑ E	C-6 No. 6	
Aerial photograph				

DESCRIPTION

Sheet No.		Station No.	D-A609(NS-09)	
Location	Ansok			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9871 578. 97	367, 925. 12	165. 86
	Auxiliary point			166. 53
Measurement	Type	NNSS Observation		
	Date	Aug. 28, 1983		
Measurement	Organization	J.I.C.A.		
Remark	KAB. Grogot			
	KEC. Long Kali			

Location

RELIEF DATA

Profile (ANT. H = 1.55)

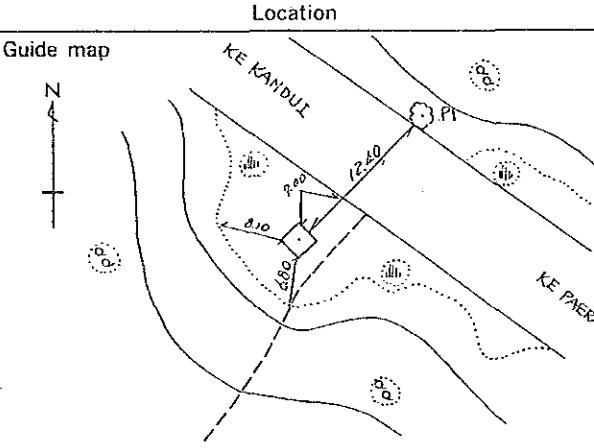
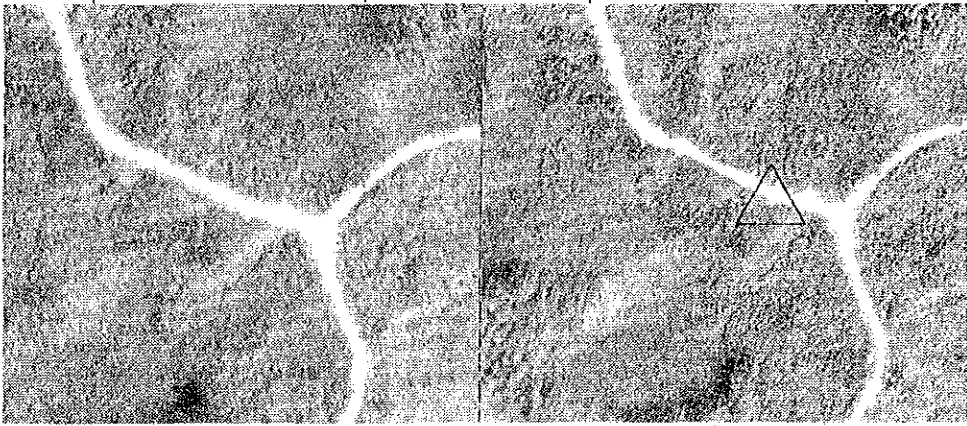
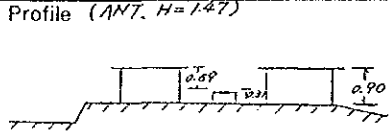
C-OA No. 2

C-OA No. 3

Aerial photograph

N ↑ E

DESCRIPTION

Sheet No.		Station No.	D-A610(NS-10)	
Location	Kandui			
Coordinate (Controlpoint) or (Bench mark)		N (X)	E (Y)	H
	Essential point	9856,054.32 ✓	292,563.13 ✓	80.52 ✓
	Auxiliary point			81.11 ✓
Measurement	Type	NNSS Observation		
Measurement	Date	Aug. 20, 1983		
	Organization	J.I.C.A.		
Remark	KAB. Barito Utara			
	KEC. Gunung Timang			
Location				
				

2nd Order B.M. Points Description

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-1	Date	August, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 17.8987 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Mabuun Raya KEC. Murug Pudak KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

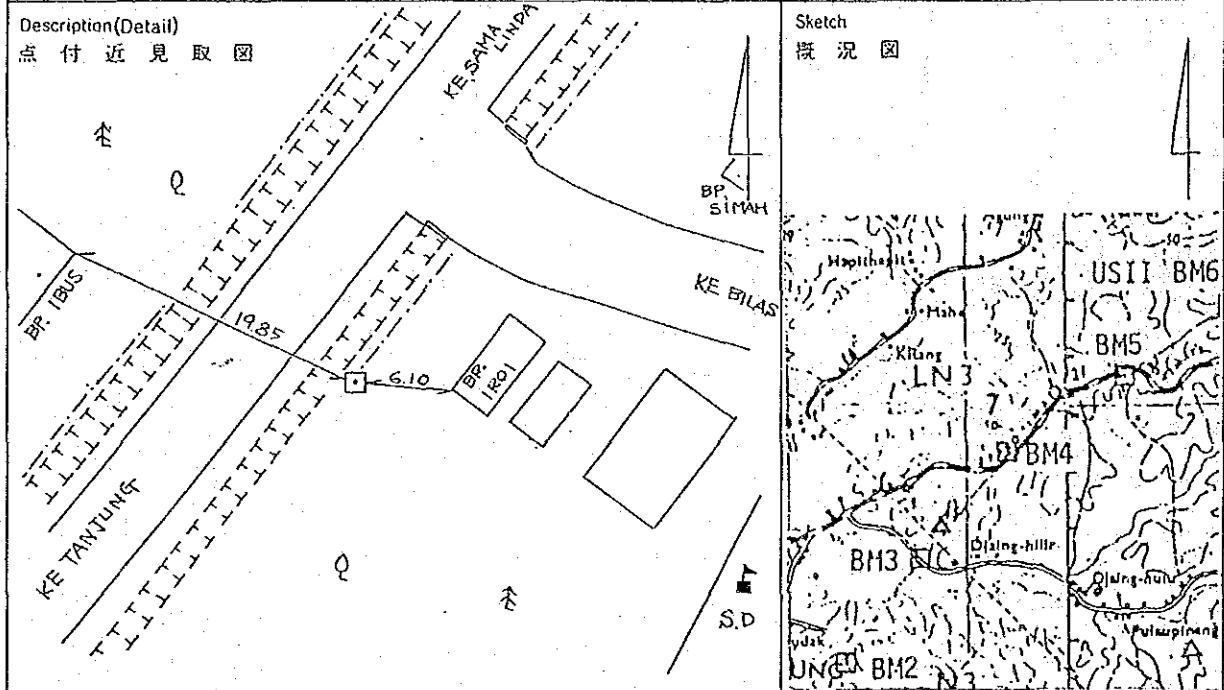
National	U-BM-II-2	Date	August, 1983	Eisei Tsutsumi	
Location	Form Monument	Organization	J.I.C.A.	Elevation 31.2380 m	
Latitude	Longitude	Sheet NO.	Class	2nd Order	
N.(Y)	E.(X)		Datum Takisong		
Description(Detail) 点付近見取図			Sketch 概況図		
<p>Diagram showing distances: 1400, 1700, 0815. Labels include KE TANDJUNG, B.MASIN 227/PAL KM, and KE B. PAM.</p>			<p>Map labels: BM4, BM3, BM2, BM1, US II, TANDJUNG OIL FIELD, TANDJUNG/WAB, 3M6, M5, 18, 52, 60, 84, 6.</p>		
Situation 概況			Foto 写真		
<p>K.P. Padaman KEC. Murung Pudac KAB. Tabalong</p>			Section 断面図		
			<p>Diagram showing a cross-section of the monument with a height of 0.32.</p>		

CONTROL POINT DESCRIPTION
基準点見取図

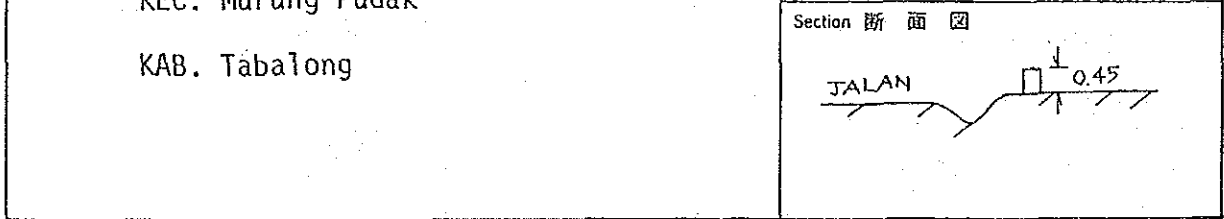
National	U-BM-II-3	Date	August, 1983	Eisei Tsutsumi
Location	Form Monumeny	Organization	J.I.C.A.	Elevation 32.1661 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Jaing Hilir KEC. Murung Pudak KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-4	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 52.8004 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum	Takisong



<p>Situation 概況</p> <p>K.P. Kasiao KEC. Murung Pudak KAB. Tabalong</p>	<p>Poto 写真</p>
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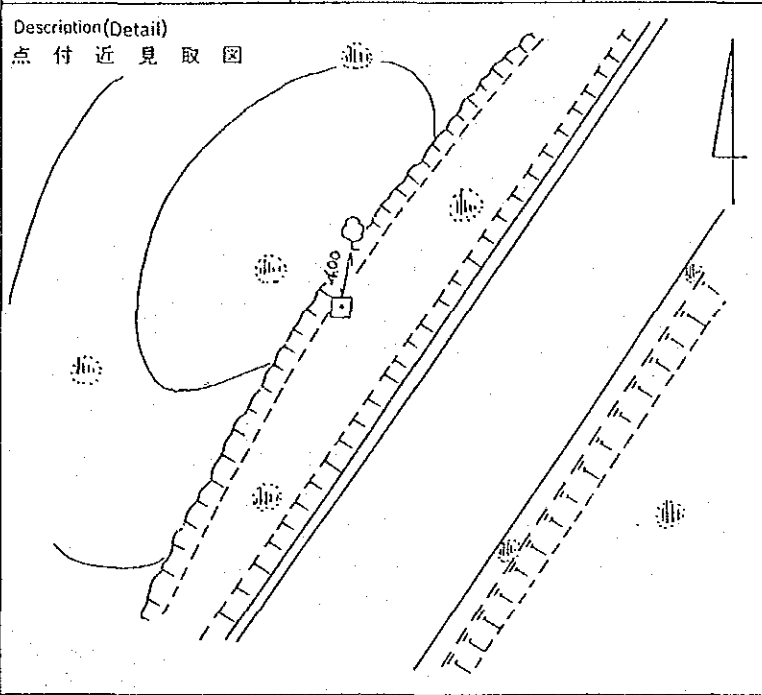
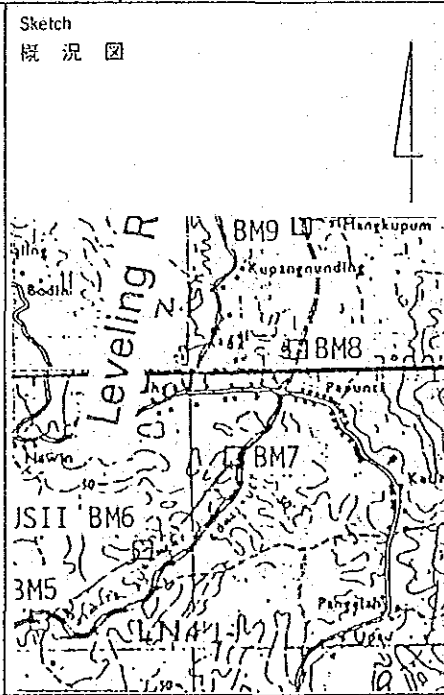
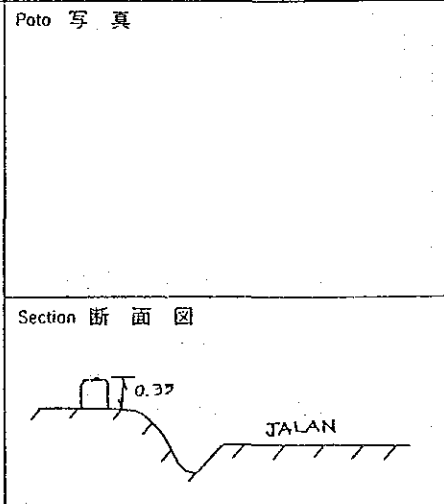
CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-5	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	Elevation 56.8289 m	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum Takison	
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Kembang Kuning KEC. Haruai KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-6	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 70.4847 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Kembang Kuning</p> <p>KEC. Haruai</p> <p>KAB. Tabalong</p>		Section 断面図		

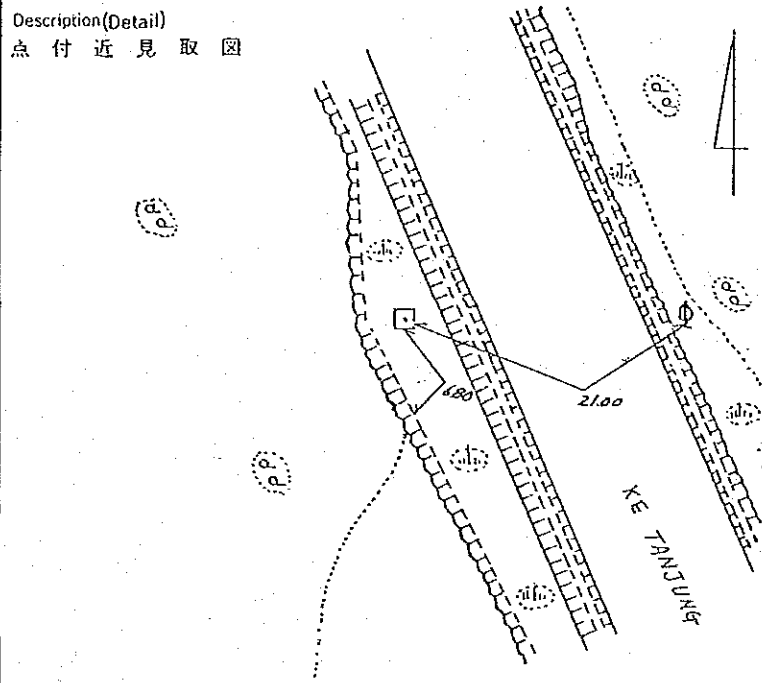
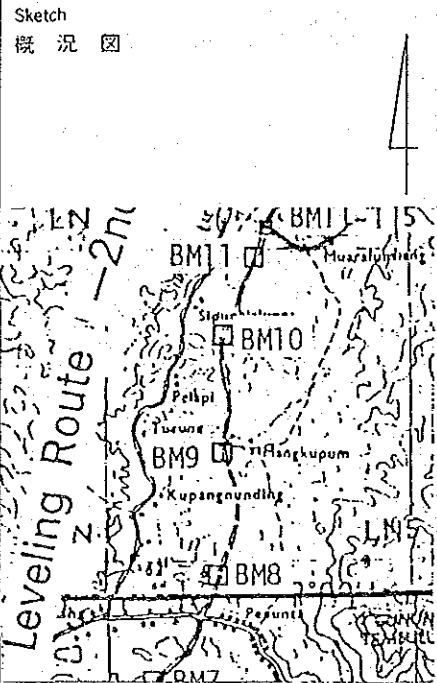
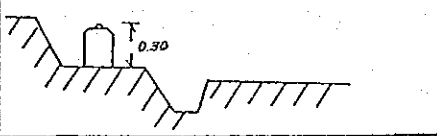
CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-7	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
				
Situation 概況		Foto 写真		
<p>K.P. Seradang KEC. Haruai KAB. Tabalong</p>		Section 断面図		
				

CONTROL POINT DESCRIPTION
基準点見取図

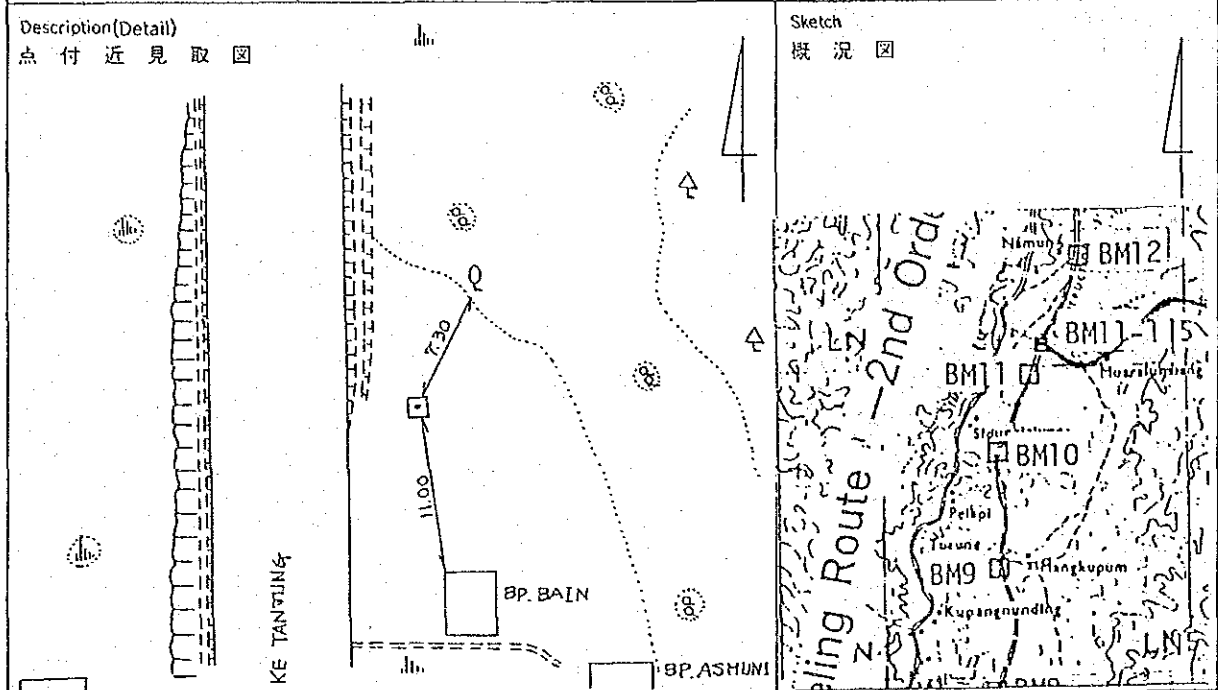
National	U-BM-II-8	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum Takisong	
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Mirang KEC. Haruai KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-9	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	Elevation 55.7009 m	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
				
Situation 概況		Photo 写真		
<p>K.P. Wirang KEC. Haruai KAB. Tabalong</p>		Section 断面図		
				

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-10	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 48.5152 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	Takisong



<p>Situation 概況</p> <p>K.P. Palape KEC. Muaruya KAB. Tabalong</p>	<p>Poto 写真</p>
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CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-11	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	J.I.C.A.	Elevation 55.9325 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Poto 写真		
<p>K.P. Lumbang KEC. Muarauya KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-12	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	Elevation 50.9326 m	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Namun</p> <p>KEC. Muarauya</p> <p>KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-13	Date	September, 1983 Eisei Tsutsumi	
Location	Form Monument	Organization	Elevation 73.8814 m	
Latitude	Longitude	Sheet NO.	Class	2nd Order
N-(Y)	E-(X)		Datum Takisong	
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Palai KEC. Muarauya KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-14	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 118.3771 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N.(Y)	E.(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Batu Putih KEC. Muarauya KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-15	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 92.4409 m
Latitude	Longitude	Sheet NO.	Class	2nd Order
N·(Y)	E·(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Solan KEC. Muarauya KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-16	Date	September, 1983	Eisei Tsutsumi
Location	Form Monument	Organization	J.I.C.A.	Elevation 123.0285 m
Latitude	Longitude	Sheet NO.	Class 2nd Order	Datum Takisong
N-(Y)	E-(X)			

<p>Description (Detail) 点付近見取図</p>	<p>Sketch 概況図</p>
<p>Situation 概況</p> <p>K.P. Batu Babi KEC. Muarauya KAB. Tabalong</p>	<p>Photo 写真</p> <p>Section 断面図</p>

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-II-17	Date	October, 1983	Eisei Tsutsumi	
Location	Form Monument	Organization	J.I.C.A.	Elevation 266.4797 m	
Latitude	Longitude	Sheet NO.		Class	2nd Order
N-(Y)	E-(X)			Datum	Takisong
Description (Detail) 点付近見取図			Sketch 概況図		
Situation 概況			Foto 写真		
<p>Kal. Timur K.P. G. Batu Aji KEC. Muar Komum KAB. Pasir Tanah Grogot</p> <p>Kal. Selatan KEC. Muarauya KAB. Tabalong</p>			Section 断面図		

3rd Order B.M. Points Description

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-1	Date	September, 1983	Hiroo Morita
Location	Form Monument	Organization	J.I.C.A.	Elevation 12.945m ✓
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Mungkur Agung KEC. Kelua KAB. Hulu Sungai Utara</p>		<p>Section 断面図</p>		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-2	Date	September, 1983 Hiroo Morita	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Punding</p> <p>KEC. Kelua</p> <p>KAB. Hulu Sungai Utara</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-3	Date	September, 1983 Hiroo Morita	
Location	Form Monument	Organization	Elevation 18.450 m	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N.(Y)	E.(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Pasar Panas KEC. Benua Lawas KAB. Barito Selatan</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-4	Date	September, 1983 Hiroo Morita	
Location	Form Monument	Organization	Elevation 26.709 m ✓	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N.(Y)	E.(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
<p>Diagram showing distances: 12.50, 12.60, 15.05. Labels: KE. AMPHA, KE. AMUNTAI, BP. AWISI, Ld.</p>		<p>Map labels: TBM25, NS-3, BM4, BM3, BM2, US, JALAN, Vegetation sources are indicated.</p>		
Situation 概況		Foto 写真		
<p>K.P. Lungkang KEC. Tamiang Layang KAB. Barito Selatan</p>		<p>Section 断面図</p> <p>Scale: 2.10, Monument height: 0.35, JALAN</p>		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-5	Date	September, 1983 Nobuo Shimizu	
Location	Form Monument	Organization	Elevation 19.989 m	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N.(Y)	E.(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Padang Lumbu</p> <p>KEC. Tanjung</p> <p>KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-6	Date	September, 1983	Nobuo Shimizu
Location	Form Monument	Organization	J.I.C.A.	Elevation 29.472 m
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Kambitin KEC. Tanjung KAB. Tabalong</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-7	Date	September, 1983 Nobuo Shimizu	
Location	Form Monument	Organization	Elevation 53.955 m	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Dalung KEC. Dusun Timur KAB. Barito Timur</p>		<p>Section 断面図</p>		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-8	Date	September, 1983 Nobuo Shimizu	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Bentot KEC. Dusun Timur KAB. Barito Timur</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-9	Date	September, 1983 Nobuo Shimizu	
Location	Form Monument	Organization	J.I.C.A.	
Elevation	Sheet NO.		Class	3rd Order
Latitude	Longitude	Datum		Takisong
N-(Y)	E-(X)			
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Rogap KEC. Dusun Timur KAB. Barito Timur</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-10	Date	September, 1983 Nobuo Shimizu	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N.(Y)	E.(X)		Datum	Takisong
Description (Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Pasar Lalap KEC. Dusun Timur KAB. Barito Timur</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-11	Date	September, 1983	Shigenori Uchimura	
Location	Form Monument	Organization	J.I.C.A.	Elevation	151.977 m
Latitude	Longitude	Sheet NO.	Class	3rd Order	
N.(Y)	E.(X)		Datum	Takisong	
Description(Detail) 点付近見取図			Sketch 概況図		
Situation 概況			Foto 写真		
<p>K.P. Maliki KEC. Muar Komum KAB. Pasir Tanah Grogot</p>			Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-12	Date	October ,1983 Shigenori uchimura	
Location	Form Monument	Organization	J.I.C.A.	
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description(Detail) 点付近見取図		Sketch 概況図		
Situation 概況		Foto 写真		
<p>K.P. Muara Katai</p> <p>KEC. Muara Koman</p> <p>KAB. Pasir Tanan Grogot</p>		Section 断面図		

CONTROL POINT DESCRIPTION
基準点見取図

National	U-BM-III-13	Date	October, 1983 Yoshiaki Otoku	
Location	Form Monument	Organization	J.I.C.A.	Elevation 74.093 m
Latitude	Longitude	Sheet NO.	Class	3rd Order
N-(Y)	E-(X)		Datum	Takisong
Description (Detail) 点付近見取		Sketch 概況図		
Situation 概況		Photo 写真		
<p>K.P. Muara Langun KEC. Muara Komum KAB. Pasir Tanah Grogot</p>		Section 断面図		

3. Scope of Work

SCOPE OF WORK
FOR
THE TOPOGRAPHIC MAPPING PROJECT
OF
THE NEGARA RIVER BASIN
IN
SOUTH KALIMANTAN
IN
THE REPUBLIC OF INDONESIA

AGREED UPON BETWEEN
THE MINISTRY OF PUBLIC WORKS
OF
REPUBLIC OF INDONESIA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

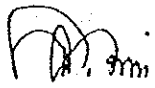
AT JAKARTA

ON APRIL 14TH, 1983

Toshitomo Kanakubo

Mr. Toshitomo KANAKUBO

Head of the Preliminary Survey
Team for the Mapping Project of
Negara River Basin, Japan Inter-
national Cooperation Agency



Ir. SARBINI RONODIBROTO

Director of the Directorate of
Planning and Programming,
Directorate General of Water
Resources Development,
Ministry of Public Works.

I. Introduction

In response to the request made by the Government of the Republic of Indonesia, the Government of Japan has decided in accordance with the relevant laws and regulations in force in Japan to conduct the topographic mapping project of the Negara River Basin, South Kalimantan, the Republic of Indonesia (hereinafter referred to as "the Project").

The Project is prerequisite for the planning of regional development, especially for the planning of water resources development mainly concerning agricultural development projects.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programmes of the Government of Japan, will undertake the Project in close cooperation with the authorities concerned of the Republic of Indonesia.

The present document sets forth the scope of work with regard to the above mentioned Project.

II. Outline of the Project

The Project will be composed of the following works:

1. The Upper Stream Area of the Negara River Basin
 - Aerial photography at the scale of 1:60,000 covering an area of approximately 10,000 km².
 - 1:50,000 scale topographic mapping (contoured at 25 meter intervals) covering an area of approximately 6,500 km².

Note: 1) Aerial photographs at the scale of 1:100,000 taken by BAKOSURTANAL will be supplementaly used.

- 2) Location of the Project area is shown in Appendix I.

2. The Down Stream Area of the Negara River Basin

- Black and white panchromatic aerial photography in the dry season at the scale of 1:20,000 covering the area of approximately 1,200 km² in Amuntai region.
- Black and white panchromatic aerial photography for getting information of the land situation in the rainy season at the scale of 1:20,000 covering the area of approximately 1,200 km² in Amuntai region.
- Topographic mapping in the form of 1:10,000 scale controlled mosaic photo-map, which is produced based on the aerial photographs taken in the dry season and represents the necessary land information of the rainy season, in the above area.
- Black and white panchromatic aerial photography in the dry season at the scale of 1:20,000 covering the area of approximately 5,100 km² in the region between Amuntai and Banjarmasin.

Note: The location of the Project area is shown in Appendix II and Appendix III.

III. Working Plan

The entire work shall be carried out under a three-year program starting from the fiscal year of 1983 and shall consist of the following phases :

A. Phase 1. Aerial Photography and Ground Control Point Survey (Satellite Geodesy, Triangulation, Traversing and Leveling.)

1-1. Aerial Photography

1-1-1. Aerial photographs shall be taken at the scale of approximately 1:60,000 with a super wide angle camera and at the scale of approximately 1:20,000 with a wide angle camera in the Upper Stream Area and the Down Stream Area respectively.

1-1-2. Signalization shall be done prior to the aerial Photography when necessary.

1-2. Ground Control Point Survey. (Satellite Geodesy, Triangulation, Traversing and Leveling.)

Although established ground control points will be used for the photographic control and mapping, ground control point survey will be carried out according to the accuracy requirement as specified for mapping at the required scale.

1-2-1. Satellite Geodesy.

Geodetic controls by means of the artificial satellite doppler system shall be carried out in order to supplement basic geodetic control points.

1-2-2. Triangulation and Traversing.

Supplementary map control points necessary for aerial triangulation and mapping works shall be established by triangulation or traversing.

1-2-3. Leveling

In the Upper Stream Area, second and third order and indirect leveling shall be carried out to obtain vertical controls necessary for aerial triangulation and mapping work starting from the existing bench marks.

In the Down Stream Area, fourth and minor order leveling shall be carried out to obtain vertical controls necessary for aerial triangulation and mapping work starting from the existing bench marks.

1-2-4. Monumentation

Monuments for control points and bench marks should follow the national specifications of Indonesia.

B. Phase 2. Pricking, Field Identification, Aerial Triangulation and Stereo-plotting.

2-1. Pricking.

Pricking in the field shall be done for aerial triangulation.

2-2. Field Identification.

The topographic information related to land classification, vegetation, etc. on the aerial photographs shall be verified in the field.

Administrative boundaries and geographical names to be printed on the maps shall be identified in the field by the Indonesian team.

2-3. Aerial Triangulation.

Aerial triangulation shall be carried out by an analytical method using comparators and electronic computer.

Adjustment shall be carried out by a block adjustment method.

2-4. Stereo-plotting.

In the Upper Stream Area, the plotting shall be carried out using stereo-plotting instruments at the scale of 1:50,000 with 25 meter contour interval. The sheet line shall be 15' in longitude and 15' in latitude.

Map specifications shall be in principle the same as those of the national base map (of the same scale) of Indonesia.

In the Down Stream Area, the plotting of spot heights shall be carried out based on the field survey and by the photogrammetric method, and contour line shall be represented on the photo maps at 5 meter intervals. The sheet line shall be 5' in longitude and 3' in latitude.

C. Phase 3. Field Completion, Color Separation Drafting, Printing, Preparation of Photo-Map and Reproduction.

3-1. Field Completion

Topographic features, vegetation, etc., which cannot be plotted shall be supplemented on the compiled sheet of topographical maps in the Upper Stream Area. Administrative boundaries and geographical names shall be verified and supplemented, if necessary, on the paper copy of the compiled sheet by the Indonesian team.

3-2. Color Separation Drafting in the Upper Stream Area.

Based on the compiled sheet, scribing shall be carried out on a stable polyester base for each color separation plate. Style sheet, colors and symbols shall be those of the national base map of Indonesia.

3-3. Color Proof Prints and Printing in the Upper Stream Area. Color proof prints shall be inspected and approved by the Indonesian team prior to the final printing.

Plate-making shall be carried out using 1:50,000 scribed negatives and printing shall be carried out by the offset method.

3-4. Preparation and Reproduction of Photo-Map in the Down Stream Area.

Photo-map shall be prepared by conventional rectification. On the photo-map, contour lines, spot heights and other useful information shall be presented.

Original negatives of photo-maps shall be prepared for photographic reproduction.

IV. Time Schedule.

The whole work in the Upper Stream Area and in the Down Stream Area shall be conducted in accordance with the time schedule as shown in Appendix IV and Appendix V respectively. The whole work shall be completed within three years.

The detailed work plan and the schedule of each phase will be settled by both sides before commencement of the work for each phase.

V. Reports and Final Results.

The reports will be presented to the Government of the Republic of Indonesia by JICA at the end of each phase. The materials mentioned in Appendix VI will be turned over to the Government of the Republic of Indonesia by JICA after the whole work is completed and they

shall be the property of the Government of the Republic of Indonesia.

VI. Undertaking of the Government of Indonesia.

1. To facilitate smooth implementation of the Project, the Government of Indonesia will take the following necessary measures :
 - (1) To secure the safety of the Japanese survey team.
 - (2) To exempt the Japanese survey team from the payment of local income tax for the salaries and allowance and to exempt from local security taxes, custom duties or other charges on equipment, machinery and other materials brought into Indonesia for the Project.
 - (3) To secure permission of entry into private properties and restricted areas and of felling trees for the purpose of the Project activity.
 - (4) To secure clearance of flight for aerial photography and use of airport related to the Project.
 - (5) To secure clearance for the use of communication facilities including transceiver with allocated frequency and electronic distance measuring instruments.
 - (6) To arrange for medical care when needed.
 - (7) To secure clearance for taking necessary materials, especially maps, aerial photographs and control points data, from Indonesia to Japan, subject to the security regulation of the Government of Indonesia.
2. The Government of Indonesia shall bear claims, if any arises, against the members of the Japanese survey team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese survey team.
3. The Directorate General of Water Resources Development of the Ministry of Public Works (hereinafter referred to as "DGWRD")

shall act as counterpart agency to the Japanese survey team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Project.

4. DGWRD shall, at its own expense, provide the Japanese survey team with the following items of (1) to (5) and shall arrange for or assist the Japanese survey team with the following items of (6) to (9), in cooperation with other agencies concerned, if necessary.

- (1) Available data, documents, materials and information related to the Project
- (2) Counterpart personnel
- (3) Suitable office with necessary equipment in the key towns
- (4) Credentials of identification cards
- (5) Establishment of the monuments of the control points and the bench marks in the Project area
- (6) Hiring of vehicles, boats, and other transportation facilities for field survey when necessary
- (7) Available necessary staying accommodation
- (8) Hiring of laborers as needed
- (9) Securing clearance of entering South Kalimantan, Central Kalimantan and East Kalimantan Provinces.

VII. Undertaking of the Government of Japan.

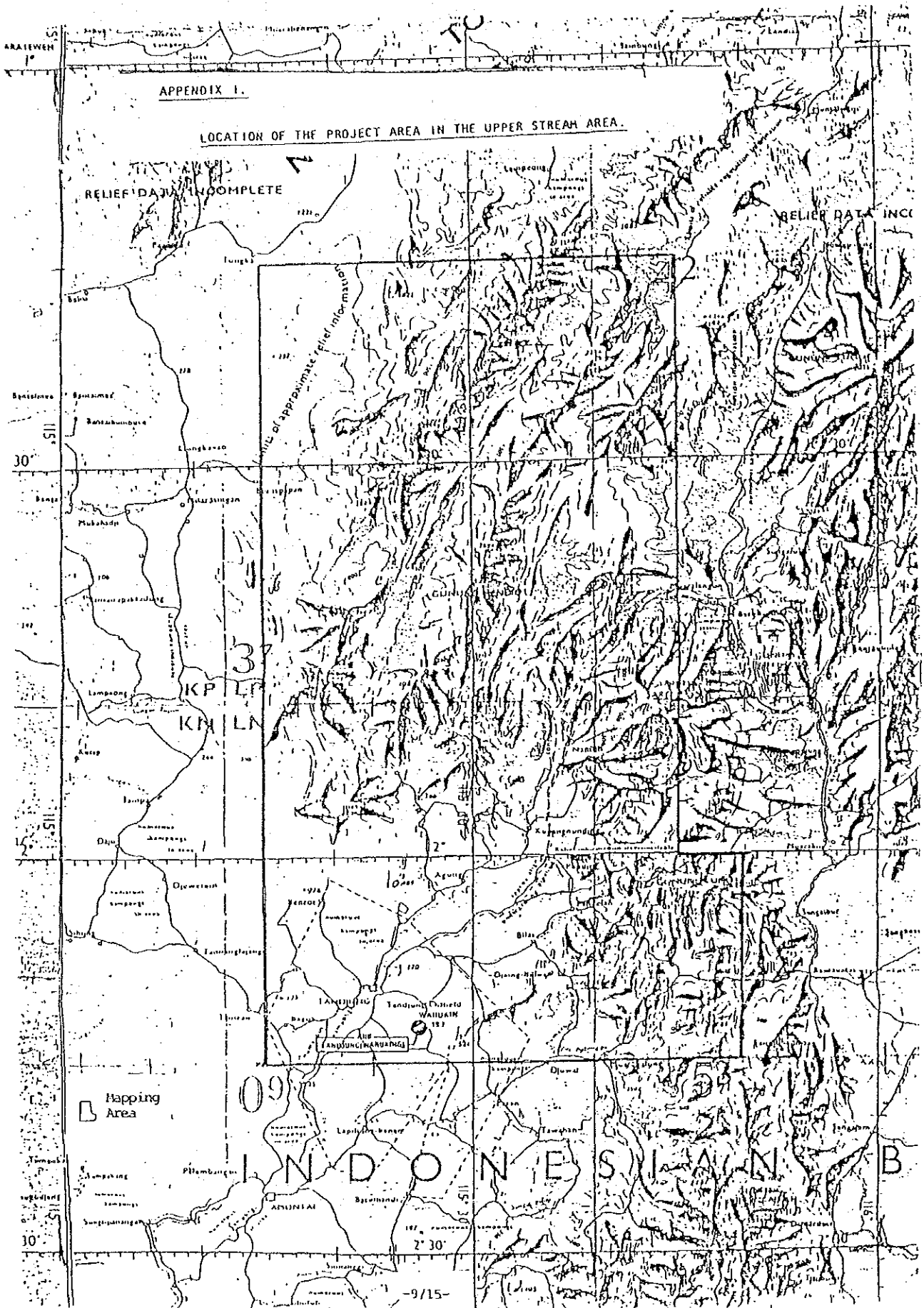
For the implementation of the Project, the Government of Japan will, in accordance with the relevant laws and regulations in force in Japan, through JICA, take necessary measures as follows :

- 1) To dispatch a Japanese survey team to carry out the Project.
- 2) To carry out necessary work in Japan.
- 3) To prepare necessary survey equipment and instruments as listed in Appendix VII and any other equipment and materials necessary for the Project.

- 4) To pursue technology transfer to the Indonesian personnel in the course of the Project.

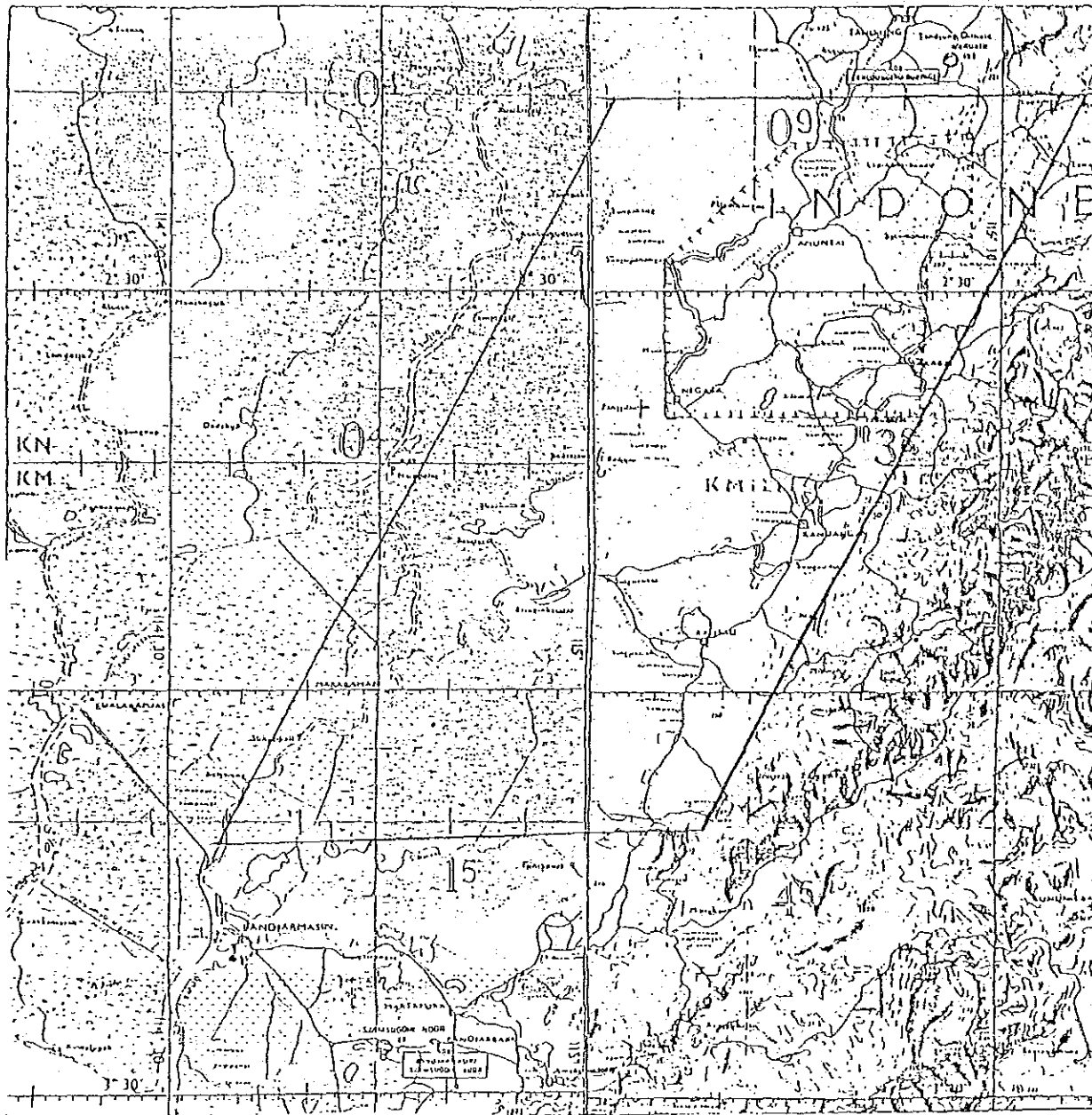
VIII. Modifications of the Scope of Work.



During the execution of the Project, changes considered useful by both sides for facilitating the implementation of the Project can be made in the text of this Scope of Work by mutual agreement.



APPENDIX 11.

LOCATION OF THE PROJECT AREA IN THE DOWN STREAM AREA (Aerial photography)

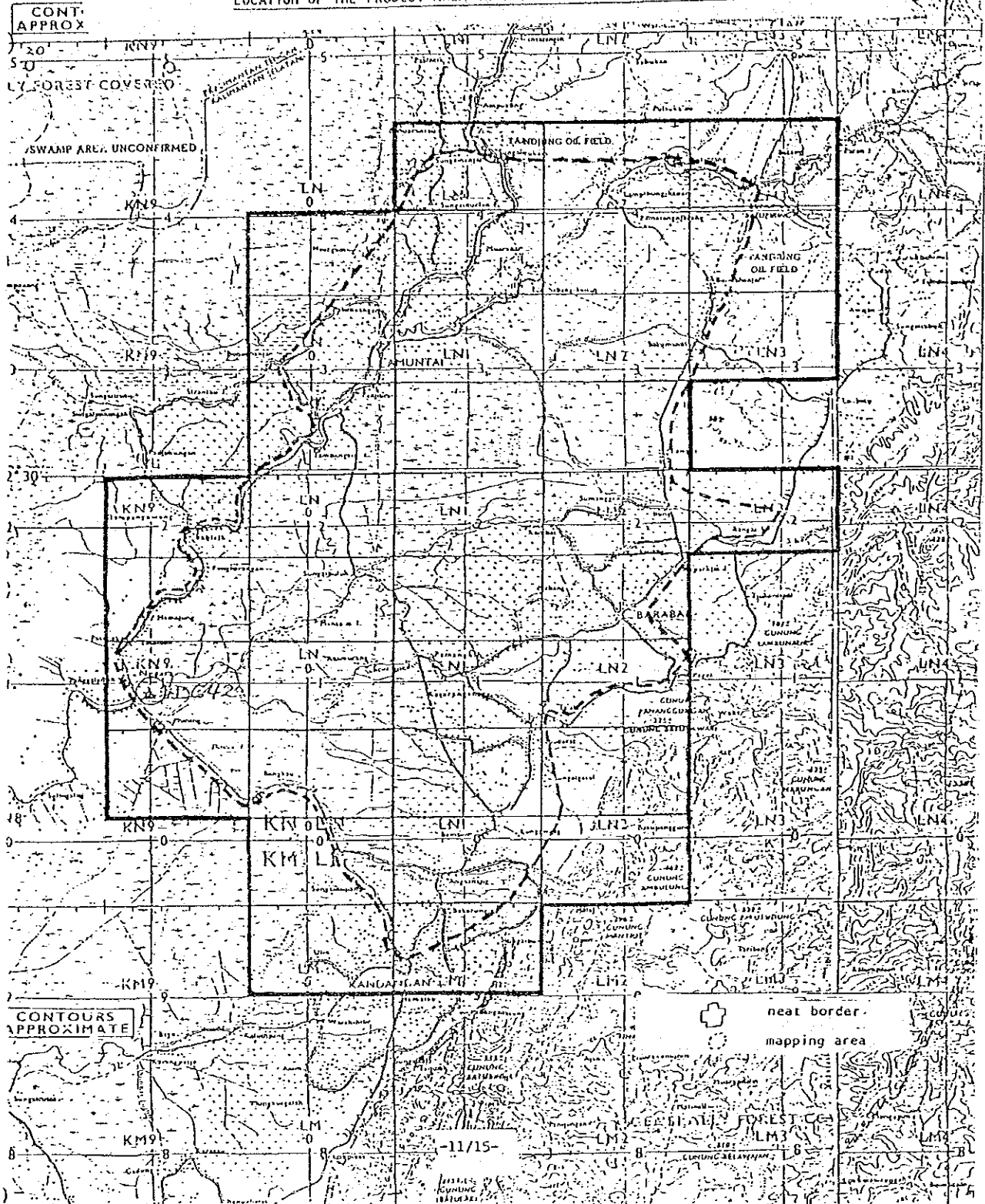


-  • Aerial Photography in Dry Season
-  • Aerial photography in Dry and rainy season

-10/15-

APPENDIX III.

LOCATION OF THE PROJECT AREA IN THE DOWN STREAM AREA (Photo Mapping)



APPENDIX IV

TIME SCHEDULE IN THE UPPER STREAM AREA

ITEM	1st Year	2nd Year	3rd Year
	Apr. 1983 - Mar. 1984	Apr. 1984 - Mar. 1985	Apr. 1985 - Mar. 1986
SIGNALIZATION	4 5 6 7 8 9 10 11 12 1 2 3 —	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3
AERIAL PHOTOGRAPHY	—		
CONTROL POINT SURVEY	—		
LEVELING	—	—	
PRICKING		—	
FIELD IDENTIFICATION		—	
AERIAL TRIANGULATION		—	
STEREO PLOTTING & DRAWING		—	—
FIELD COMPLETION			—
PRINTING			—

Note: Time schedule mentioned above is tentative and subject to change.

APPENDIX V

TIME SCHEDULE IN THE DOWN STREAM AREA

ITEM	1st Year	2nd Year	3rd Year
	Apr. 1983 - Mar. 1984	Apr. 1984 - Mar. 1985	Apr. 1985 - Mar. 1986
SIGNALIZATION	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3
AERIAL PHOTOGRAPHY	(dry season)	(rainy season)	
CONTROL POINT SURVEY			
LEVELING			
PRICKING			
FIELD IDENTIFICATION			
AERIAL TRIANGULATION			
SPOT HEIGHTS, RECTIFICATION, MOSAICING			
PREPARATION OF PHOTO-MAP			
REPRODUCTION			

Note: Time schedule mentioned above is tentative and subject to change.

APPENDIX VI

FINAL RESULTS

- I. Aerial Photography
 1. Original negatives
 2. Contact paper prints (one each)
 3. Photo index sheets

- II. Geodetic Control Survey
 1. Horizontal control results
 2. Vertical control results
 3. Computation sheets
 4. Field notes
 5. Description of points

- III. Topographic Mapping in the Upper Stream Area
 1. Pricked photos and identified photos
 2. Original manuscripts
 3. Diapositives
 4. Aerial triangulation results
 5. Color separation scribed sheets
 6. 1:50,000 scale topographic maps (1,000 sets)

- IV. Photo-mapping in the Down Stream Area
 1. Pricked photos and identified photos
 2. Original manuscripts
 3. Diapositives
 4. Aerial triangulation results
 5. 1:10,000 scale photo-map (200 sets)
 6. Original negative of photo-map (1:10,000 scale)

APPENDIX VII

LIST OF EQUIPMENT TO BE USED FOR
FIELD SURVEY BY THE JAPANESE TECHNICAL MISSION

1. Theodolites
2. Electronic distance measuring equipment
3. Shortwave transmitter receivers
4. Transceivers
5. Heliotropes
6. Signal lamps
7. Doppler observation system
8. Auto-levels with staves
9. Electronic calculators
10. Camping materials
11. Generators
12. Small instruments, office equipment and consumables

Note: 1. Above list is tentative and subject to alteration.

2. Number and type of each equipment will be informed to the DGWRD prior to the implementation of the Project.

4. Minutes of Meetings

(1) Minutes of the First Year

1) First meeting (signed in July 1983)

Minutes of the Meetings
on
the Topographic Mapping Project
of
the Upstream Area of the Negara
River Basin in South Kalimantan, Indonesia
held in July, 1983

1. The chairman, Mr. Mashudi, delivered an introductory speech for the meeting.
2. The supervisor of the Japanese team, Mr. Kazuo Komaki, briefed the draft of Plan of Operation for the topographic mapping project of the upstream area of the Negara river basin in South Kalimantan, Indonesia. (Attachment 4).
3. The following matters were discussed and confirmed:
 - 1) The Japan side suggested that the scale of aerial photography is changed from 1:60,000 to 1:50,000 due to the altitude of the covered area. The Indonesia side approved it.
 - 2) The Indonesia side recommended to set temporary signals for aerial photography on the control points. The Japan side agreed to set the signals on the horizontal control points.
 - 3) Both sides confirmed that the coordinates obtained by NNSS should be transformed to Padang Datum which adopts the GRS-67 ellipsoid.
 - 4) The Indonesia side suggested that the outline of the work of aerial photography be corrected as shown below:

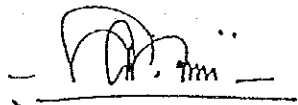
- i) overlap : more than 60%
- ii) sidelap : 30 ± 5%
- iii) cloud coverage : meets the requirements of aerial triangulation processing and line map compilation.

The Japan side agreed it.

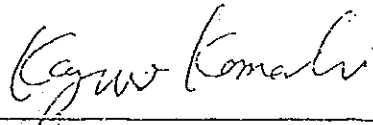
- 5) The Indonesia side suggested that the Doppler observations be conducted by the translocation mode. The Japan side insisted that both sides had agreed that the point positioning mode gives sufficient accuracy for the mapping in the preliminary discussions.
- 6) The Indonesia side confirmed that monumentation of all the horizontal control points and the vertical control points will be conducted by the Indonesia side. And the Indonesia side promised to finish the monumentation of the vertical control points, maximum 25, by the end of August, 1983.
- 7) The Indonesia side confirmed that the Indonesian counterparts, at least four, will take part in the survey.
- 8) The Indonesia side confirmed that DGWRD will be responsible to get all the necessary data to be used by the survey team.
- 9) The Indonesia side confirmed to give assistance for arranging vehicles, laborers and accommodation to the survey team.
- 10) The Indonesia side confirmed to secure clearance of entering the relevant Kalimantan provinces during the survey.

- 11) The Indonesia side expressed the willingness to give assistance for air cargo transportation from Jakarta to Banjarmasin and vice versa.

Jakarta, July 29th, 1983



Ir. Sarbini Ronodibroto
Director of the Directorate
of Planning and Programming,
Directorate General of
Water Resources Development,
Ministry of Public Works



Mr. Kazuo KOMAKI
Supervisor of the Survey Team
for the Mapping Project of the
Upperstream Area of the
Negara River Basin,
Japan International Cooperation
Agency

Attachment 1.

Memo of the Meeting

1. Date and Time: Thursday, July 21, 1983 11:00-14:00 WIST
2. Place : DPU Conference Room, Jl. Sriwijaya Raya 46
3. Attendants :

The Indonesia Side

- Mr. Sarbini Ronodibroto: Director of the Directorate of Planning and Programming, DGWRD.
- Mr. Mashudi : Chief of Sub Directorate of River Basin Planning, Directorate of Planning and Programming, DGWRD.
- Mr. Suharto : Head of Survey and Investigation Section, Dit. of Planning and Programming.
- Mr. Sudiyanto : Ass. Region IV of P3SA, Dit. of Planning and Programming.
- Mr. Hariyanto : Staff of Dit. of Planning and Programming.
- Mr. Subandiyo : Staff of Dit. of Planning and Programming.
- Mr. Wrahastirto : Chief of Mapping of Centre Statistic and Processing, Dept. Public Works.
- Mr. Yaya Suyana : Chief of Surveying of Directorate of Swamps.
- Mr. Bambang Sapto : Staff Deputy I of BAKOSURTANAL.
- Mr. Azis Bockings : Staff of Foreign Affair Division, DGWRD.
- Mr. Soeminto : Chief of Mapping of SURTA ABRI.
- Mr. Toekino : JANTOP
- Mr. Mitsuyuki Yuasa : Senior Colombo Plan Expert, DGWRD.
- Mr. Syogo Hosaki : Colombo Plan Expert, South Kalimantan Design Unit.

The Japan Side

Mr. Kazuo KOMAKI : Supervisor of the Japanese Survey Team, JICA, Japan.

Mr. Eiji GOJO : Leader of the Japanese Survey Team.

Mr. Akira UKIYA : Coordinator of the Project, JICA, Japan.

Mr. Mamoru MURATA : Member of the Japanese Survey Team.

Mr. Hiroshi KIMURA : "

Mr. Yoshiaki OHTOKU : "

Mr. Tsutomu SHIMIZU : "

Attachment 2.

Memo of the Meeting

1. Date and Time: Saturday, July 23, 1983 9:30-11:30 WIST
2. Place : DPU Conference Room, Jl. Sriwijaya Raya 46
3. Attendants :

The Indonesia Side

- Mr. Suharto : Head of Survey and Investigation
Section, Dit. of Planning and
Programming.
- Mr. Sudiyanto : Ass. Region IV of P3SA, Dit. of
Planning and Programming
- Mr. Subandiyo : Staff of Dit. of Planning and
Programming.
- Mr. Kartono : Staff of Mapping Centre.

The Japan Side

Same with the Meeting of July 21, 1983.

Attachment 3.

Memo of the Meeting

1. Date and Time: Thursday, July 28, 1983 10:40-13:00 WIST
2. Place : DGWRD Meeting Room
3. Attendants :

The Indonesia Side

- Mr. Suharto : Head of Survey and Investigation Section, Dit. of Planning and Programming.
- Mr. Sudiyanto : Ass. Region IV of P3SA, Dit. of Planning and Programming.
- Mr. Hariyanto : Staff of Dit. of Planning and Programming.
- Mr. Beddi Juwadi : Staff of Dit. of Planning and Programming.
- Mr. Mitsuyuki Yuasa : Senior Colombo Plan Expert, DGWRD.
- Mr. Tamdjid : DPU, South Kalimantan.

The Japan Side

- Mr. Kazuo KOMAKI : Supervisor of the Japanese Survey Team, JICA, Japan.
- Mr. Eiji GOJO : Leader of the Japanese Survey Team.
- Mr. Akira UKIYA : Coordinator of the Project, JICA, Japan.
- Mr. Masayoshi ENOMOTO : Deputy Resident Representative, JICA, Jakarta.
- Mr. Mamoru MURATA : Member of the Japanese Survey Team.
- Mr. Hiroshi KIMURA : "
- Mr. Yoshiaki OHTOKU : "
- Mr. Tsutomu SHIMIZU : "

(Attachment 4)

PLAN OF OPERATION
FOR
TOPOGRAPHIC MAPPING PROJECT OF THE UPSTREAM AREA
OF
THE NEGARA RIVER BASIN IN SOUTH KALIMANTAN
IN
THE REPUBLIC OF INDONESIA

-- 1st Year --

July 1983

JAPAN INTERNATIONAL COOPERATION AGENCY

(Contents omitted)

2) Second meeting (signed in November 1983)

Minutes of the Meeting
on
The Topographic Mapping Project
of
The Upstream Area of the Negara
River Basin in South Kalimantan, Indonesia

Following an introductory speech by Mr. Rachardjo Notosaputro, the Japan side briefed the progress report on the first phase survey and the tentative plan for the second phase survey of the topographic mapping project of the upstream area of the Negara river basin in South Kalimantan (Attachment III). And the following matters were discussed and confirmed by the both sides :

1. Numbering of the Doppler observation points on the final records which will be submitted by the Japanese survey team shall be done as specified by BAKOSURTANAL. And numbering of the vertical control points on the final records shall be done as specified by D.P.U. (Attachment IV,1).

2. The coordinates of the Doppler observation points which will be submitted by the Japanese survey team and used for the photogrammetry are computed with the broadcast ephemeris. And the Japanese survey team will send the data tapes to BAKOSURTANAL by January, 1984 so that BAKOSURTANAL will be able to recompute the coordinates with the precise ephemeris obtained by BAKOSURTANAL. If BAKOSURTANAL will finish the recomputation with the precise ephemeris by the end of July, 1984, the coordinates by the precise ephemeris may be used for the photogrammetry based on the discussion by the both sides which will be held at the end of the field identification (Attachment IV,2,3).

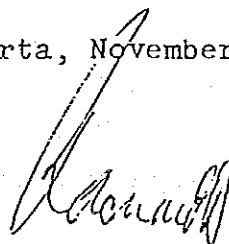
3. The Japan side requested that the clearance for carrying the aerial photos and the related data to Japan shall be completed by the beginning of December, 1983 so that the security officer will be able to come to Japan early in January, 1984. The Indonesia side promised to complete the clearance as soon as possible.

4. Concerning the field identification, field completion in the second phase survey, the Indonesian side requested to reduce the number of the Japanese survey team members and replace by Indonesian consultants in compliance with the government's policy of promoting the Indonesian technical capabilities. The Japan side indicated the difficulty to meet the request from a viewpoint of its policy for making national base maps. The request of the Indonesian side will be conveyed to the Japanese government.

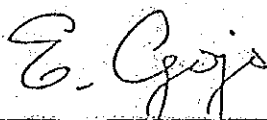
Jakarta, November 19, 1983



Mr. KAZUO KOMAKI
Supervisor of the Survey
Team for the Mapping
Project of the Upstream Area
of the Negara River Basin,
Japan International
Cooperation Agency



Ir. RACHARDJO NOTOSAPUTRO
Acting Chief of Sub Directorate
of River Basin Development
Planning, Directorate of
Planning and Programming,
DGWRD.



Mr. ELJI GOJO
Leader of the Survey Team

Attachment I

Memo of the Meeting (1)

1. Date and Time : Saturday, November 12, 1983 10.00-14.00 WIST
2. Place : DPU Conference Room, Jl. Sriwijaya Raya 46
3. Attendants :

The Indonesian side

- Mr. Rachardjo Natosaputro : Acting Chief of Sub Directorate of River Basin Development Planning, Directorate of Planning and Programming, DGWRD.
- Mr. Suharto : Head of Survey and Investigation Section, Dit. of Planning and Programming.
- Mr. Sudiyanto : Ass. Region IV of P3SA, Dit. of Planning and Programming.
- Mr. Hariyanto : Staff of Dit. of Planning and Programming.
- Prof. Jacob Rais : Deputy Chief of BAKOSURTANAL
- Mr. Wrahastirto : Chief of Mapping of Centre Statistic and Processing, Dept. Public Works.
- Mr. Soeminto : Chief of Mapping of SURTA ABRI.
- Mr. Toekino : JANTOP.
- Mr. Mitsuyuki Yuasa : Senior Colombo Plan Expert, DGWRD.

The Japan Side.

- Mr. Kazuo Komaki : Supervisor of the Japanese Survey Team, JICA, Japan.
- Mr. Eiji Gojo : Leader of the Japanese Survey Team.
- Mr. Yoshiharu Mawatari : Coordinator of the Project, JICA, Japan.

Attachment II

Memo of the Meeting (2)

1. Date and Time : Thursday, November 17, 1983 10.00-11.30 WIST
2. Place : DGWRD Meeting Room
3. Attendants :

The Indonesian side

Mr. Sudiyanto : Ass. Region IV of P3SA,
Dit. of Planning and Programming.

Mr. Mitsuyuki Yuasa : Senior Colombo Plan Expert, DGWRD.

The Japan Side

Mr. Kazuo Komaki : Supervisor of the Japanese Survey Team,
JICA, Japan.

Mr. Eiji Gojo : Leader of the Japanese Survey Team.

Mr. Yoshiharu Mawatari : Coordinator of the Project, JICA, Japan.

Attachment III

TOPOGRAPHIC MAPPING PROJECT
OF
UPPER STREAM AREA OF THE NEGARA RIVER BASIN
SOUTH KALIMANTAN, INDONESIA

PROGRESS REPORT

FIRST PHASE SURVEY:

AERIAL PHOTOGRAPHY

GROUND CONTROL POINT SURVEY

OCTOBER 1983

JAPANESE SURVEY TEAM FOR TOPOGRAPHIC MAPPING
PROJECT OF UPPER STREAM AREA OF THE NEGARA
RIVER BASIN, SOUTH KALIMANTAN, INDONESIA

(Contents omitted)

Attachment IV

Memo of the Details

1. Specifications of Numbering

i) Doppler observation points

temporary		specified
NS1	————→	D-A600
:		:
NS7	————→	D-A606
NS7'	————→	D-A607
:		:
NS10	————→	D-A610

ii) vertical control points

temporary		specified
2nd order BM.1	————→	U - BM - II - 1
:		:
3rd order BM.1	————→	U - BM - III - 1
:		:

2. Formula for Coordinate Transformation

$$\begin{pmatrix} X \\ Y \\ Z \end{pmatrix} \text{ Padang Datum} = \begin{pmatrix} X \\ Y \\ Z \end{pmatrix} \text{ Broadcast} + \begin{pmatrix} -2^m.691 \\ +14^m.757 \\ -0^m.224 \end{pmatrix}$$

3. Specifications of Data Tape

Contents	Majority Vote Data (JMR)
Format	ASCII
Label	No
Density	1600 BPI

(2) Minutes of the Second Year

1) Meeting at the field identification work (August 1984)

MINUTES OF MEETINGS ON THE TOPOGRAPHIC MAPPING
PROJECT OF THE UPPER STREAM AREA OF THE NEGARA
RIVER BASIN, SOUTH KALIMANTAN, INDONESIA

1. Date and Place:

July 13, 1984	Meeting Room, DGWRD, DPU, Jakarta
July 16, 1984	Meeting Room, DPU, Banjarmasin
July 20, 1984	Meeting Room, BAKOSURTANAL, Cibinong
July 30, 1984	" " , " , "

Attendants of Meetings are listed in Attachments 1-4.


2. The chairman, Mr. Sarbini Ronodibroto, delivered an introductory speech at the first meeting held at DGWRD, DPU on July 13 '84, and the Japanese team briefed the draft Plan of Operation for the 2nd year work of the topographic mapping project of the upper stream area of the Negara river basin, South Kalimantan (refer to Attachment 5), and which was discussed in a very smooth manner and confirmed by the both sides.

3. Concerning "SPESIFIKASI PETA RUPABUMI INDONESIA SKALA 1/50,000. BAKOSURTANAL", discussions were made at BAKOSURTANAL and confirmed as attached hereto. (refer to Attachment 6)

At the discussions, BAKOSURTANAL promised to nominate one (1) counterpart (topo name expert) to cooperate with the Japanese team in the field identification work.

4. Related to the 2nd year work of the upper stream mapping project, JICA informs one person counterpart would be allocated for training in Japan, 2 months (October - November '84).

Jakarta, August 10, 1984



Ir. Sarbini Ronodibroto
Director
Directorate of Planning
and Programming, DGWRD



Mr. Sho Saito
Team Leader of the Topo-
graphic mapping Project
Of the Upper Stream Area
of the Negara river basin
South Kalimantan

Attachment 1

Attendants of Meeting
(July 13, 1984)

1. The Government of Indonesia

Mr. Sarbini Ronodibroto	Director of Planning and Programming, DGWRD
Mr. Sidharta	Dit. of Planning and Programming, DGWRD
Prof. Jacob Rais	BAKOSURTANAL
Mr. Soetopo	P4S, Jakarta
Mr. Suharto	Dit. of Planning and Programming, DGWRD
Sr. Sudyanto	"
Mr. Beddi	"
Mr. Haryanto	"
Mr. Kartono	PUSDATA, Public Works

2. The Japanese Survey Team

Mr. H. Kimura	Deputy Leader (Negara Upper Stream)
Mr. M. Murata	Chief Surveyor (")
Mr. M. Togashi	Surveyor (")
Dr. K. Muraoka	Team Leader (Negara Downstream)
Mr. T. Watanabe	Surveyor (")

Attachment 2

Attendants of Meeting

(July 16, 1984)

1. The Government of Indonesia

Mr. Hally Dezar	Chief of Public Works, South Kalimantan
Mr. A. Tamdjid	Water Resources Development Division, South Kalimantan
Mr. Rachmat Norlias	P3SA, South Kalimantan
Mr. Agus Susanto	"
Mr. Sudyanto	Dit. of Planning and Programming
Mr. Suharto	"

2. The Japanese Survey Team

Mr. H. Kimura	Deputy Leader (Negara Upper Stream)
Mr. M. Murata	Chief Surveyor(")
Mr. M. Togashi	Surveyor (")
Dr. K. Muraoka	Team Leader (Negara Downstream)

Attendants of Meeting
(July 20, 1984)

1. The Government of Indonesia

Prof. J. Rais	BAKOSURTANAL
Mr. Bebas Purnawan	"
Mr. Riadika Mastra	"
Mr. Beddi Juwadi	Dit. of Planning and Programming

2. The Japanese Survey Team

Mr. H. Kimura	Deputy Leader (Negara Upper Stream)
Mr. M. Murata	Chief Surveyor (")
Mr. M. Togashi	Surveyor (")
Dr. K. Muraoka	Team Leader (Negara Downstream)

Attachment 4

Attendants of Meeting

(July 30, 1984)

1. The Government of Indonesia

Prof. J. Rais	BAKOSURTANAL
Mr. Bebas Purnawan	"
Mr. Riadika Mastra	"

2. The Japanese Survey Team

Mr. S. Saito	Team Leader (Negara Upper Stream)
Mr. H. Kimura	Deputy Leader(")
Mr. M. Murata	Chief Surveyor(")
Dr. Y. Egawa	Advisor

PLAN OF OPERATION
FOR
TOPOGRAPHIC MAPPING PROJECT OF THE UPSTREAM AREA
OF
THE NEGARA RIVER BASIN IN SOUTH KALIMANTAN
IN
THE REPUBLIC OF INDONESIA

-- 2nd Year --

July 1984

JAPAN INTERNATIONAL COOPERATION AGENCY

(Contents omitted)

2) Meeting at the field completion work (February 1985)

MINUTES OF MEETING ON TOPOGRAPHIC MAPPING PROJECT OF
UPPER STREAM AREA OF NEGARA RIVER BASIN,
SOUTH KALIMANTAN, INDONESIA

I. Dates and Places of Meeting

- 1) February 9, 1985: Directorate General of Water Resources Development
Ministry of Public Works (Jakarta)
- 2) February 11, 1985: - ditto -

Attendants of meetings are as listed in Appendix-1 and 2.

II. Results of the Meetings

Preceding the meetings at DGWRD, DPU, three preliminary meetings had been held as follows:

- 1) Meetings between local government officials and the Japanese Survey Team in Banjarmasin and Tanjung.
- 2) Meeting between BAKOSURTANAL and the Japanese Survey Team in Cibinong.

The meetings in Tanjung and Banjarmasin were concerned about administrative boundaries and geographical names. The meeting in Cibinong was concerned about technical matters related to scribing and printing work.

The meetings at D.P.U. Jakarta were concerned about the reports of activities that had been conducted by the Japanese Survey Team and the Indonesian counterparts. Matters concerning administrative boundaries were also discussed in the meetings at D.P.U. (Refer to Appendix-3, 4, 5 and 6)

Major items of discussions and their results are as follows.

II-1. Administrative Boundaries

Administrative boundaries have been remained undetermined by the time of the meeting. However, D.P.U. emphasized that administrative boundaries should be drawn on maps completely.

If the official information on administrative boundaries between East Kalimantan and South Kalimantan, and between Central Kalimantan and South Kalimantan, and on other boundaries are not sent to JICA Jakarta office by May 15, 1985, the Japanese Survey Team is requested

draw the boundary lines based on the information on the boundary lines which the Government of Indonesia will transfer from 1:250,000 scale existing topographic map which will be sent to J.I.C.A. Jakarta office not later than May 15,1985. This information will be drawn in 1:50,000 scale by the Government of Indonesia. In this case the remark saying "Administrative boundary line between _____ and _____ ; and between _____ and _____ were drawn by referring to the existing 1:250,000 scale topographic map." should be put.

II-2. Geographical Names

Geographical names to be printed on the maps are those listed on "Table for Confirmation of Geographical Names" authorized by D.P.U. and BAKOSURTANAL.

II-3. Scribing and Printing

"Instructions from BAKOSURTANAL Concerning the Scribing and Printing Work" (Appendix-7) will be regarded as the additional technical specifications required for this topographic mapping work.

II-4. Training of Indonesian Counterparts

Related to the scribing and printing work of the 3rd year work to be carried out in Japan in 1985, the following counterpart training allocation was explained by the Japanese side:

For scribing work : 2 persons for 1.0 month

For printing work: 1 person for 0.5 month

The Japanese side noted that the participants for printing work

needs to be a high ranking officer who has a power to authorize the results of printing work. Indonesian side said that D.P.U. would pay attention to the requirements of J.I.C.A. concerning the participants. Starting time of the training will be determined according to the progress of the scribing and printing work.

II-5. Number of Sets of Maps to be Printed.

In the Scope of Work for this mapping project the number of sets of the map to be printed is stipulated as 1,000 for each map sheet. The Indonesian side explained that not only offices of the central government but also various offices of local governments such as of province, county, district, and town and police offices use topographical maps. The Indonesian side said that 1,000 sets would not be sufficient to cope with existing and expected needs for the accurate topographic maps, therefore, if possible 2,000 sets of maps would be printed for each sheet. The Japanese side took note of this request.

II-6. Number of Colours of the Map

In the Plan of Operation attached to the Minutes of Meeting for this mapping project dated August 10, 1984, the number of colours to be used for the printing of the 1:50,000 scale topographic maps is stipulated as five. Regardless of the above mentioned agreement, both sides agreed to change the number of colours from five to four (black, blue, green, and brown) in accordance with the Figure-1 "Schematic Diagram of Scribing and Printing" of the "Instructions from BAKOSURTANAL Concerning the Scribing and Printing Work".

II-7. Delivery of Data and Information to be Provided by
The Indonesian Government

As for data and information which cannot be prepared by the Indonesian government for the Japanese Survey Team by their departure, and expected to be used for 1:50,000 scale topographic mapping, they shall be delivered to J.I.C.A. Jakarta office by May 15, 1985 with appropriate authorization.

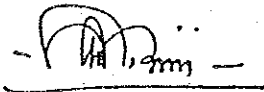
II-8. Delivery of Topographic Maps

Printed 1:50,000 scale topographic maps and other materials which should be delivered to the Indonesian government according to the Scope of Work, shall be sent to the following office and address:

- Office: Directorate General of Water Resources Development,
Ministry of Public Works
- Attn: Director, Directorate of Planning and Programming
- Address: Jl. Pattimura No. 20, Kebayoran Baru,
Jakarta-Selatan

For confirmation of the above,

February 13, 1985



Ir. Sarbini Ronodibroto

Director,
Directorate of Planning
and Programming, DGWRD



Sho Saito

Leader of the Japanese
Survey Team



Minoru Akiyama

Supervisor of
the Japanese Survey Team



REPUBLIC INDONESIA
DEPARTEMEN PEKERJAAN UMUM
DIREKTORAT JENDERAL PENGAIRAN
DIREKTORAT BINA PROGRAM PENGAIRAN

JALAN PATTIMURA NO. 20/PERC. 7 TILP. 736616 (3 saluran) TEROMOL POS 39/KBT -- KEBAYORAN BARU
JAKARTA

Alamat Kawat : DITJEN AIR

DAFTAR HADIR

Undangan Rapat : UPPER STREAM -- S. NEGARA (KALSEL)
Meeting Invitation

Hari dan Tanggal : Sabtu, 9 Pebruari 1985
Day and date

Tempat : Ruang Sidang Dit. DPP
Place

Pukul : 10.00 -- 12.00 WIB
Time

Pimpinan Rapat : KA.SUB DIT. P2WS
Chairman

No.	<u>N a m a</u> N a m e	<u>Instansi</u> Office	<u>Jabatan</u> Occupation	<u>Tanda Tangan</u> Signature
1.	Ir. N. Sidharto	B P P	Kasubdit.P2WS	
2.	Ir. Suharto	B P P	Ka. Sie Survey	
3.	Ir. Bebas Furnawan	BAKOSURTANAL	Staf Kartografi	
4.	B. Ali Syakhbana	B P P	Staf Sie Survey	
5.	Moh. Rusfai	B P P	Staf Sie Survey	
6.	Hilman Kosasih	"	Staf PWS II	
7.	Subandiyo	"	Staf Sub Bag, ABLW	
8.	B. Premono	"	K1. Sie PWS II	
9.	Ir. Marianto W.	"	Staf Sie Survey	
10.	Tzutomu Kusaka		JICA, Survey Team	
11.	HIKIO TOGASHI		"	
12.	HIROSHI MURAKAMI	JICA	Staf	
13.	SHO SAITO	"	Team Leader	
14.	Minoru AKIYAMA	Ministry of Construction	Supervisor	



REPUBLIK INDONESIA
 DEPARTEMEN PEKERJAAN UMUM
 DIREKTORAT JENDERAL PENGAIRAN
DIREKTORAT BINA PROGRAM PENGAIRAN
 JALAN PATTIMURA NO. 20/PERC. 7 TELP. 736016 (3 saluran) TEROMCIL PUS 30/KBT - KEBAYORAN BARU
 JAKARTA

Alamat Kawat : DITJEN AIR

List of Attendance

Meeting Date : Februari 11th, 1985
 Place : Dicertor Room
 Subject : UPPER STREAM S. NEGARA (SOUTH KALIMANTAN)
 Time : 01.00 / 02.00

No.	Name	Office	Occupation	Signature
1.	Ir, Sarbini	BPP	Director	
2.	Ir. M. Sidharto	BPP	Chief of P2WS	
3.	Ir. Suharto	BPP		
4.	Mr. Sho Saito	JICA	Team Leader	
5.	Mr. Hiroshi Murakami	"	Staff	
6.	Mr. Mikio Tojoshi	"	Survey Team	
7.	Mr. Tzutomu Kuzaka	"	"	
8.	Mr. Minoru Akiyama	"	Supervisor	

JICA