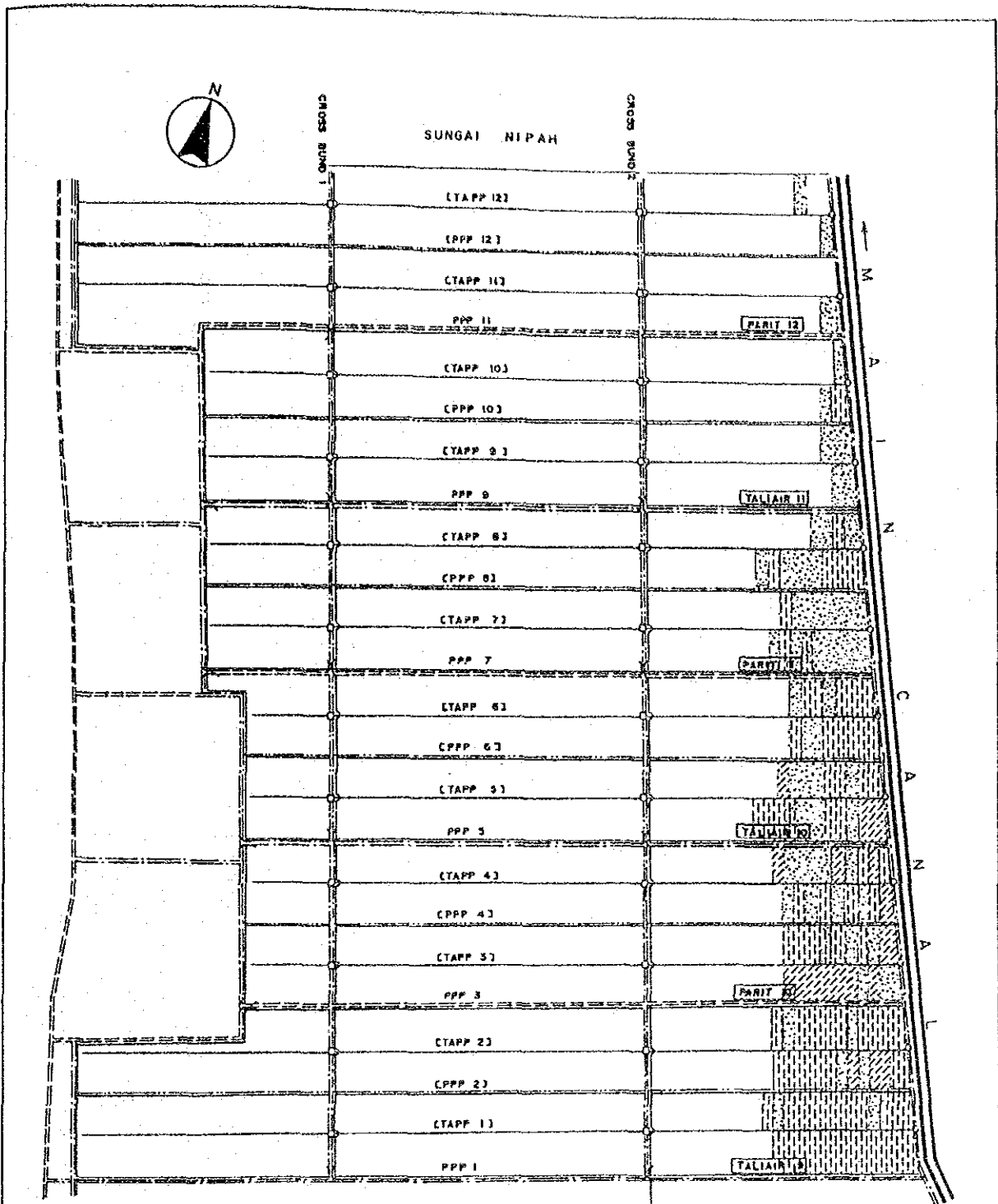


図. 11 計画地区現況土地利用図 (4/8)

(スンガイレマン灌漑区)

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LEGEND

- Paddy
- Vegetable
- Tree Crop
- Idle Land
- Public Yard
- Water Deficit Area
- Back-flooding Area
- Poor Drainage Area

0 SCALE 1 km

図. 11 計画地区現況土地利用図 (5 / 8)
(パッシールバンジャン灌漑区)

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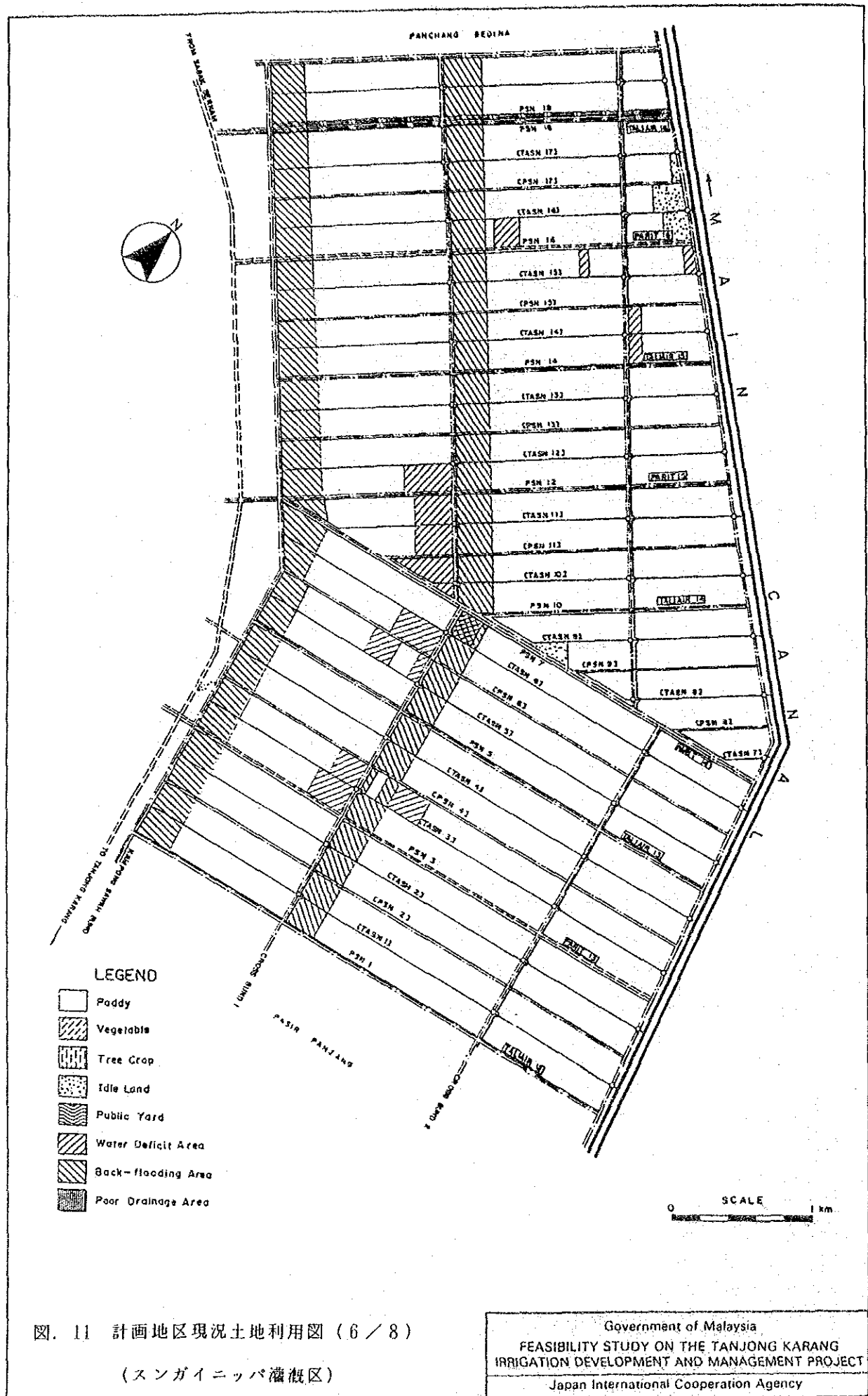


図. 11 計画地区現況土地利用図 (6 / 8)

(スンガイニッパ灌漑区)

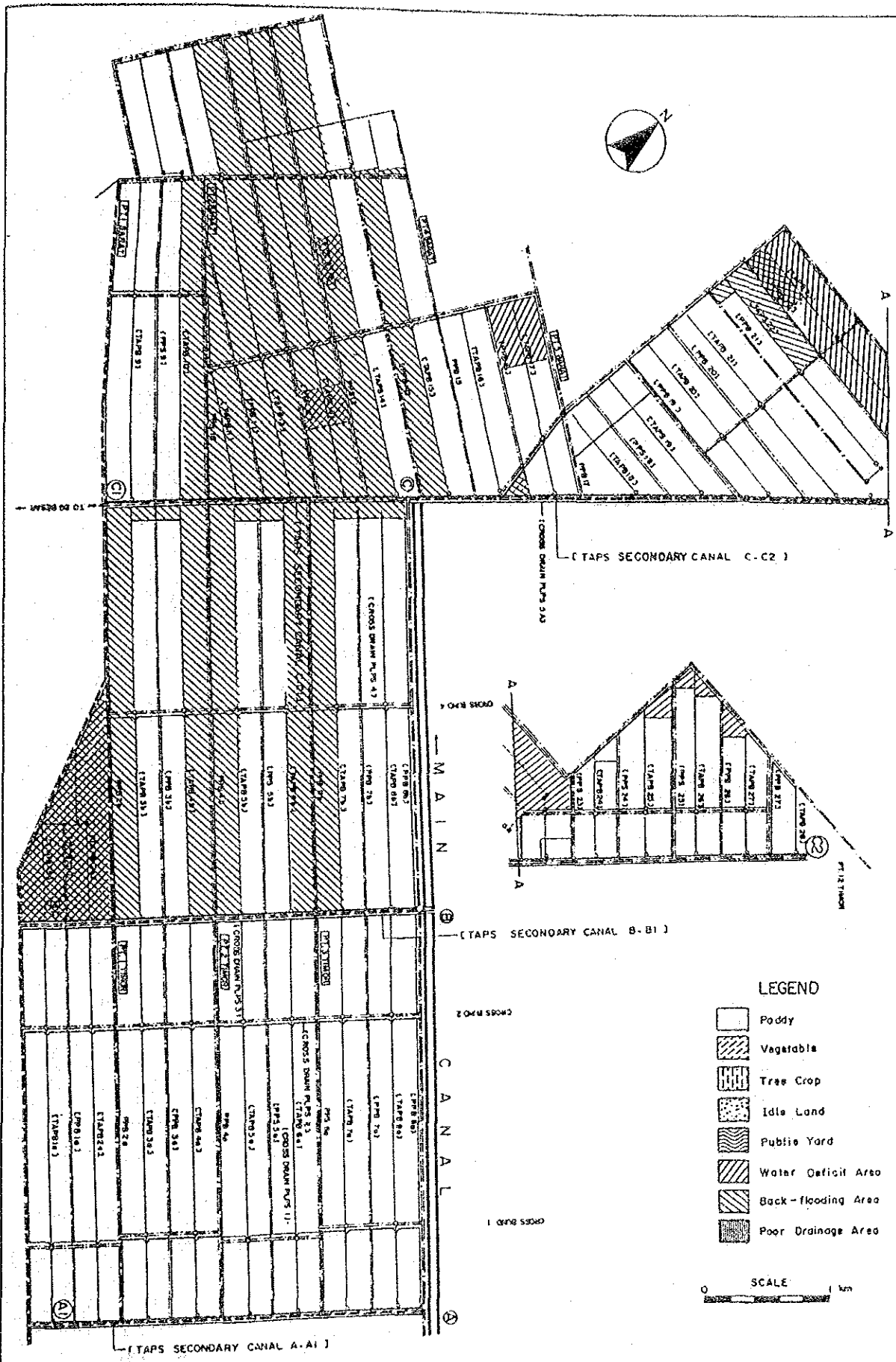


圖. 11 計画地区現況土地利用図 (7/8)
 (パンチャンペディナ灌漑区)

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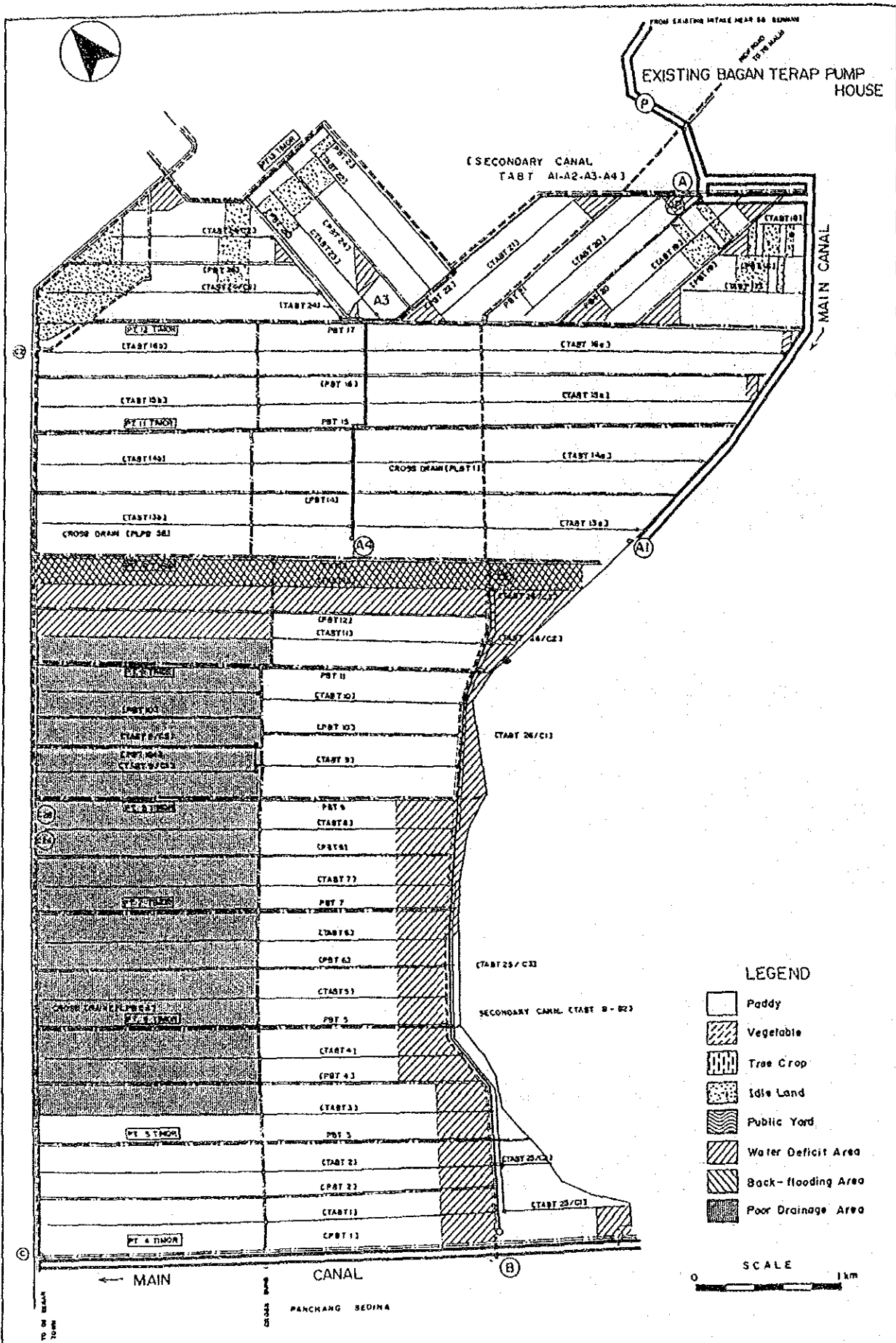


図. 11 計画地区現況土地利用図 (8 / 8)

(バガンテラップ灌漑区)

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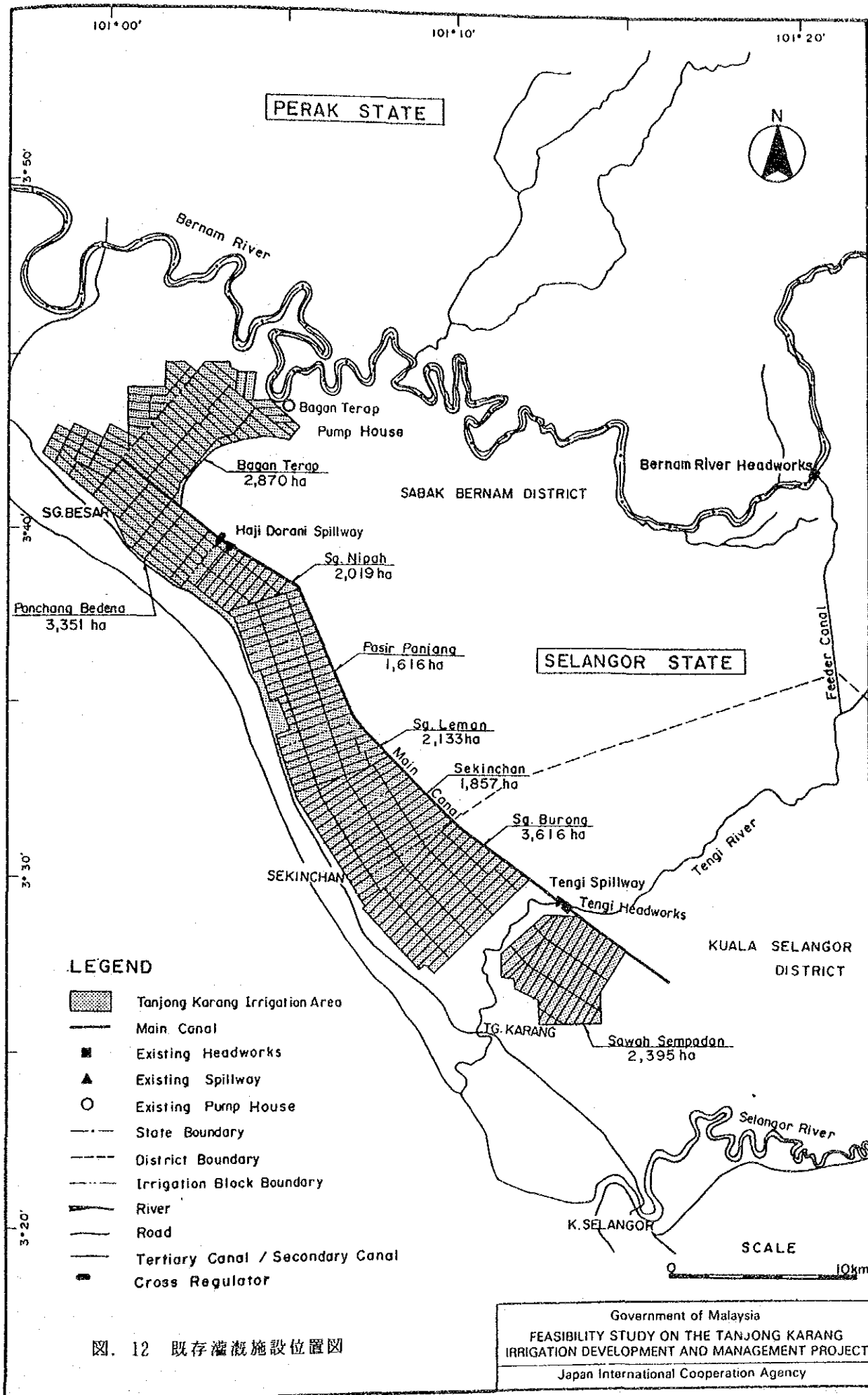


图. 12 既存灌溉施設位置图

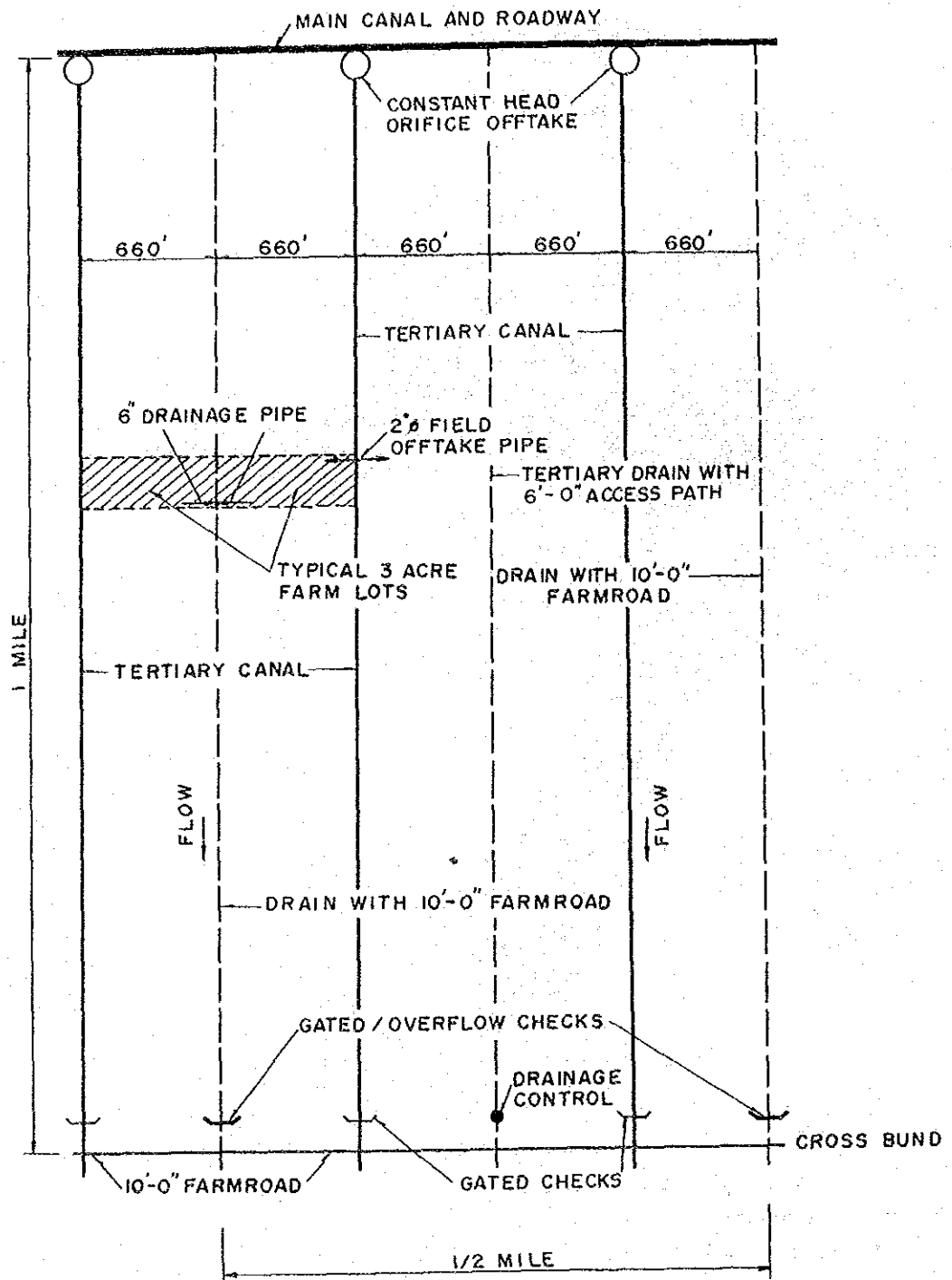
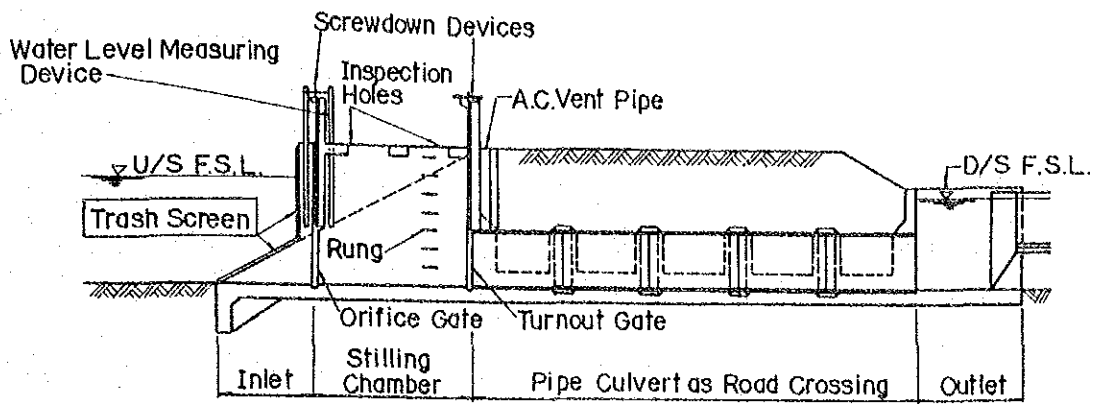
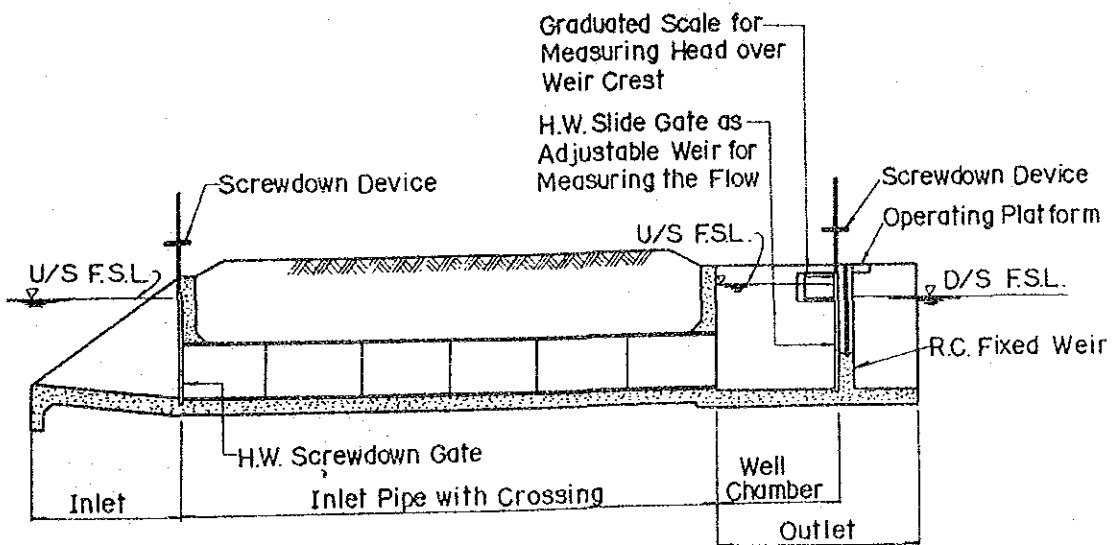


图. 13 三次水路配置图

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TYPICAL CONSTANT HEAD ORIFICE OFFTAKE



TYPICAL ADJUSTABLE WEIR OFFTAKE

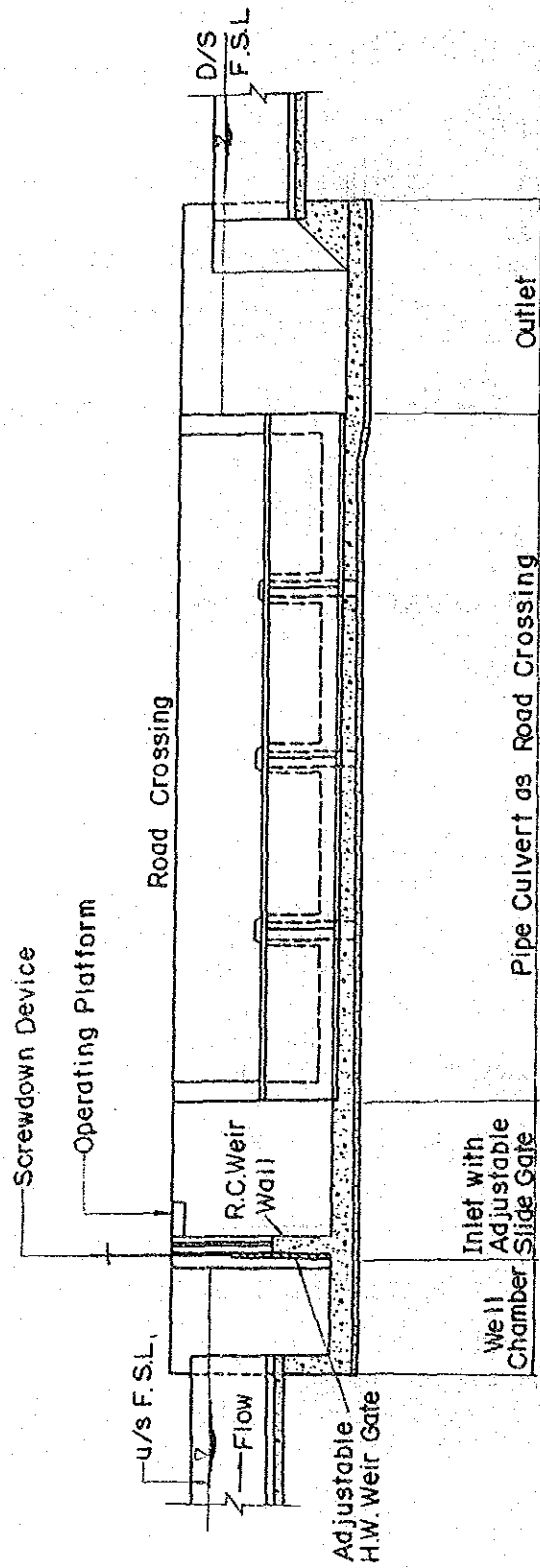


圖. 15 三次水路水位調查施設基準構造圖

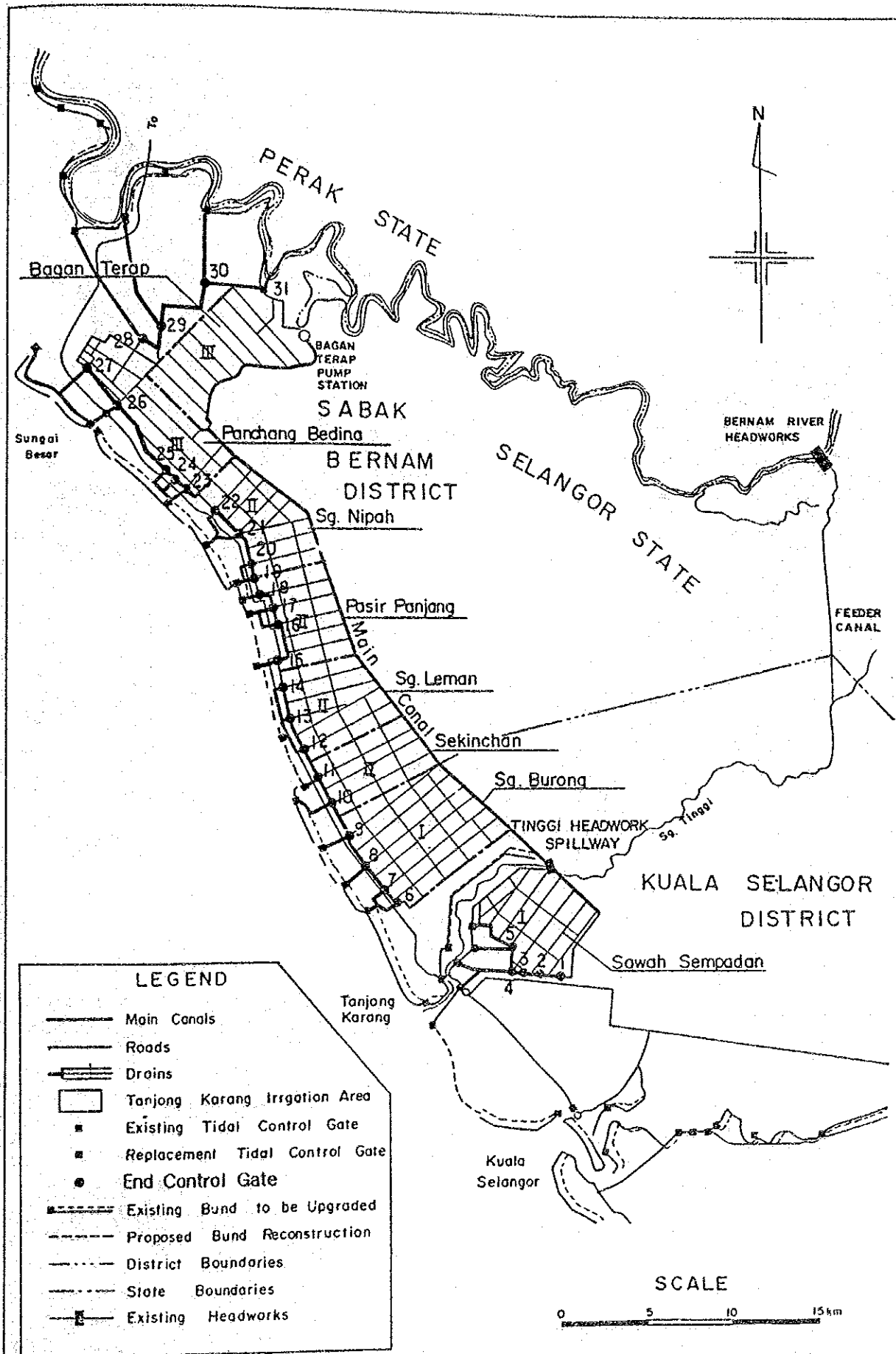


图. 16 計画地区排水路網現況図

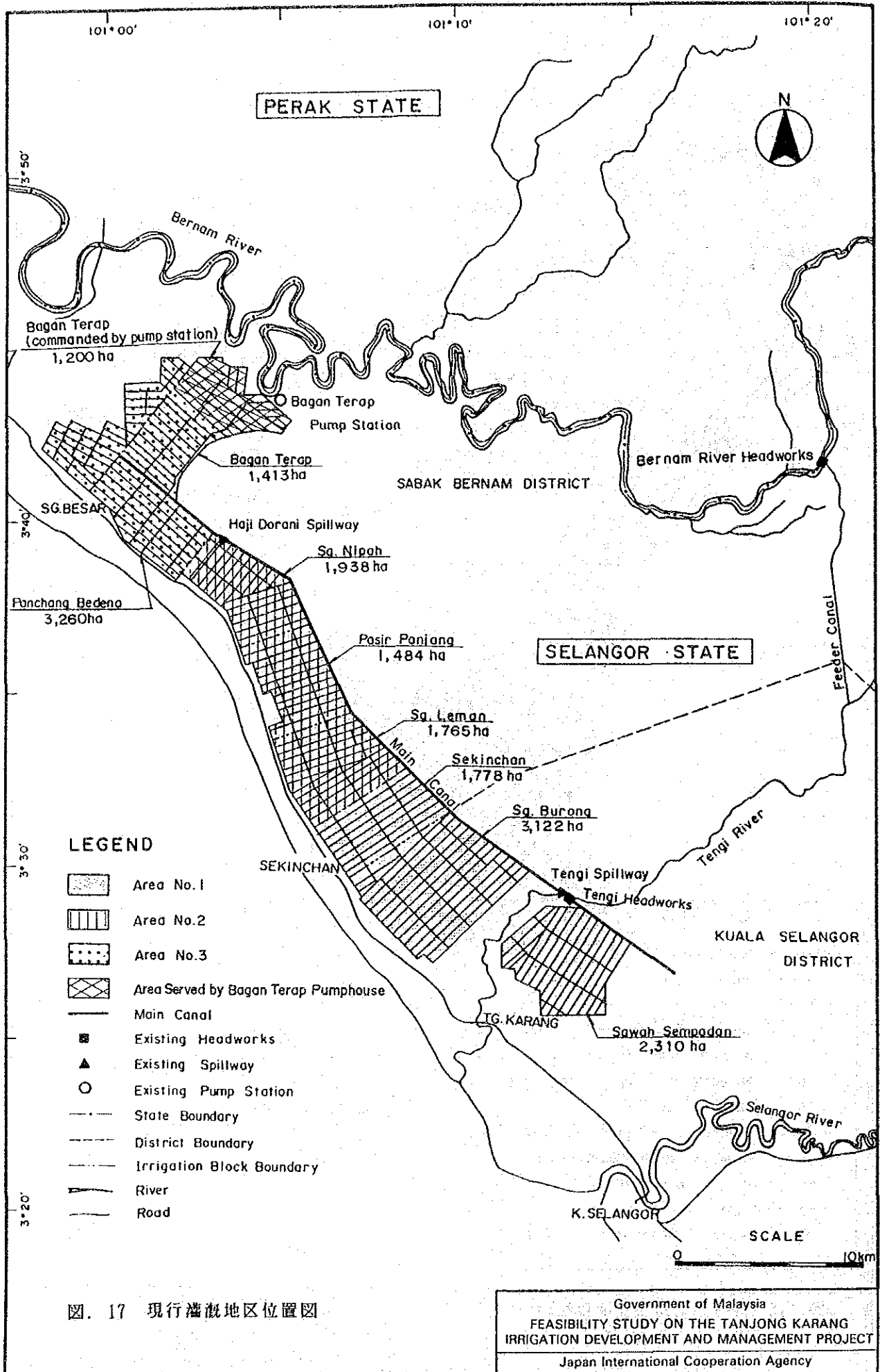


图. 17 现行灌溉地区位置图

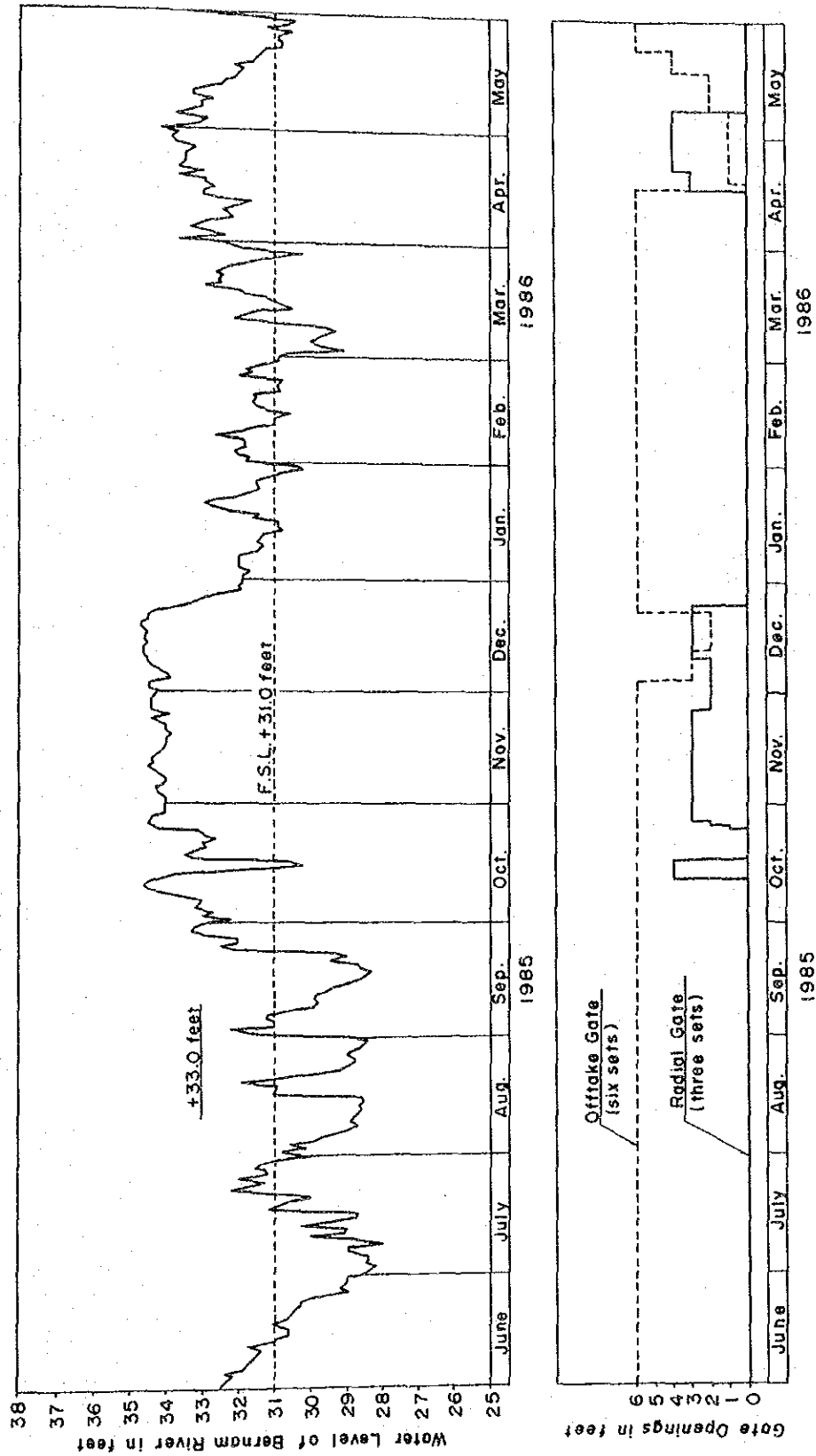


図. 18 ベルナム頭首工操作実績

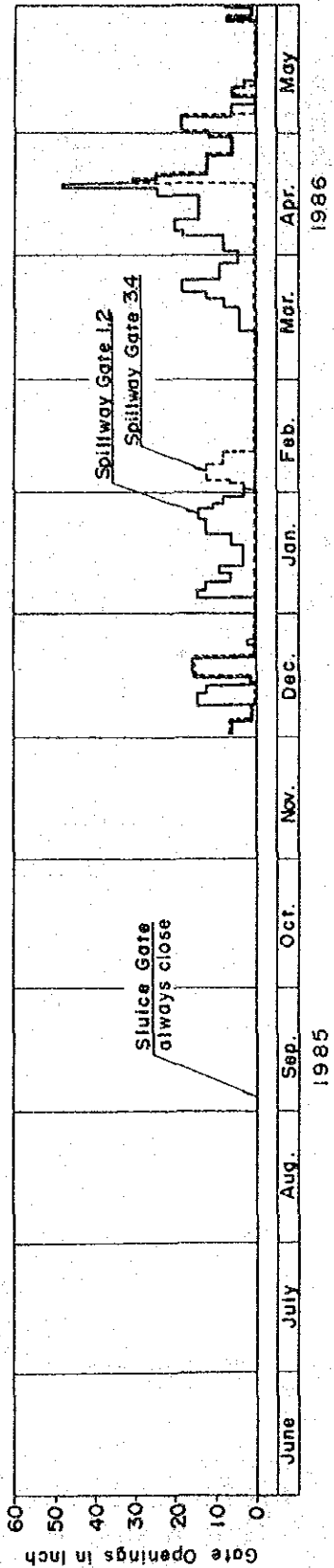
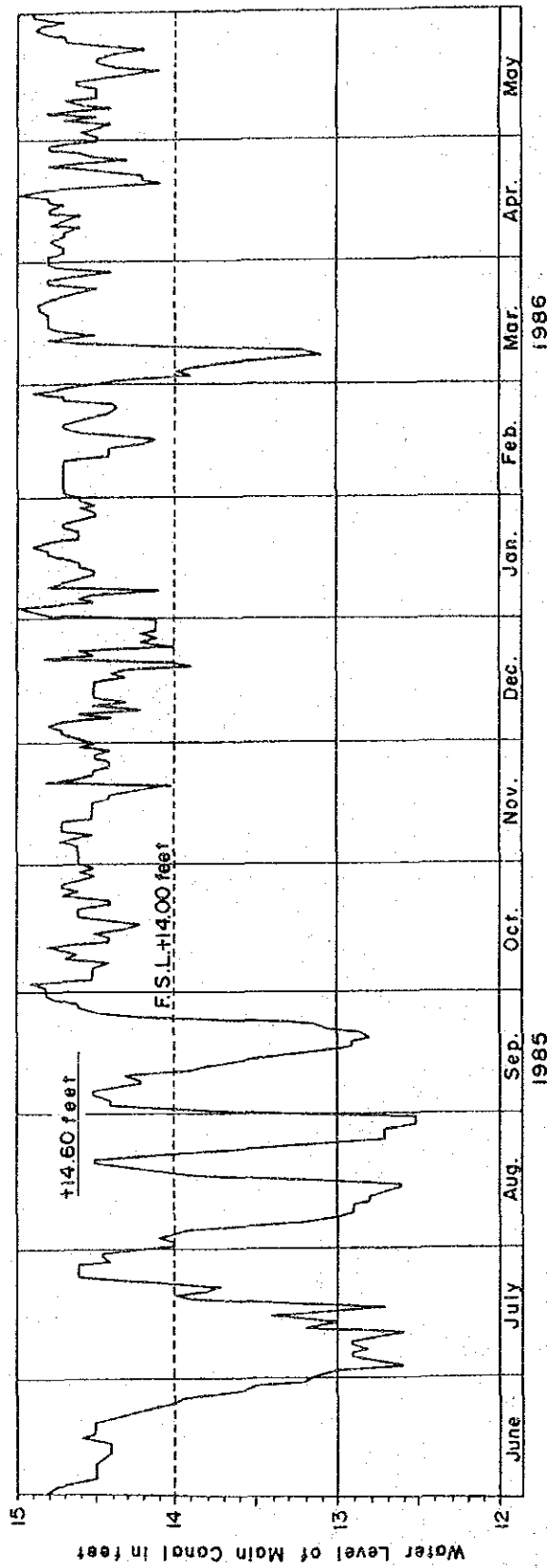


図. 19 幹線水路日水位変動記録

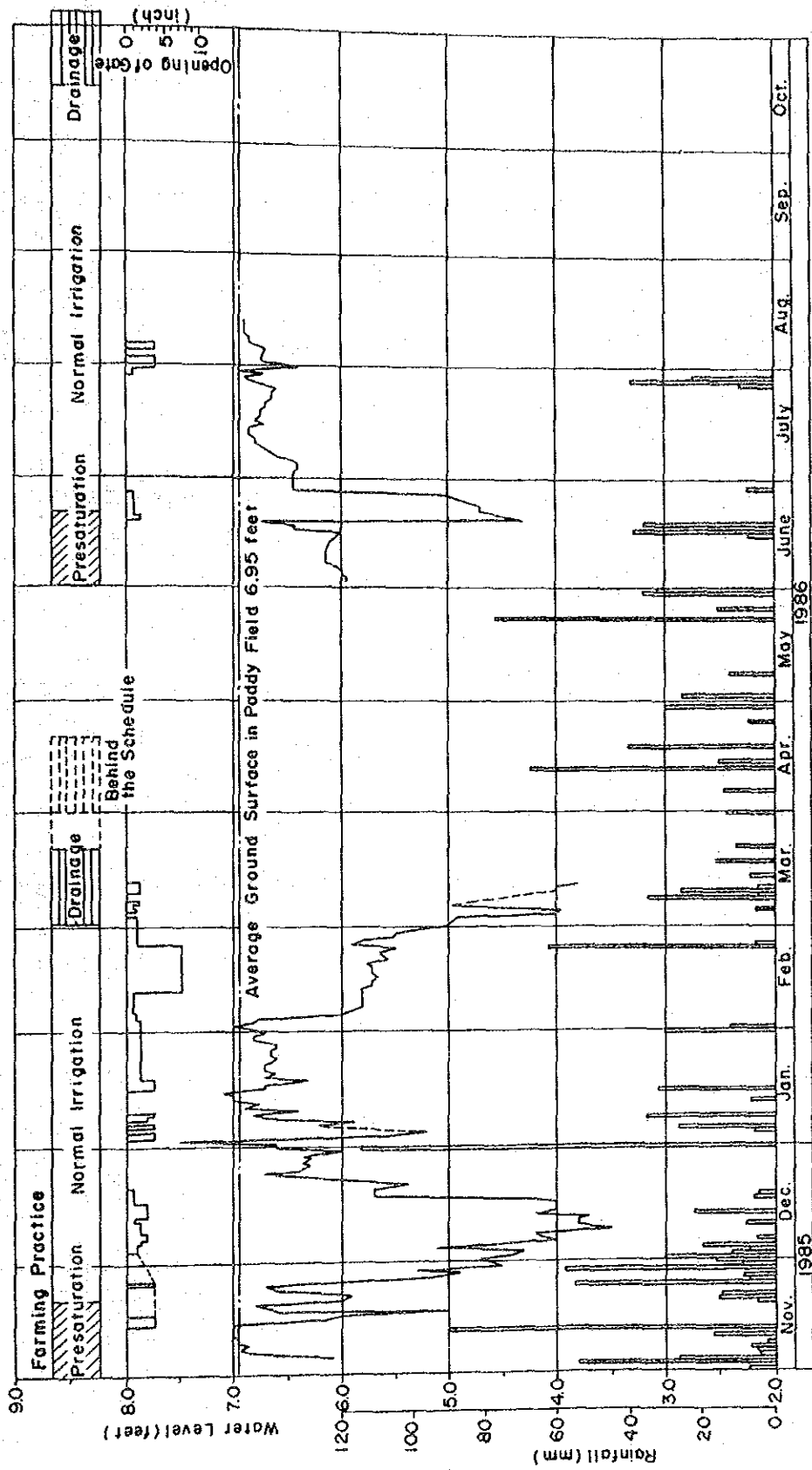
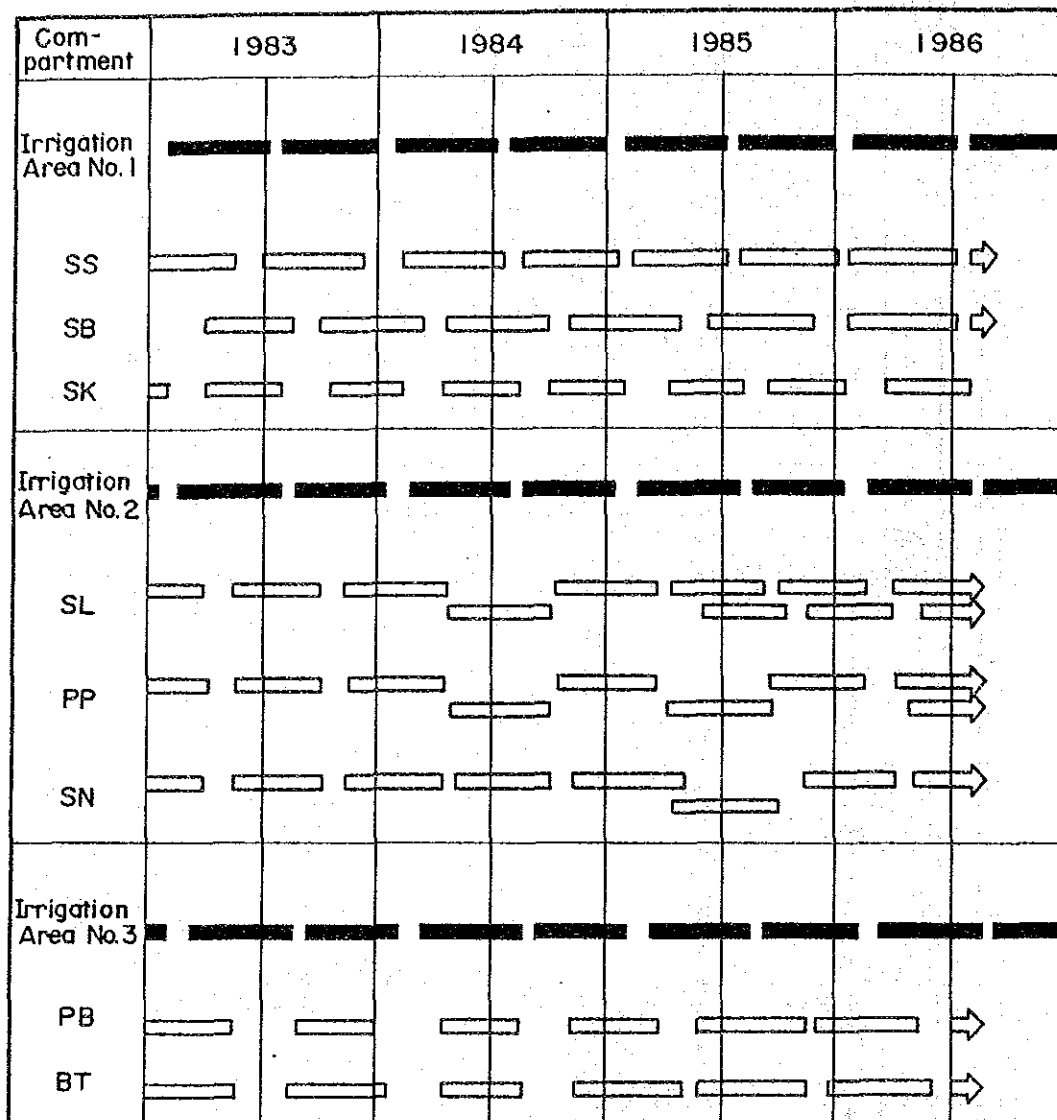


図. 20 ハジドラニ排水路水位記録



Remarks: Compartment
 SS: Sawah Sempadan SB: Sungai Burong
 SK: Sekinchan SL: Sungai Leman
 PP: Pasir Panjang SN: Sungai Nipah
 PB: Panchang Bedena BT: Bagan Terap



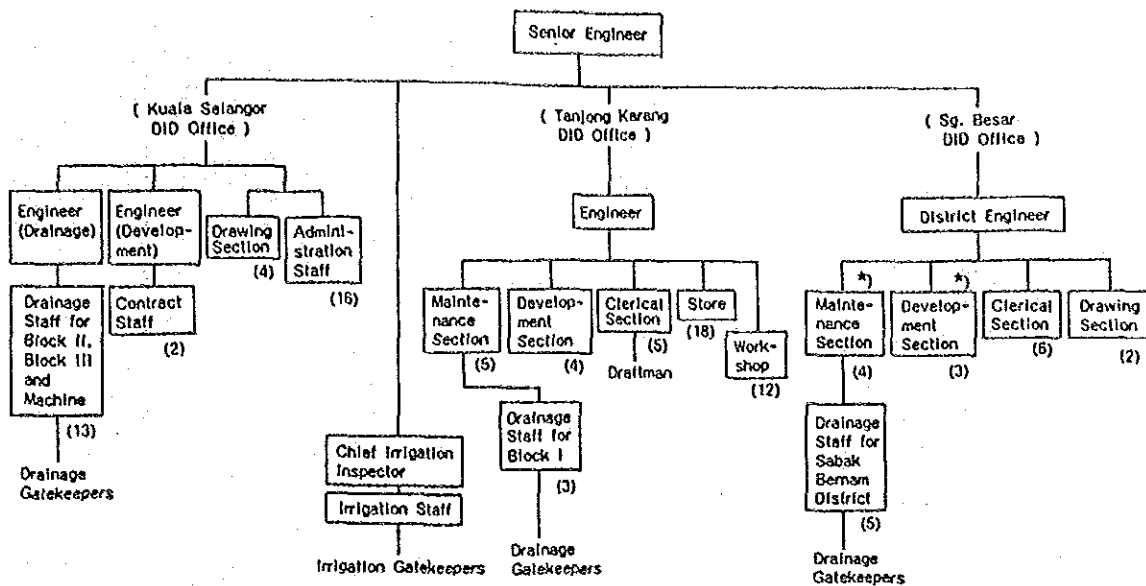
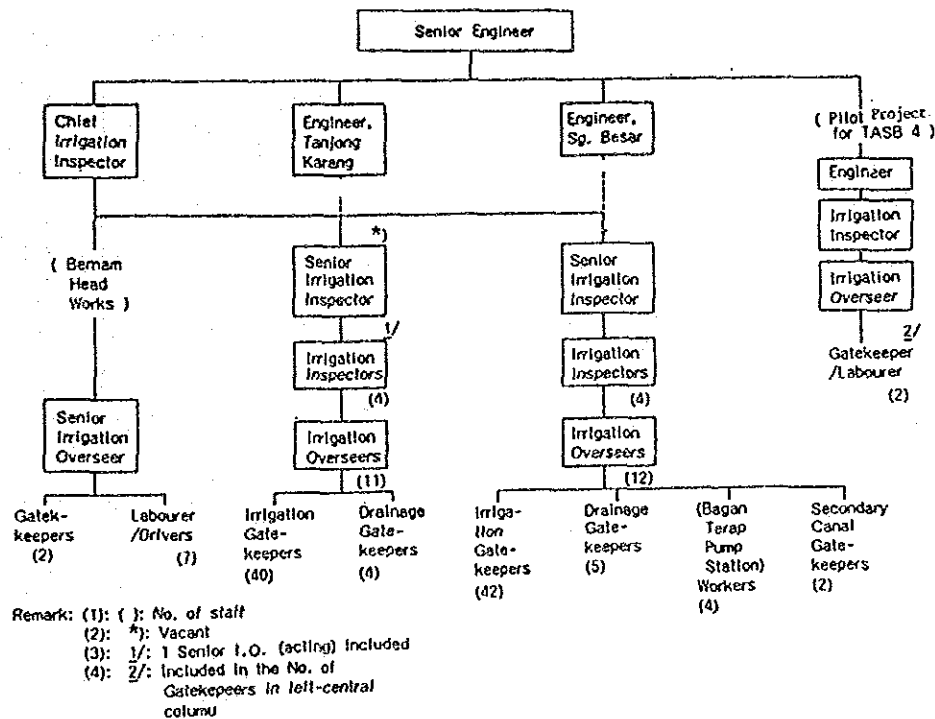
 Irrigation Schedule
 Actual Cropping Calendar

図. 21 現行灌漑計画と作付実績の対比



Remark: (1): () : Number of Staff
(2): * : Vacant



Remark: (1): () : No. of staff
(2): *): Vacant
(3): 1/ : 1 Senior I.O. (acting) included
(4): 2/ : Included in the No. of Gatekeepers in left-central column

図. 22 D I D クアラセランゴール地方事務所
組織図

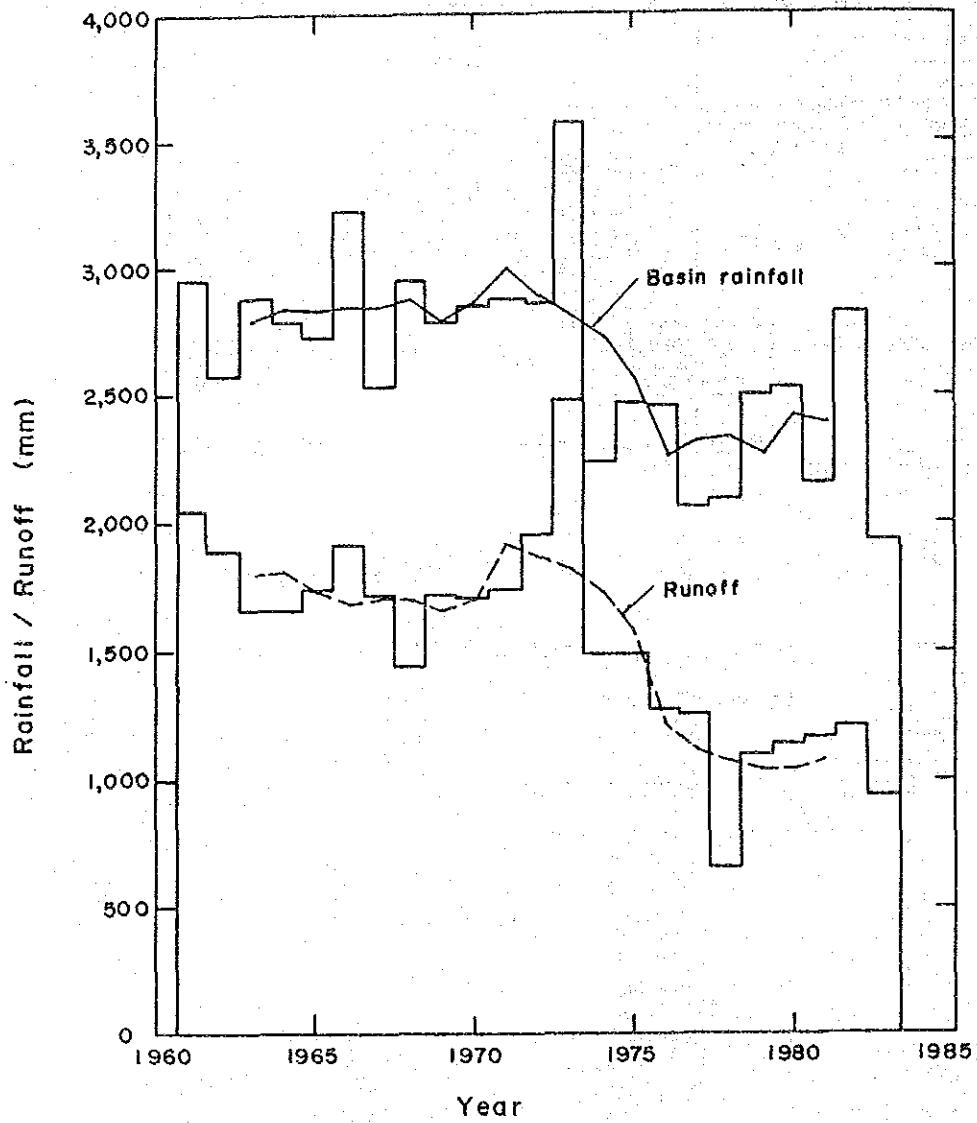


図. 23 ベルナム川流域における降雨量と流出量の
経年変化

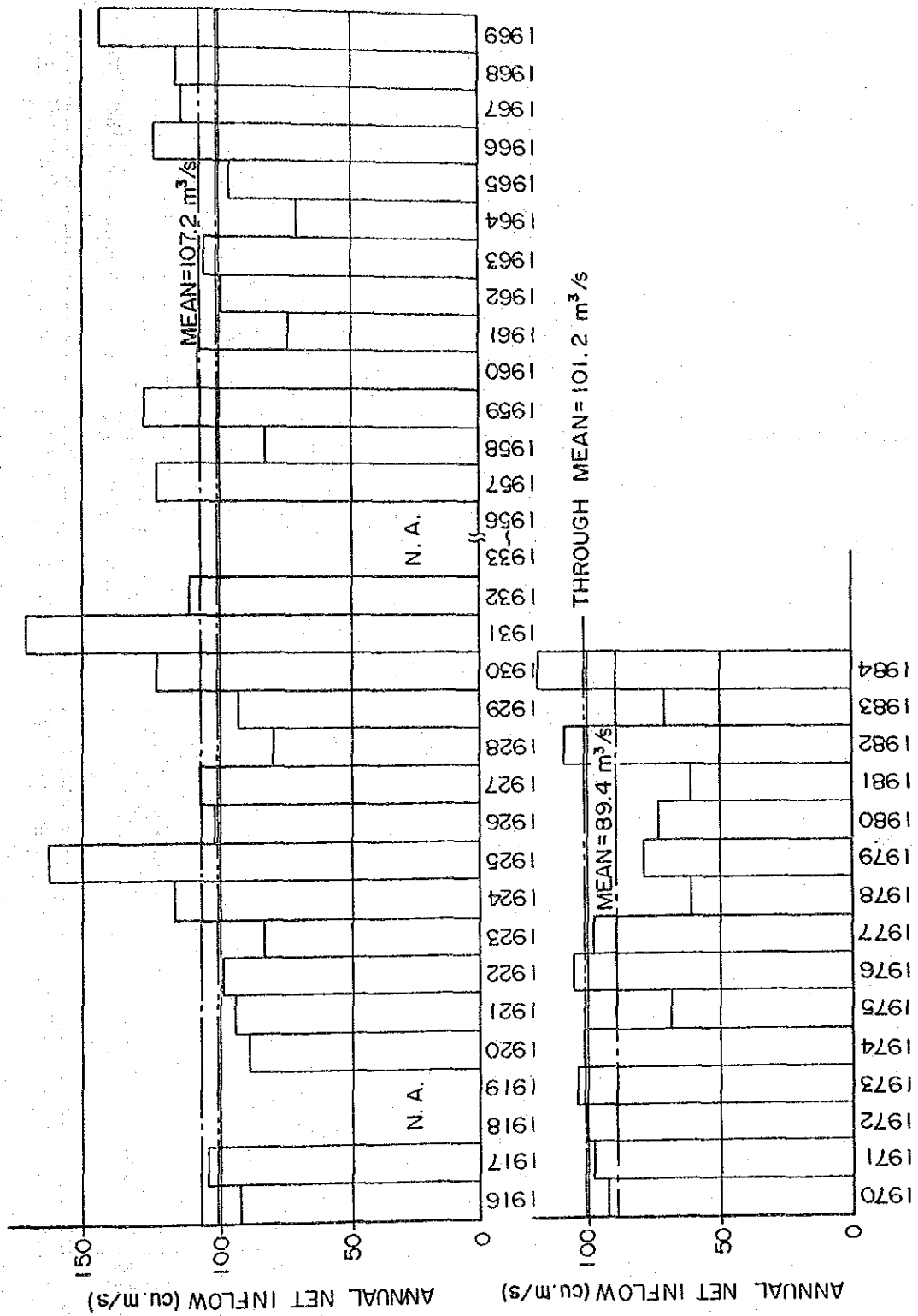


図. 24 スマトラ島トバ湖への純流入量経年変化

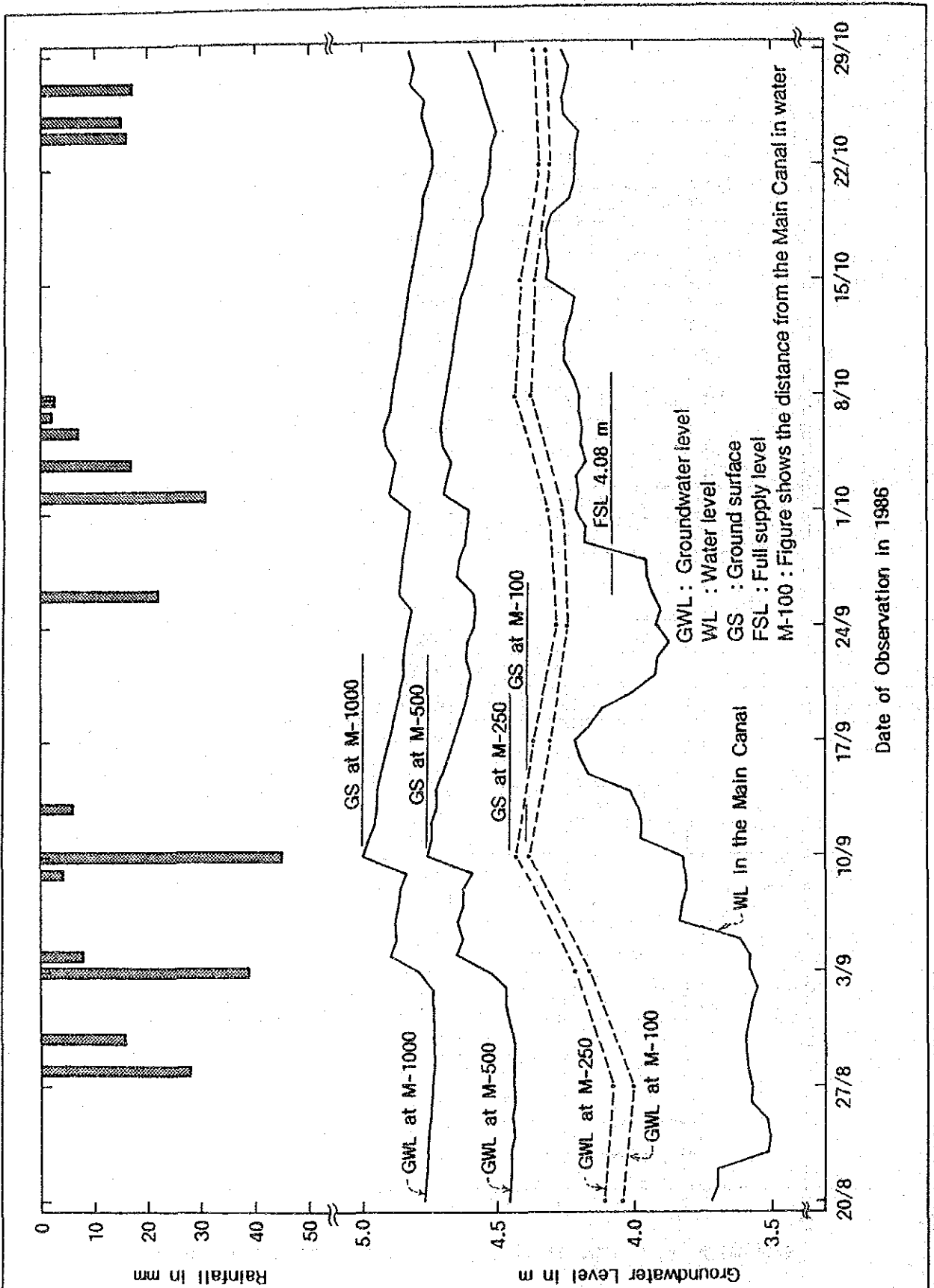


図. 25 タンジョンカラン湿地における降雨量と
 地下水位観測記録

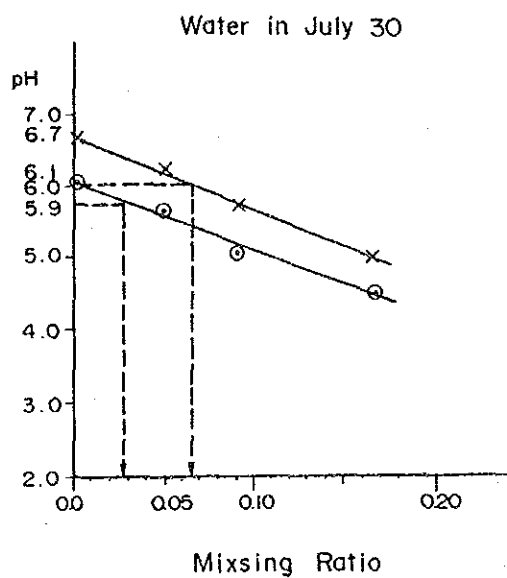
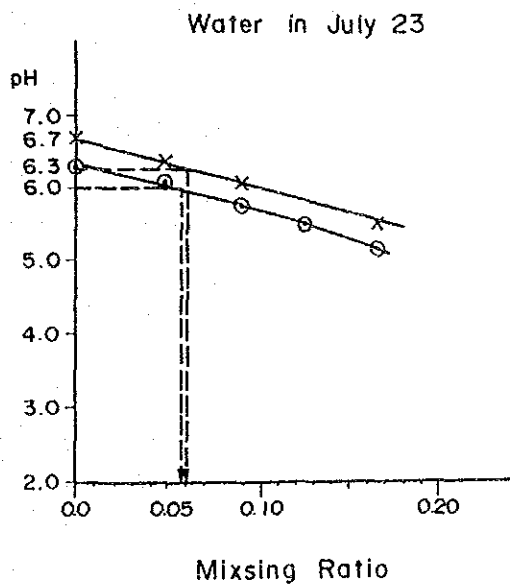
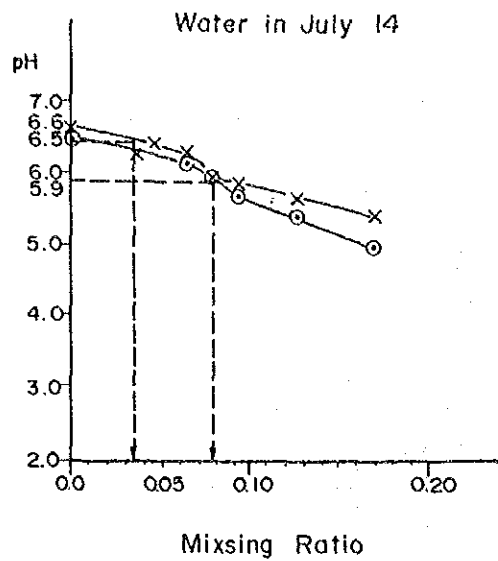
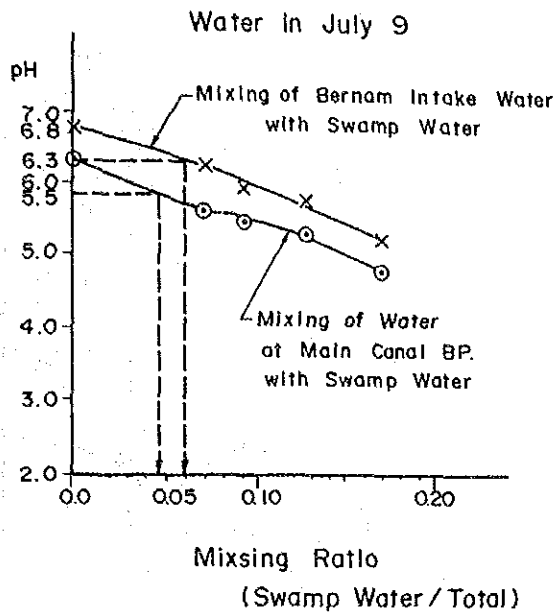
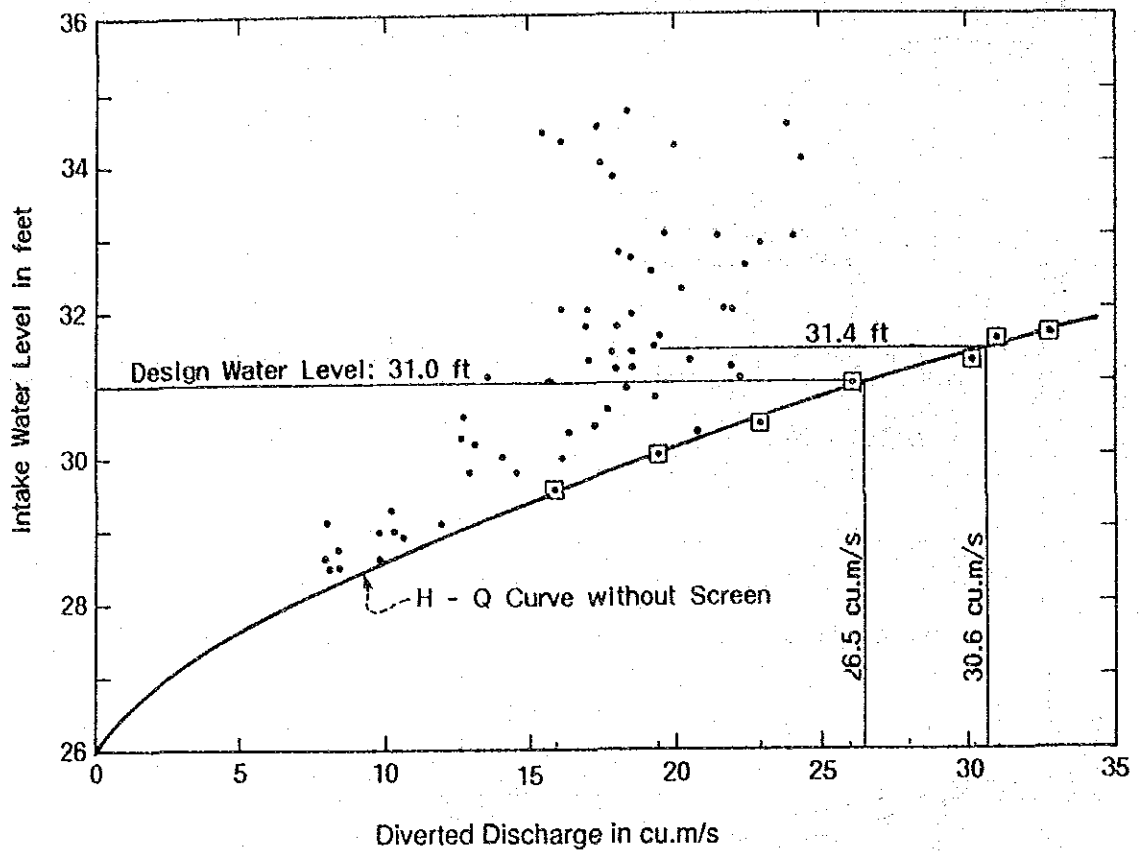


図. 26 タンジョンカラシ湿地浸出水とベルナム川
河川水の混合比率とpH測定値の対比



- : Measurement Records from Dec., 1984 to Sept., 1986 with screen condition
- ◻ : Measurement Records In November, 1986 without screen condition

図. 27 ベルナム頭首工上流測水位と取水量の対比

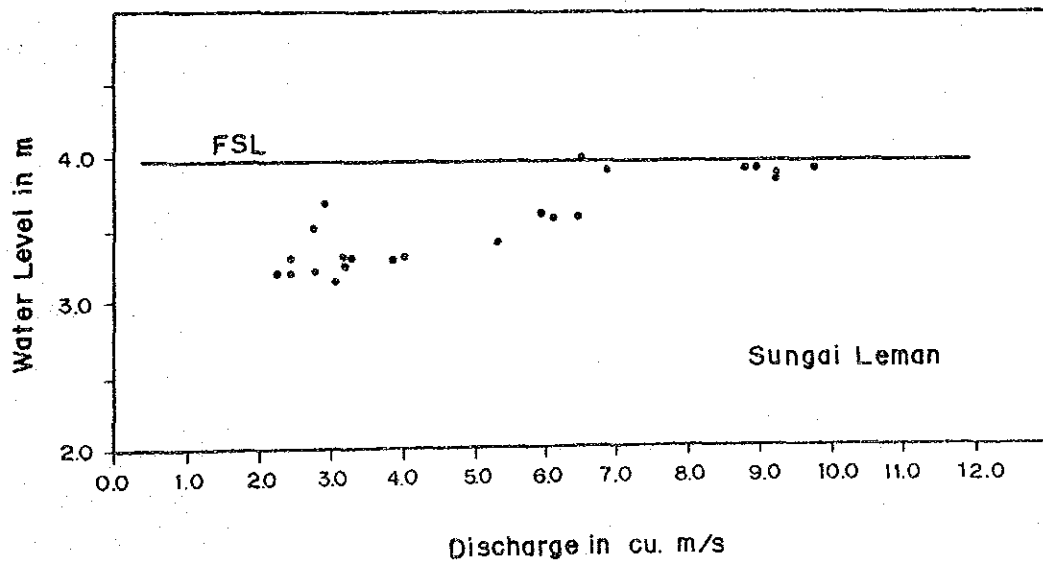
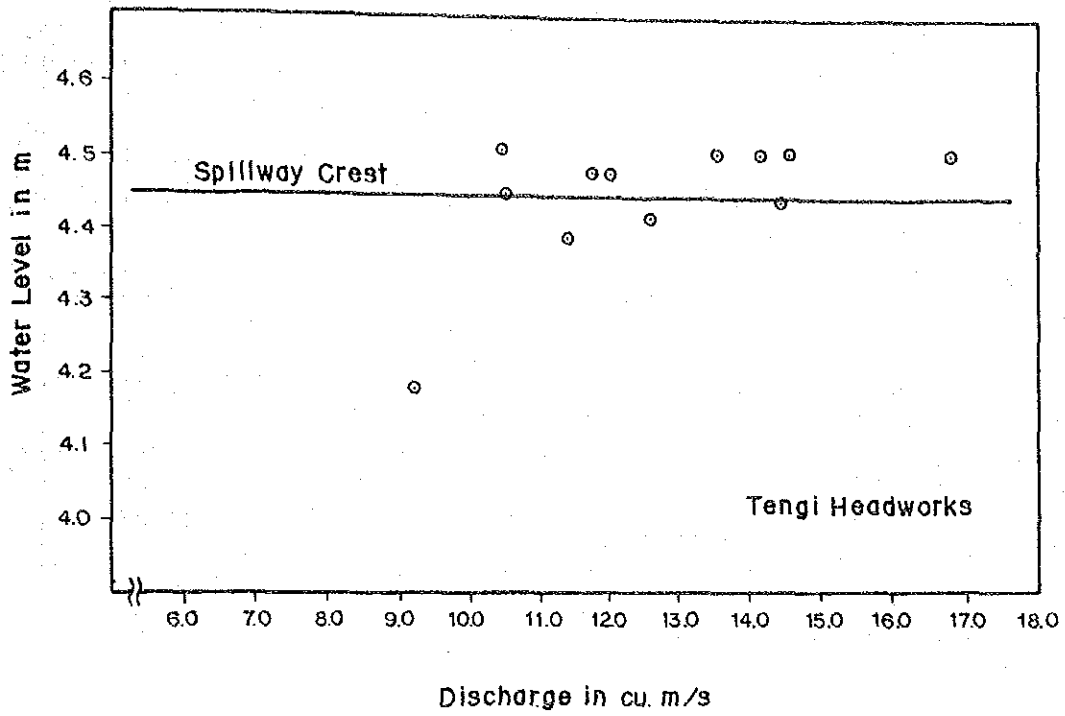


図. 28 ティンギ頭首工直下流地点における
幹線水路の水位と流量の対比

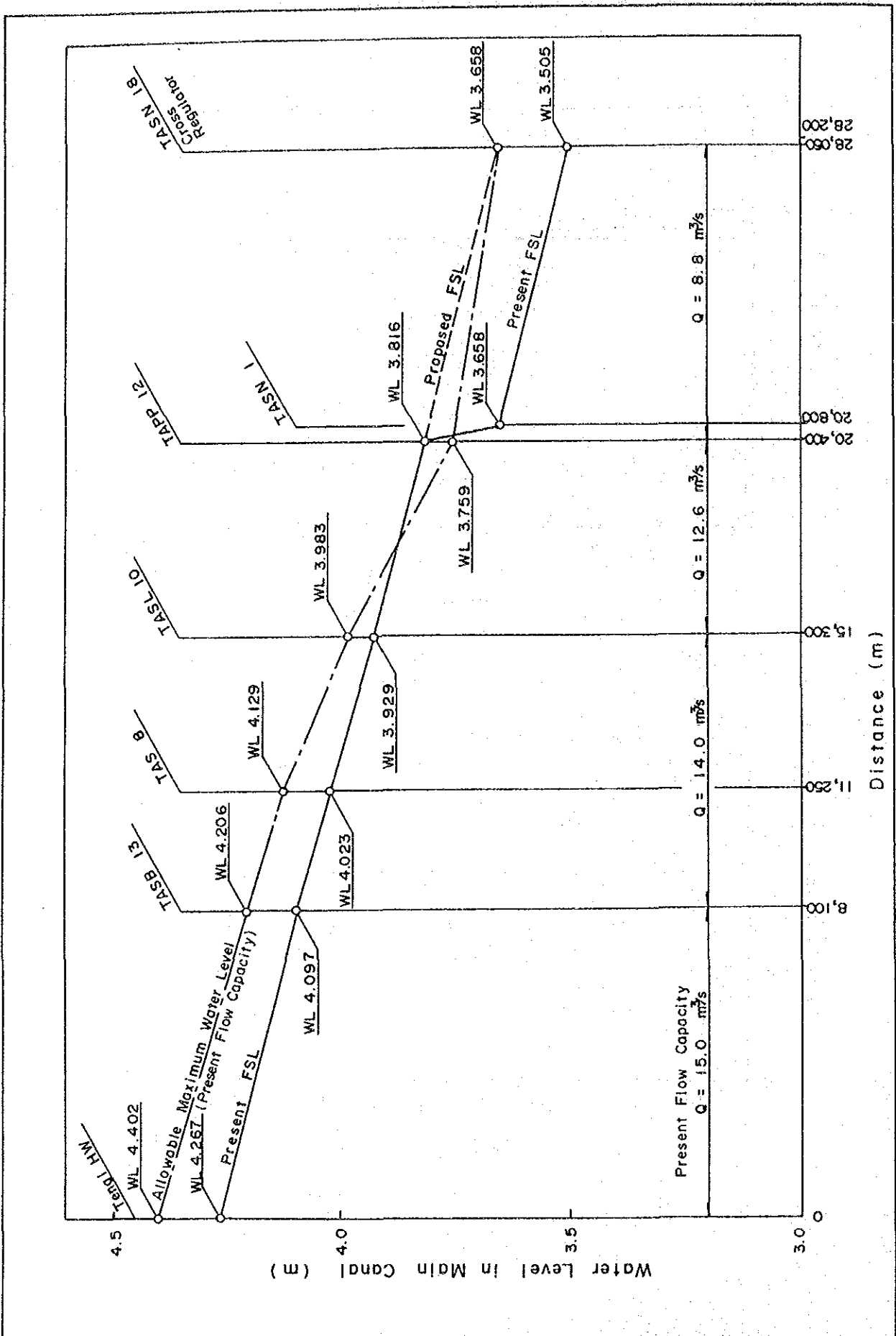


图. 29 幹線水路通水能力現況

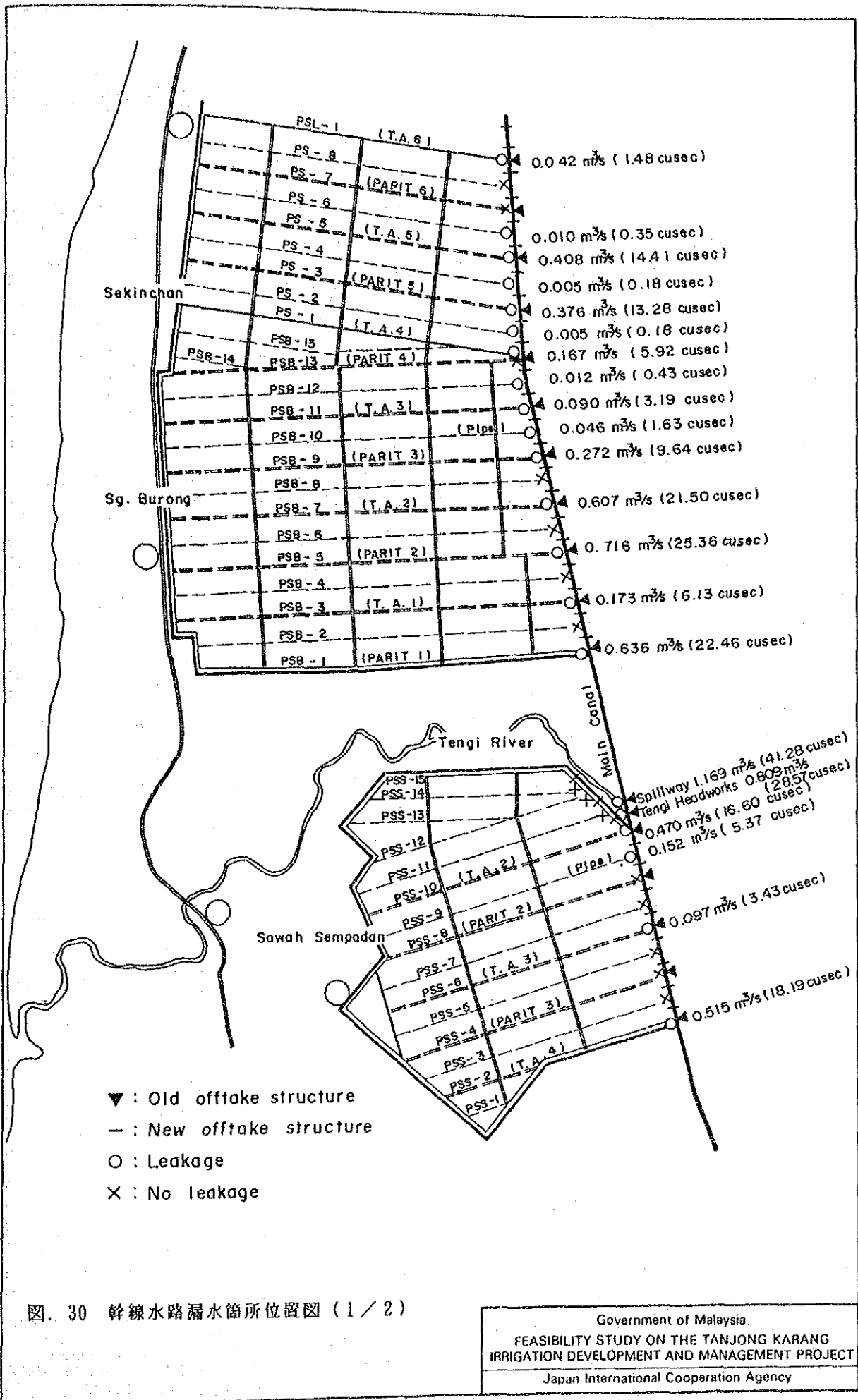


圖. 30 幹線水路漏水箇所位置圖 (1 / 2)

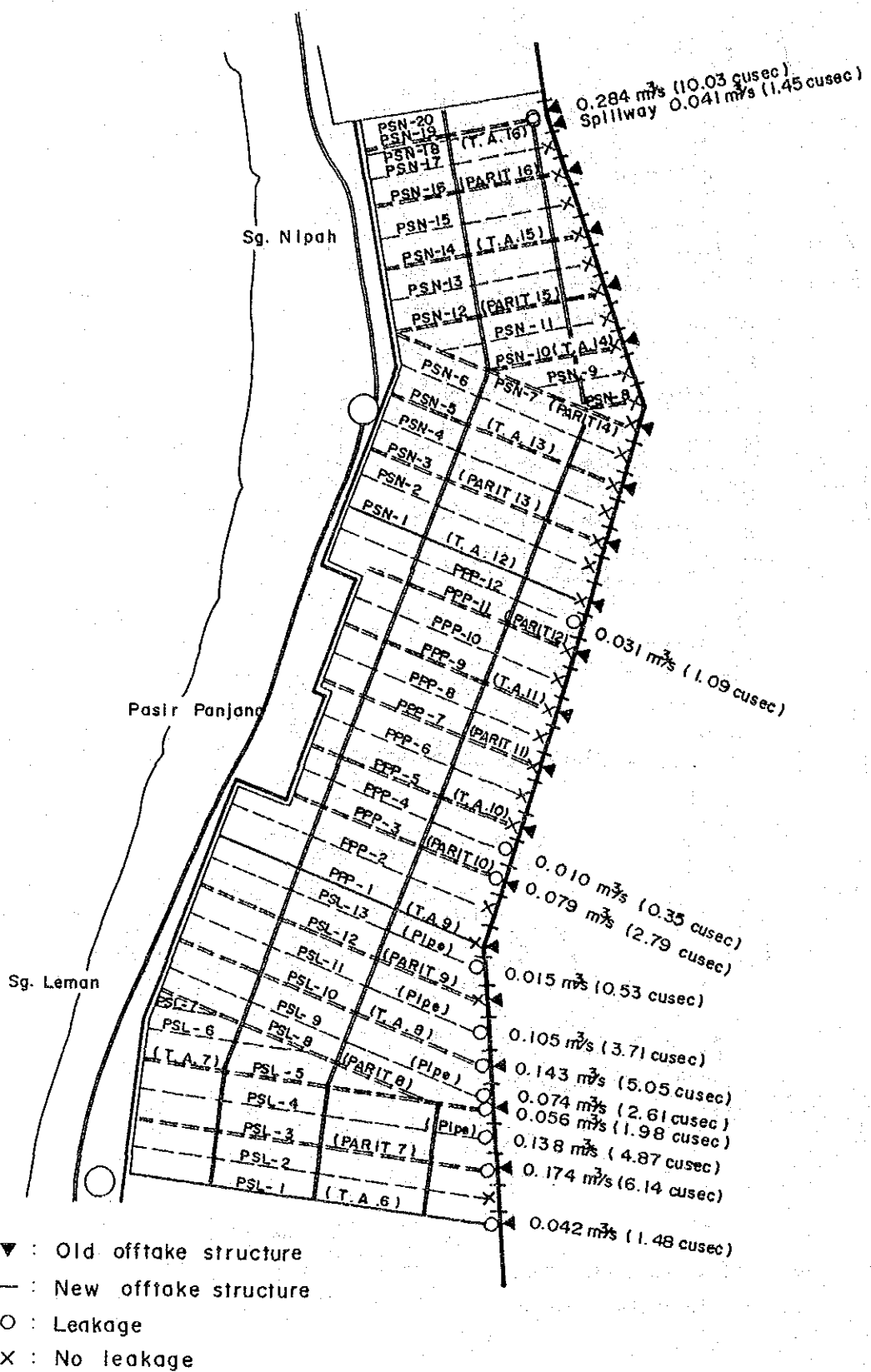
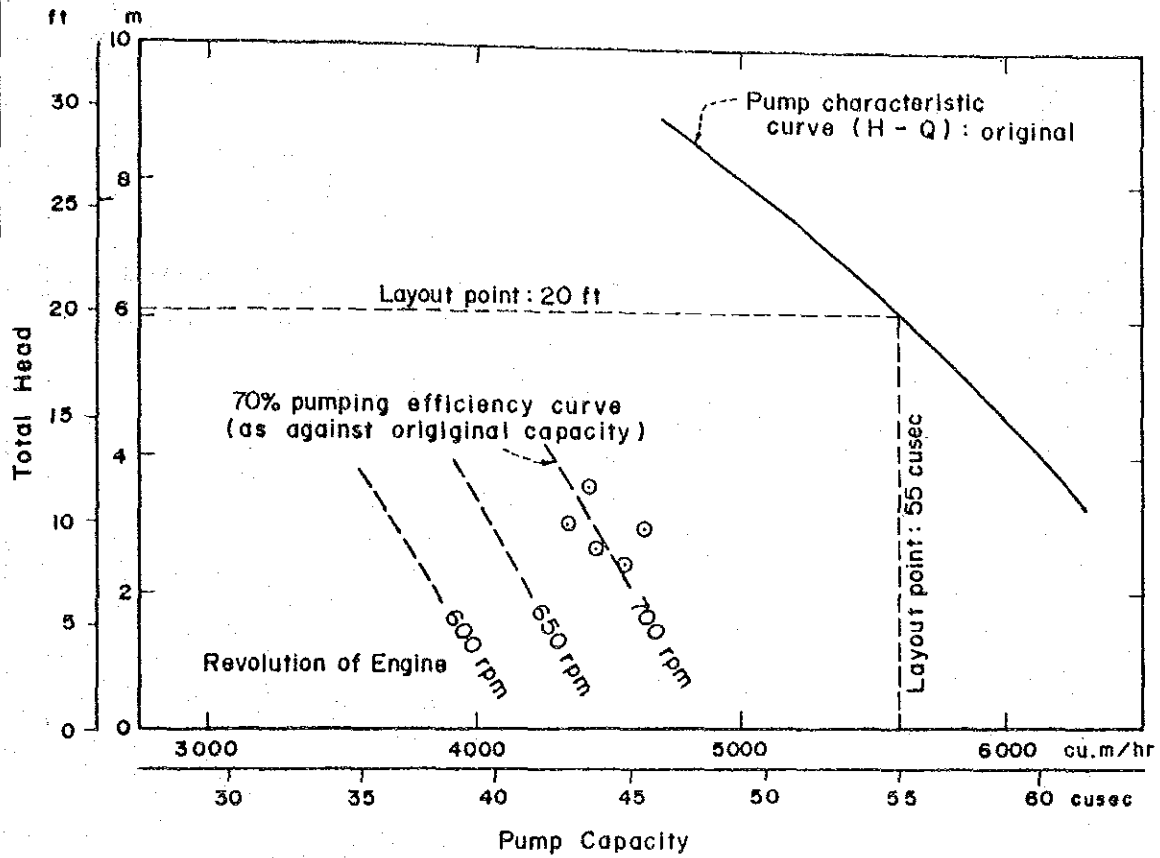


圖. 30 幹線水路漏水箇所位置圖 (2 / 2)



Remarks : Measurement date : July 10, 14 and 15 , 1986

図. 31 バガンテラップ揚水機場ポンプ効率

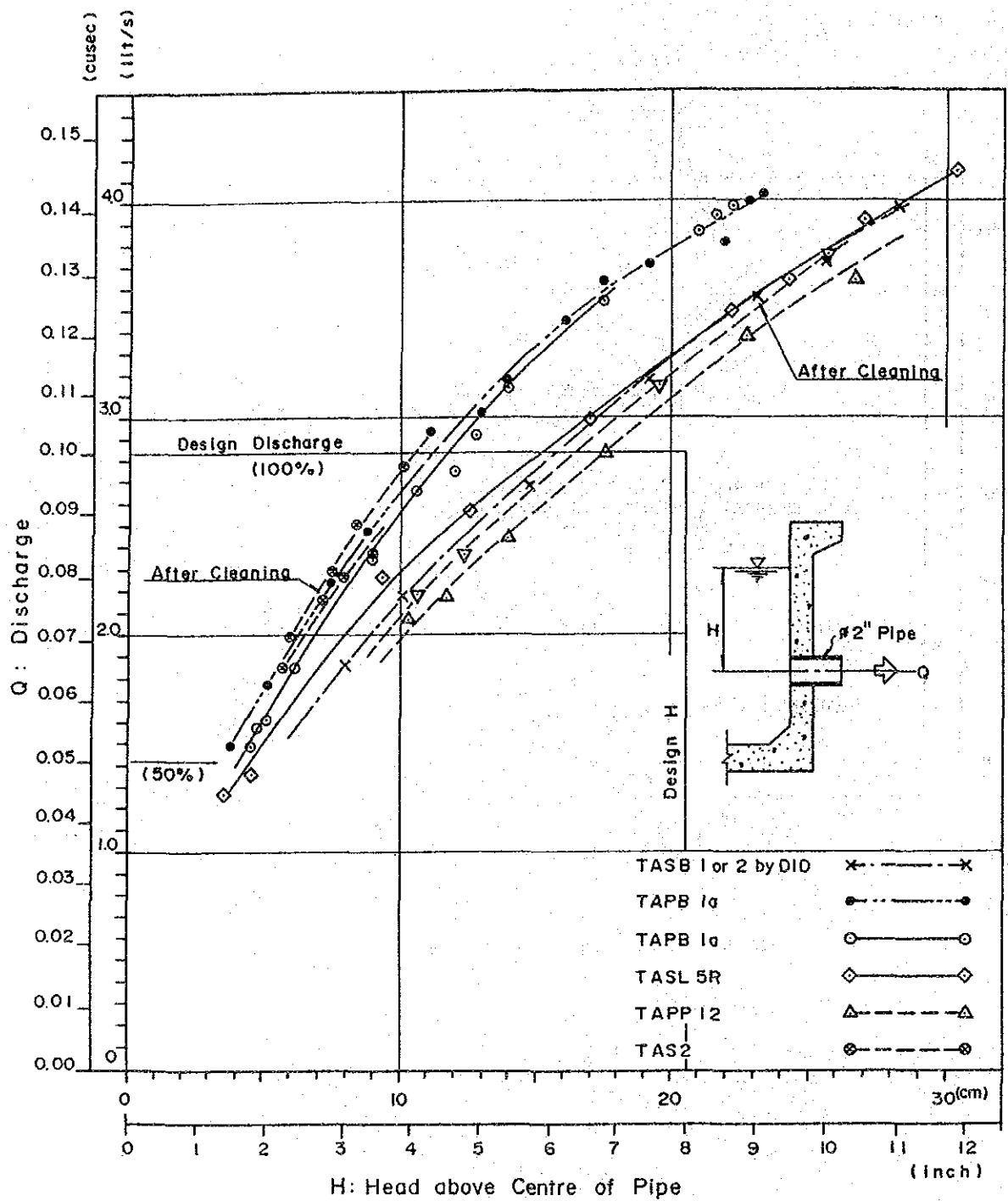
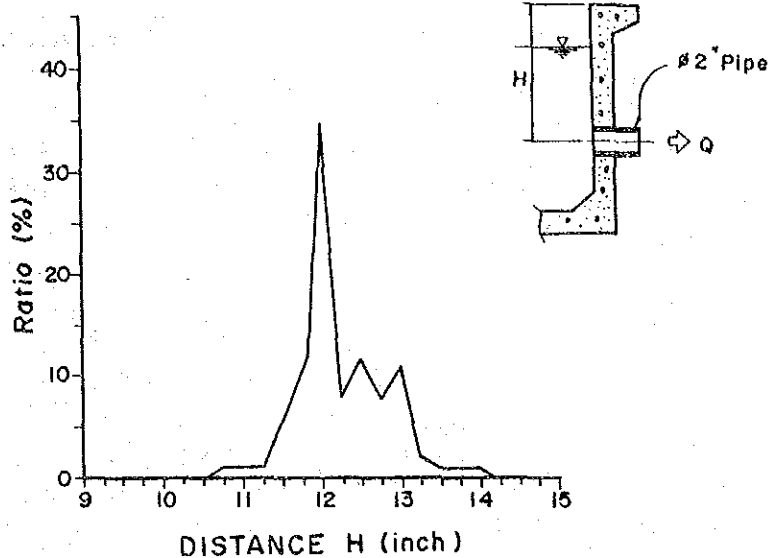


図. 32 分水パイプ放流量測定記録



H	TASB3	TASB4	TAS1	TAS2	TASL1	TASL2	TASL8	TAPB1	TAPB2	TABT1	TABT2	TOTAL	RATIO(%)
8.25											1	1	0
9.00									1			1	0
9.75											1	1	0
10.00				1							2	3	0
10.25											1	1	0
10.50								1			2	3	0
10.75			2	1							3	6	0
11.00			5	1	2				1	2	1	12	1
11.25	3	2	4	8	1	4	2				2	26	1
11.50	10	35	24	2	5	4	1	3	3	13	3	103	6
11.75	35	61	44	23	11	11	8		2	5	7	207	12
12.00	128	84	74	126	42	33	21	42	32	18	21	621	35
12.25	25	5	12	28	17	15	22		1	10	10	145	8
12.50	12	9	11	6	32	33	30	26	19	13	24	215	12
12.75	8	5	6	2	33	26	35		5	11	5	136	8
13.00	2	28	15		32	27	19	16	19	13	14	185	11
13.25	1	3	2		1	19	9		1	3	2	41	2
13.50	4		1			2	3	2	5	5		22	1
13.75	2					4	1		1	1	2	11	1
14.00			2				1				1	5	0
14.25										2		2	0
14.50	1									1		2	0
15.00	1											1	0
TOTAL	232	232	202	198	176	178	152	90	90	98	102	1750	100

図. 33 分水パイプ取付位置測定記録

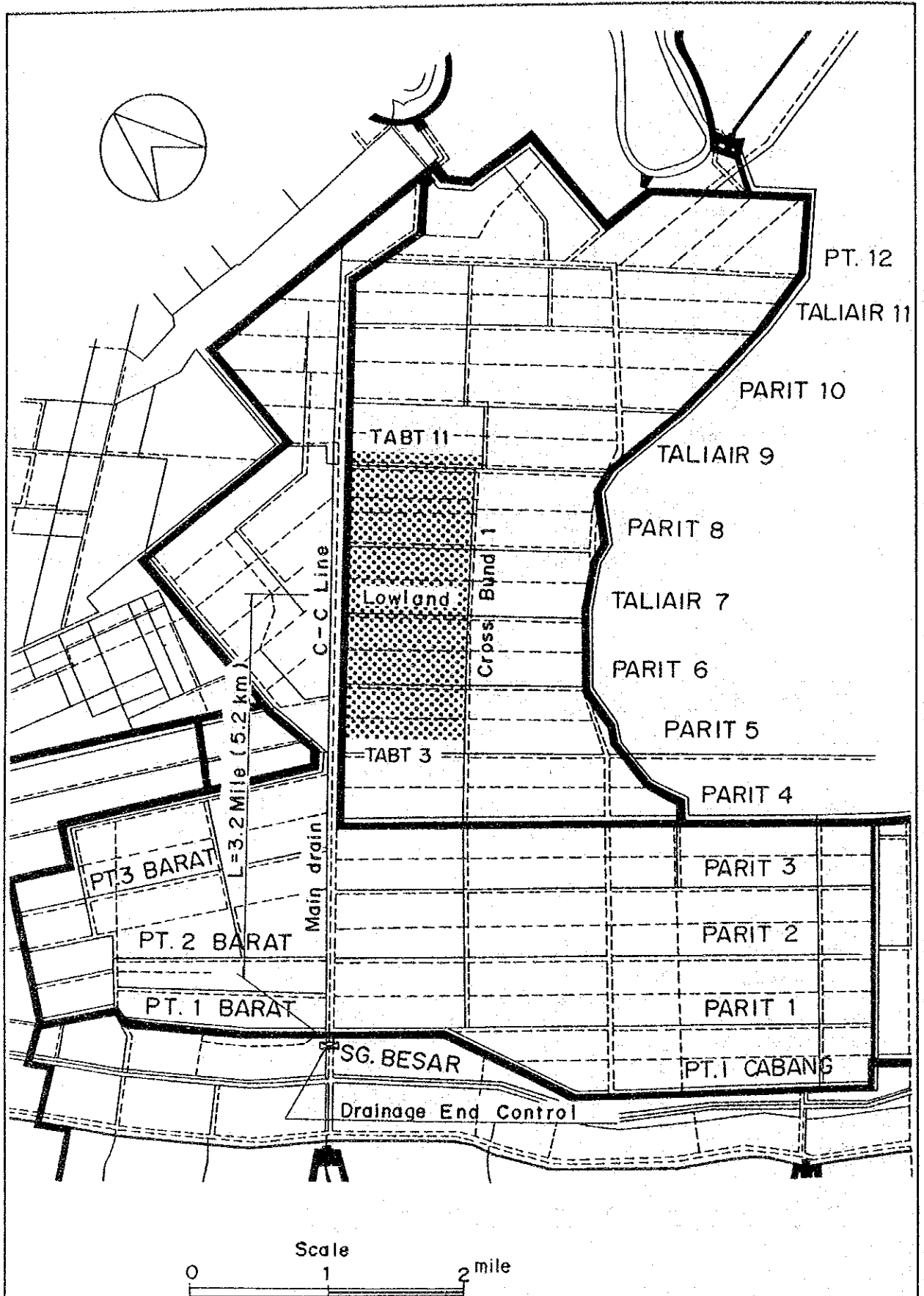
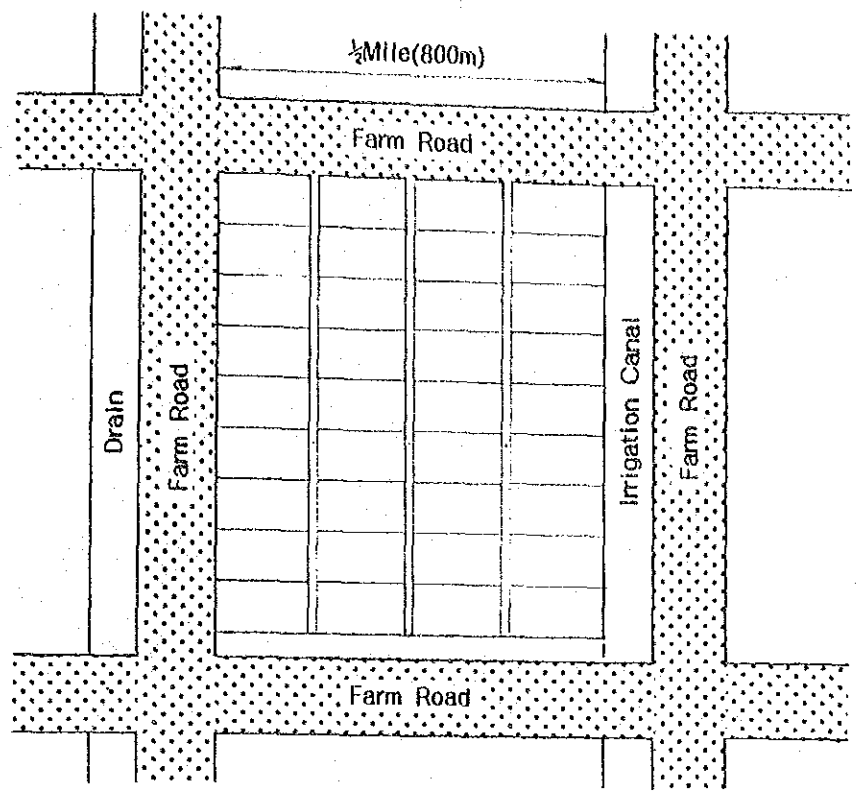
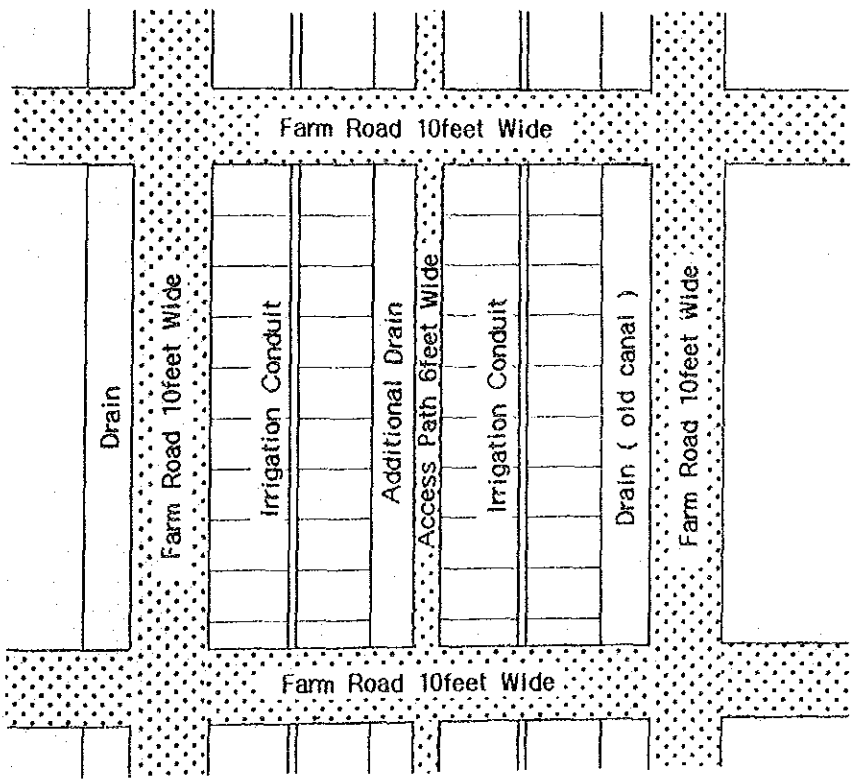


图. 34 常習潜水地区位置图

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Old Irrigation System



New Irrigation System

図. 35 P B L S 完成前と完成後の農道標準配置図

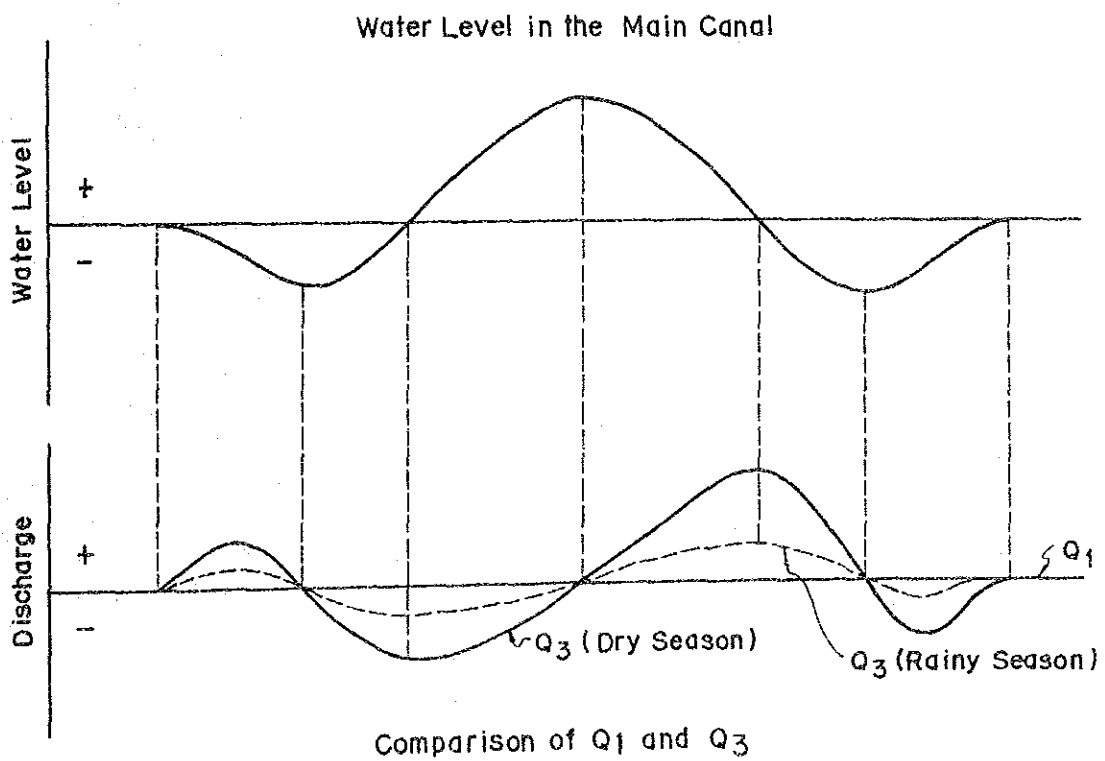
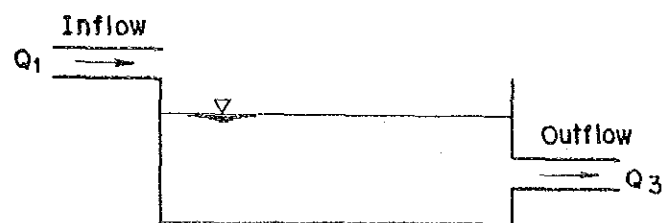
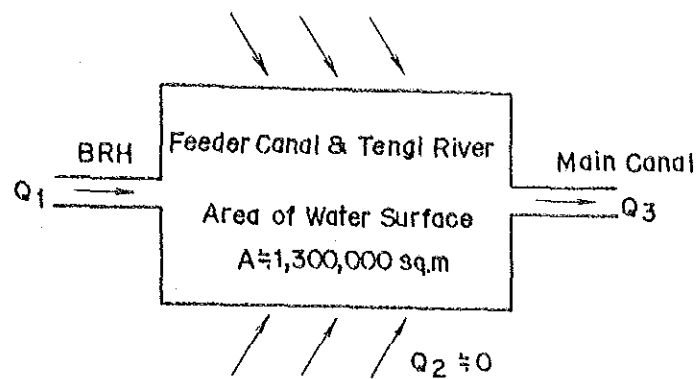
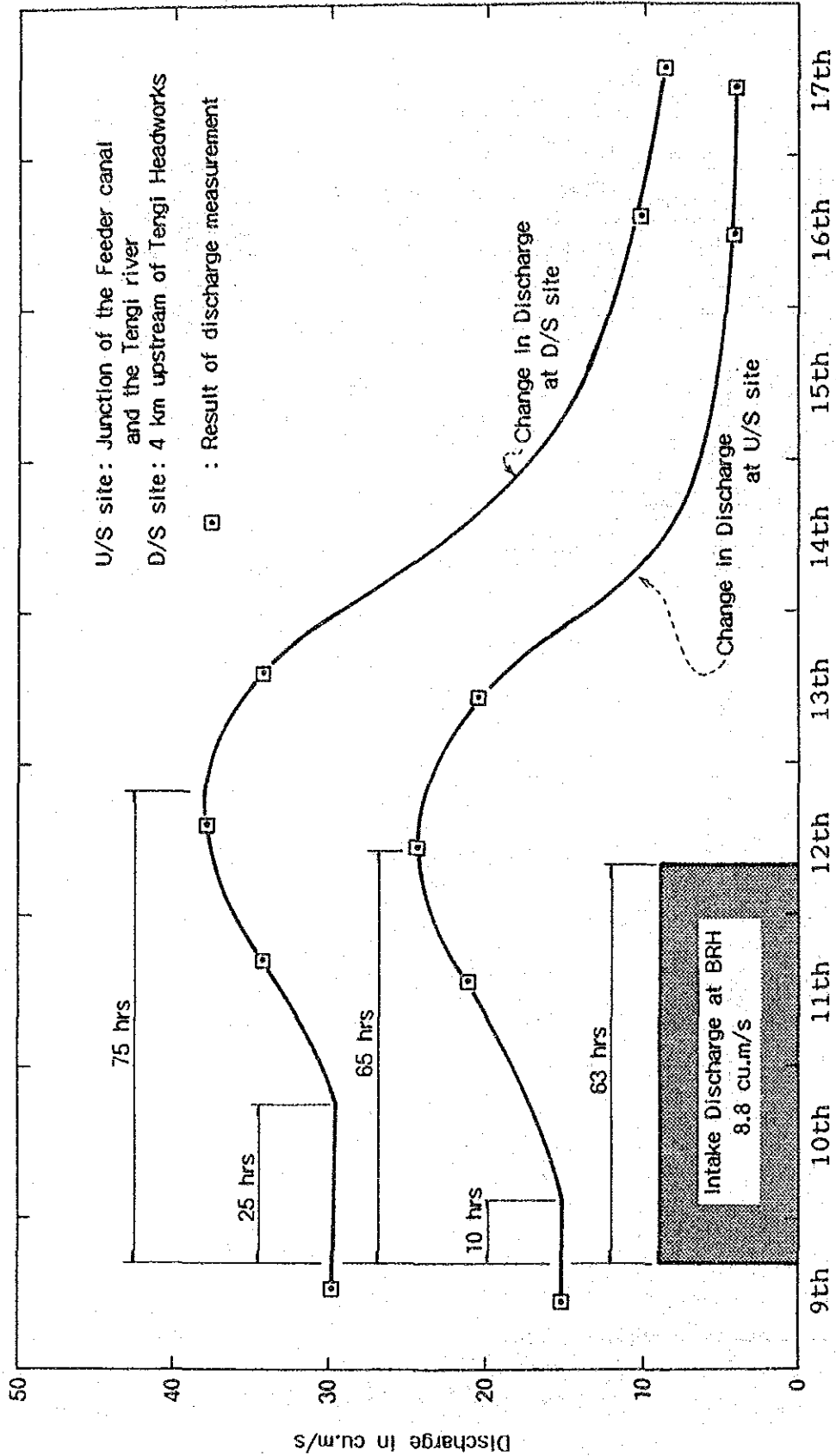


図. 37 ティンギ導水路及びティンギ川の

流況モデル



Date in December, 1986

図. 38 ティンギ導水路及びティンギ川の流量特性

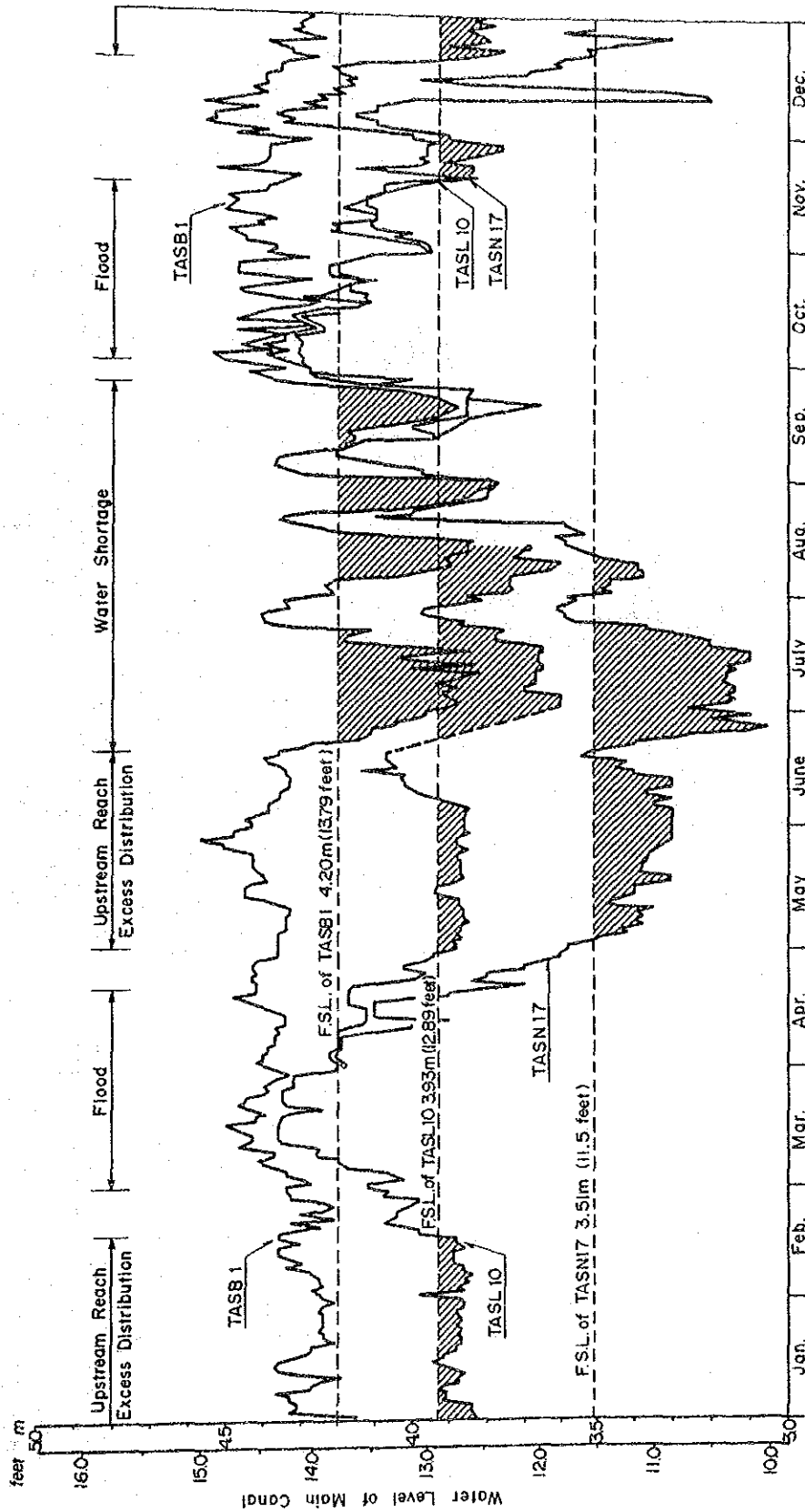
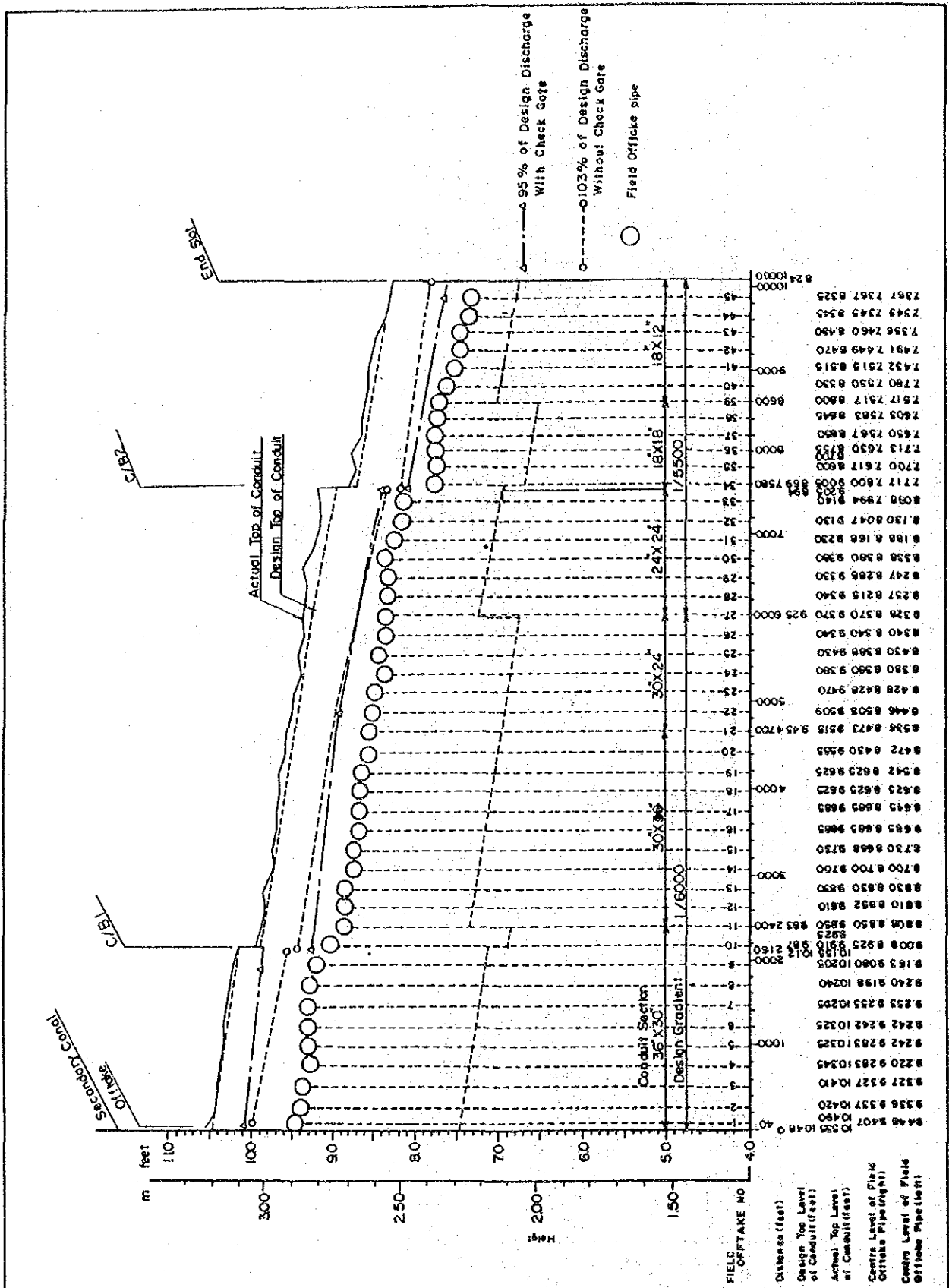


図. 39 1985年の幹線水路水位記録

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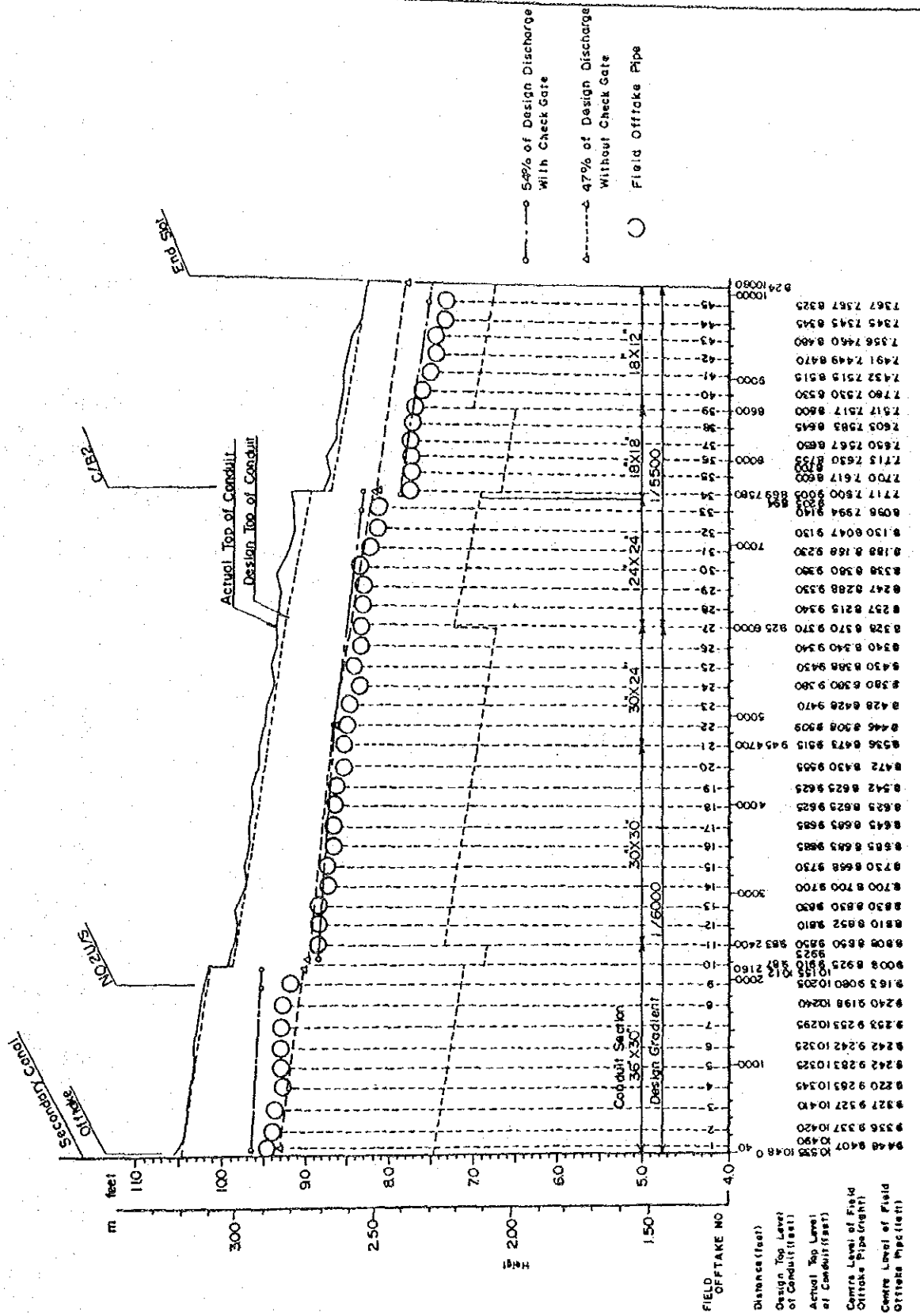
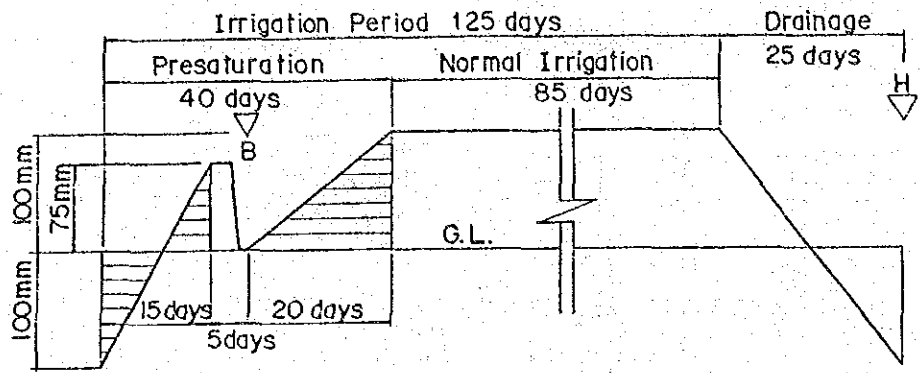
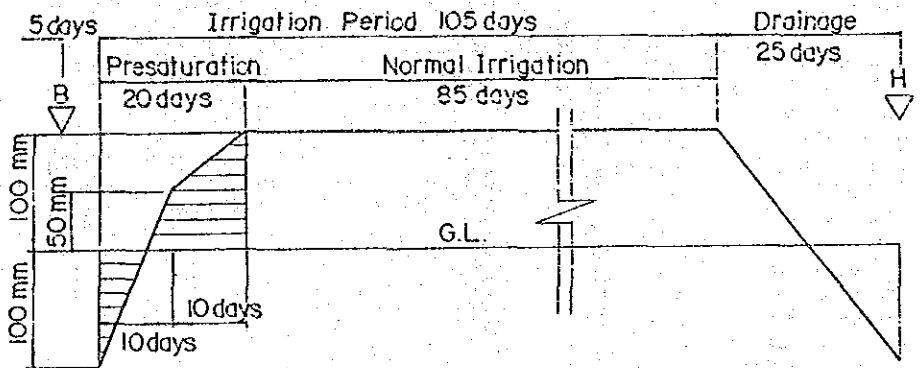


図. 41 三次水路 T A P B 2 a における

Direct Seeding
under wet
Field Condition



Direct Seeding
under Dry
Field Condition



Remarks ; B = Broadcasting
H = Harvesting

图. 42 栽培方式別圃場内水管理法

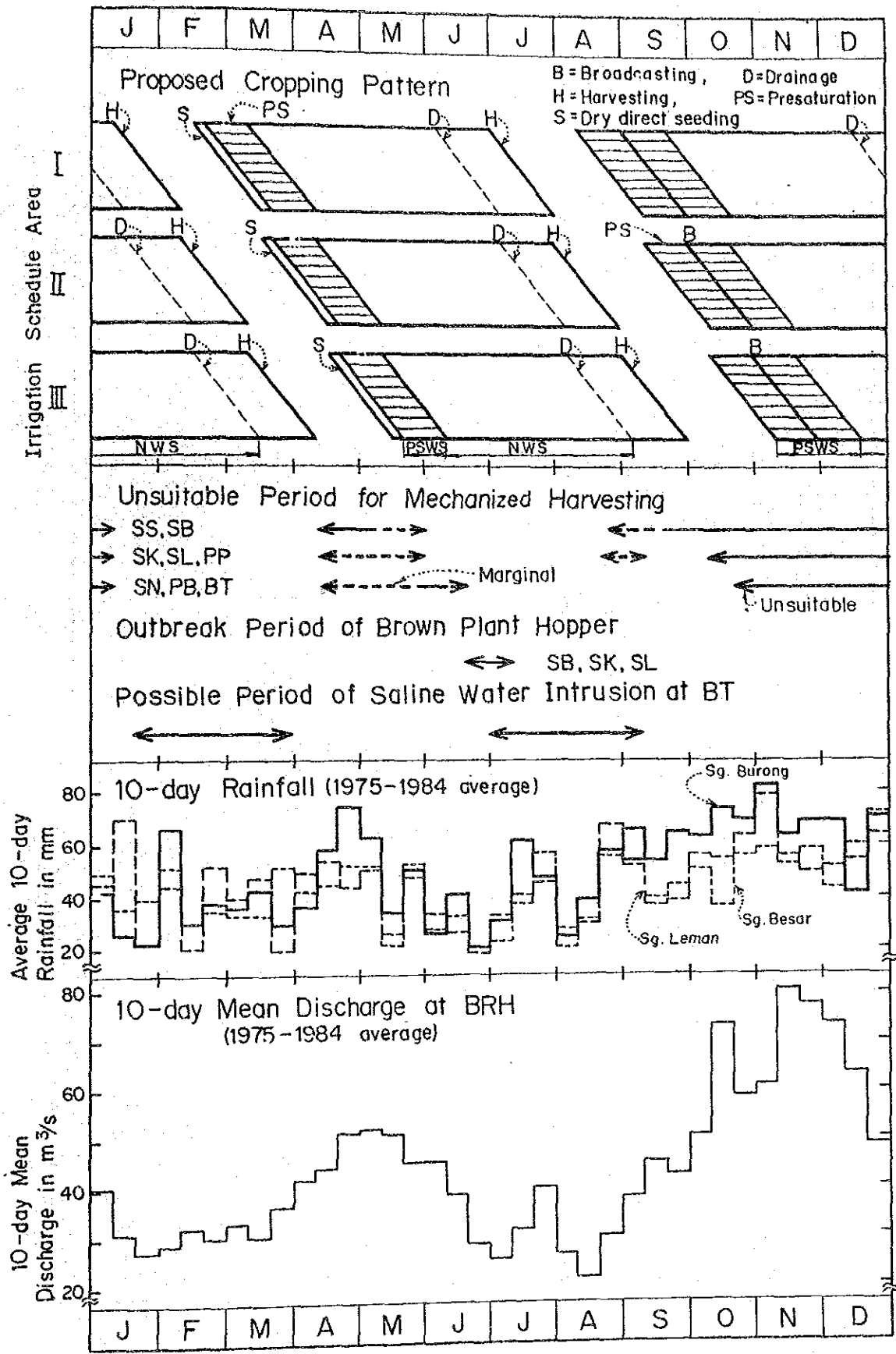
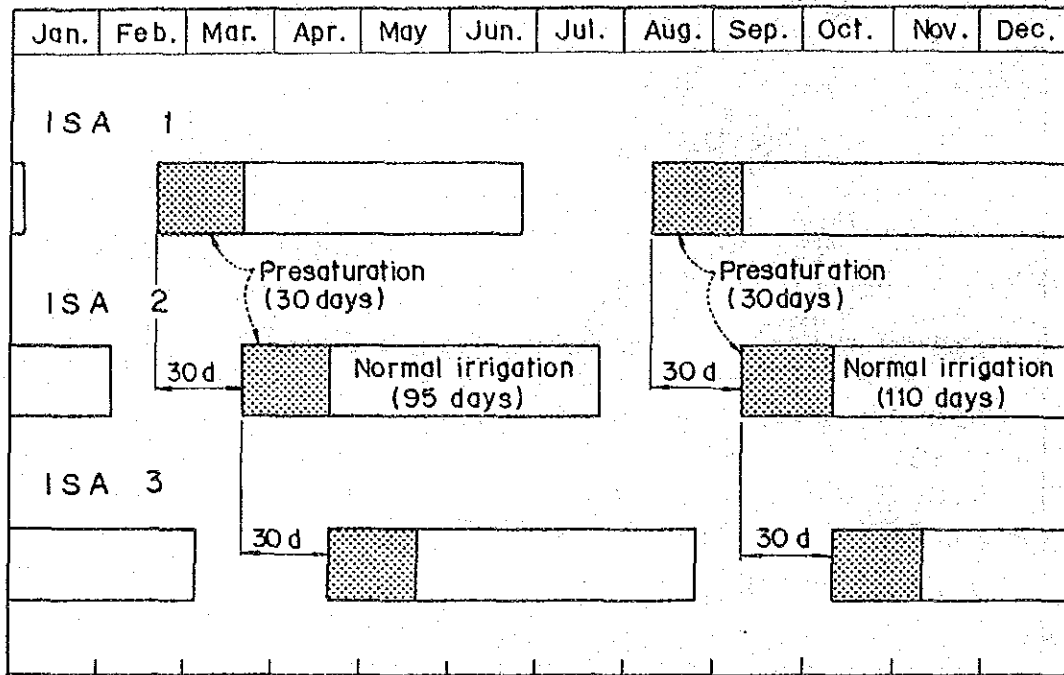


图. 43 計画作付体系



- ISA 1 : Sg. Burong, Sekinchan and Sg. Leman
- ISA 2 : Sawah Sempadan, Pasir Panjang, Sg. Nipah and Panchang Bedena (a-a)
- ISA 3 : Panchang Bedena (b-b, c-c), Bagan Terap and Sg. Panjang

图. 44 灌溉計画 Irrigation Schedule

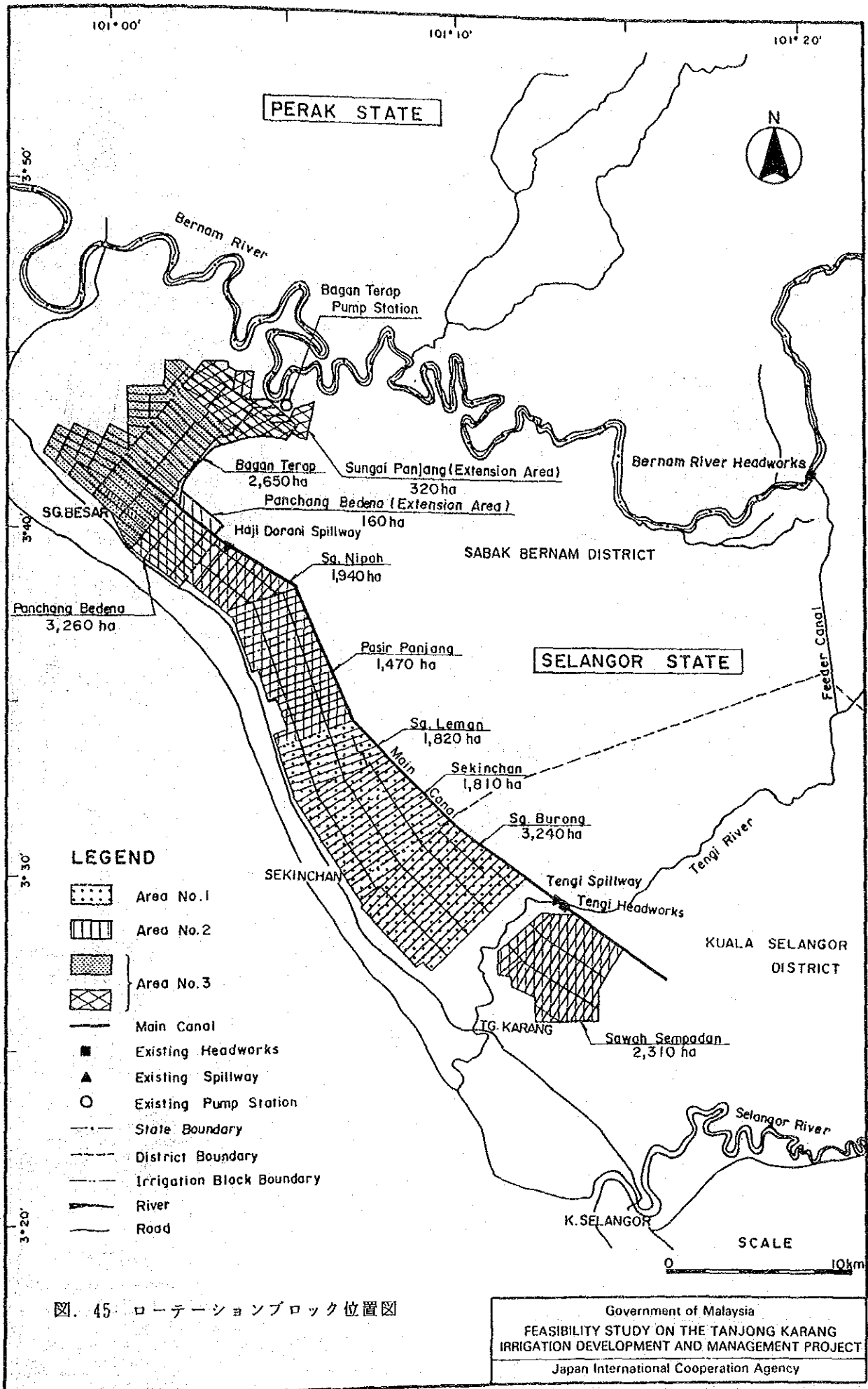


図. 45 ローテーションブロック位置図

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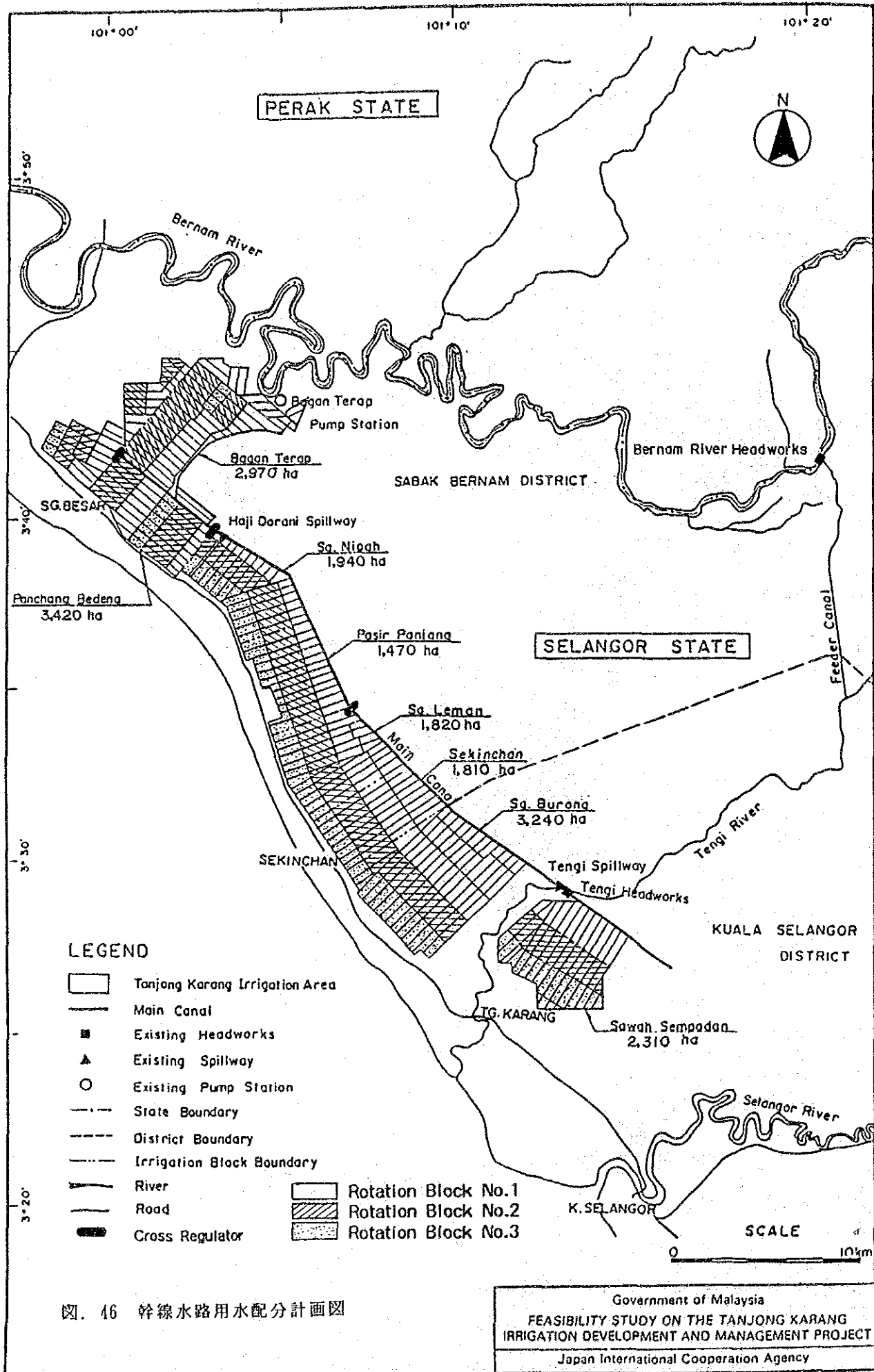


图. 46 幹線水路用水配分計画図

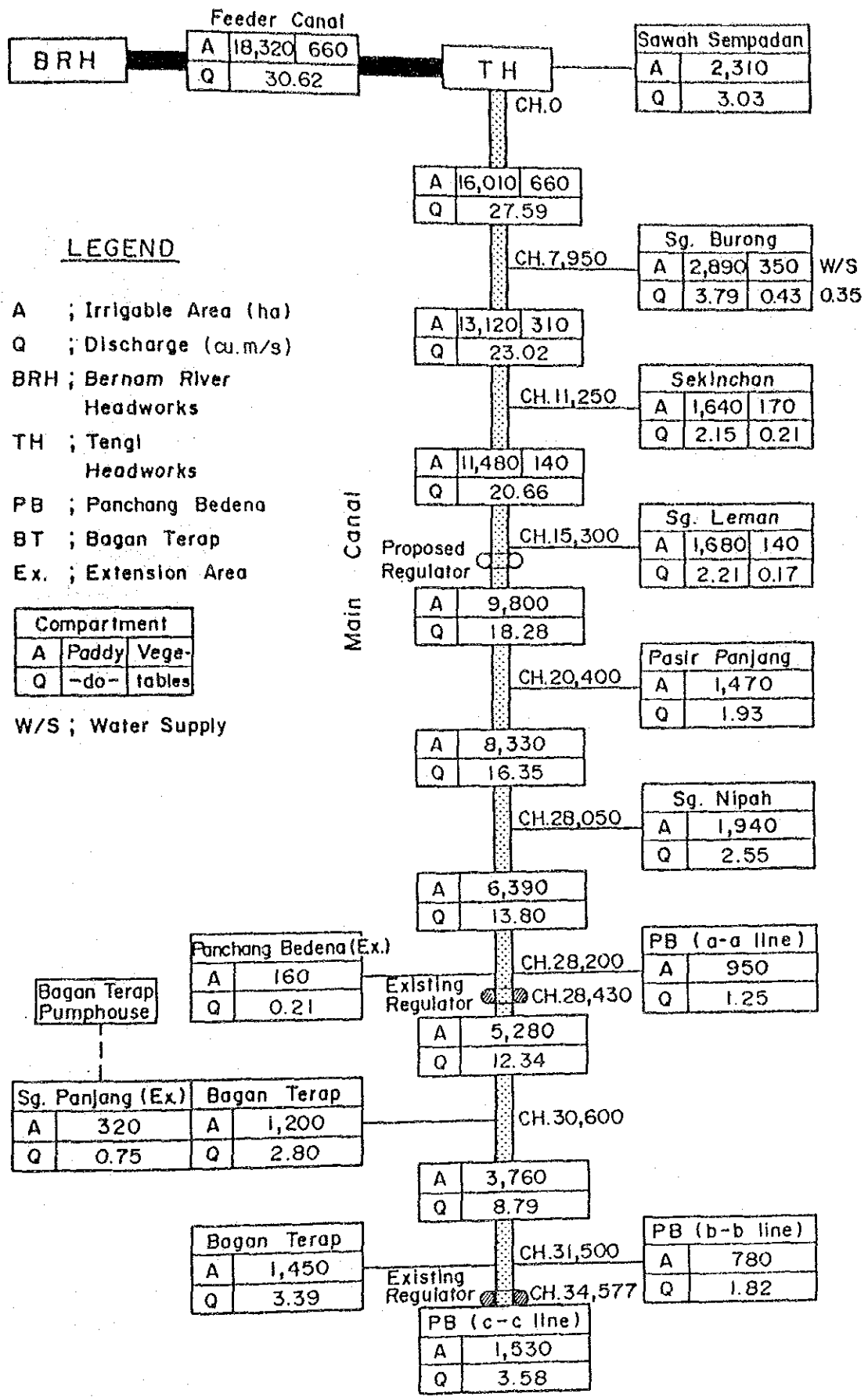


圖. 47 計畫用水量系統圖
 (1/4) (Design Discharge,
 Presaturation in ISA-3)

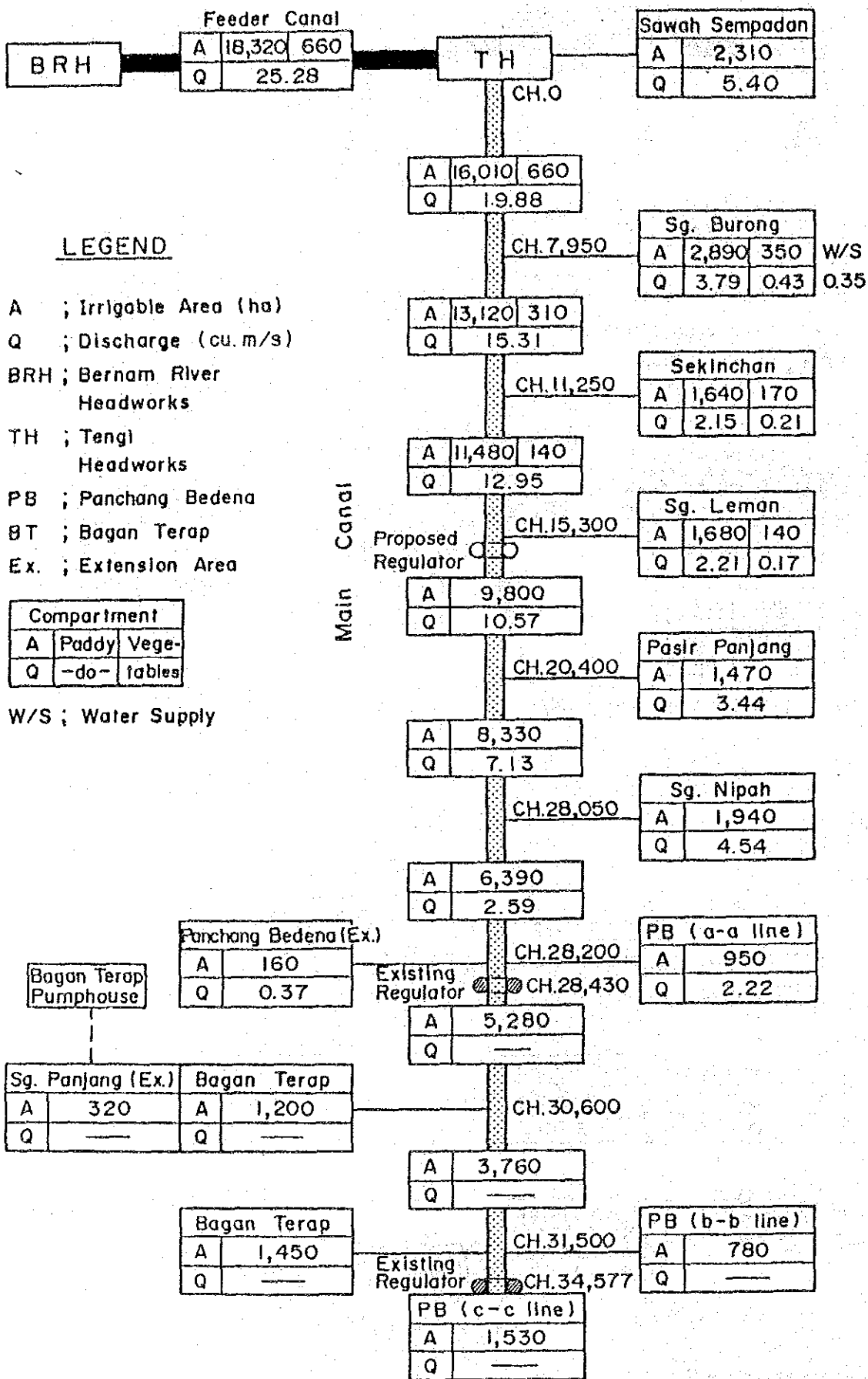
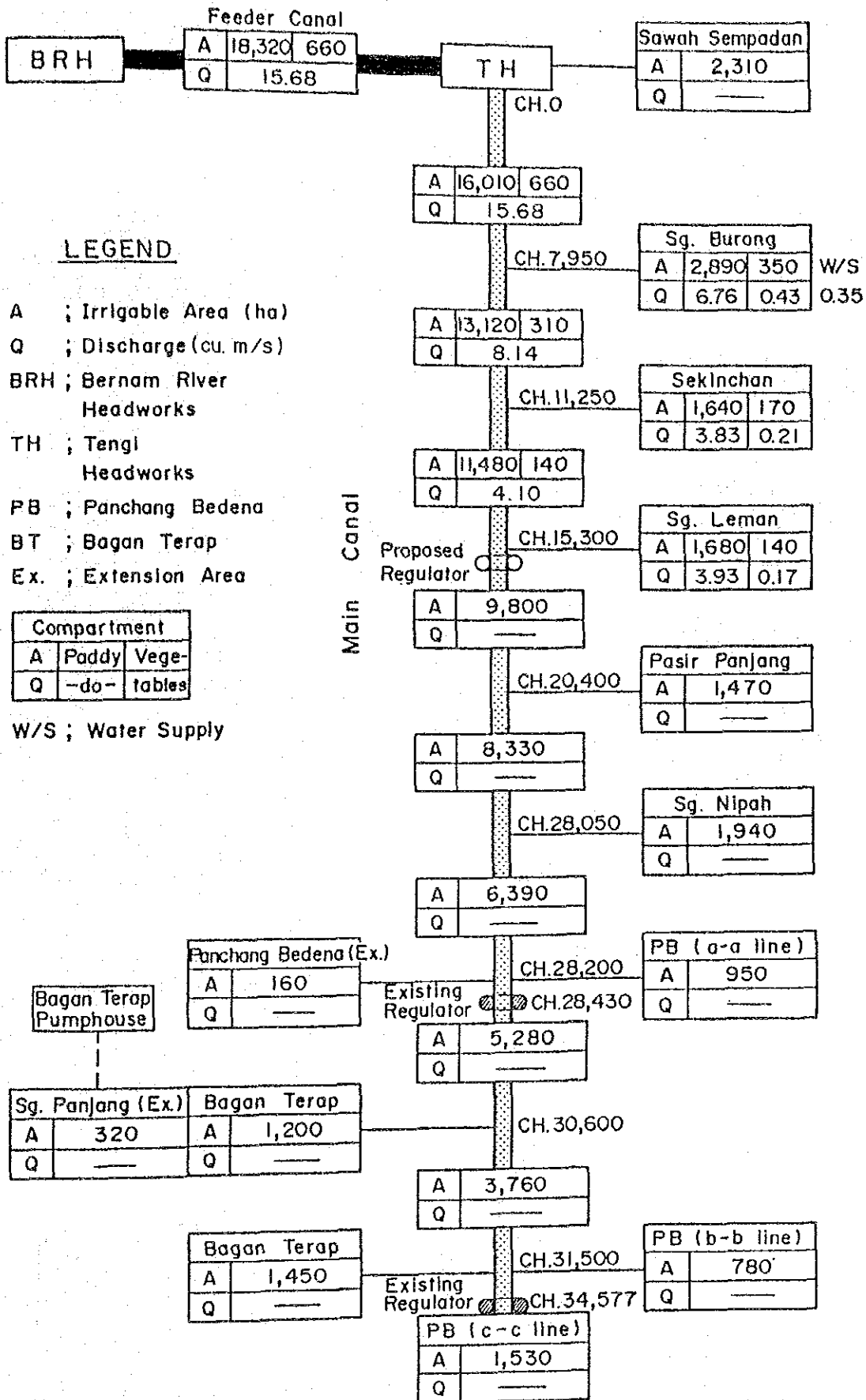


図. 47 計画用水量系統図.
 (2/4) (Case 1, Presaturation in
 ISA-2)



LEGEND

A ; Irrigable Area (ha)

Q ; Discharge (cu. m/s)

BRH ; Bernam River
Headworks

TH ; Tengi
Headworks

PB ; Panchang Bedena

BT ; Bagan Terap

Ex. ; Extension Area

Compartment	
A	Paddy
Q	-do-
	Vege-
	tables

W/S ; Water Supply

図. 47 計画用水量系統図
(3/4) (Case 2, Presaturation in
ISA-1)

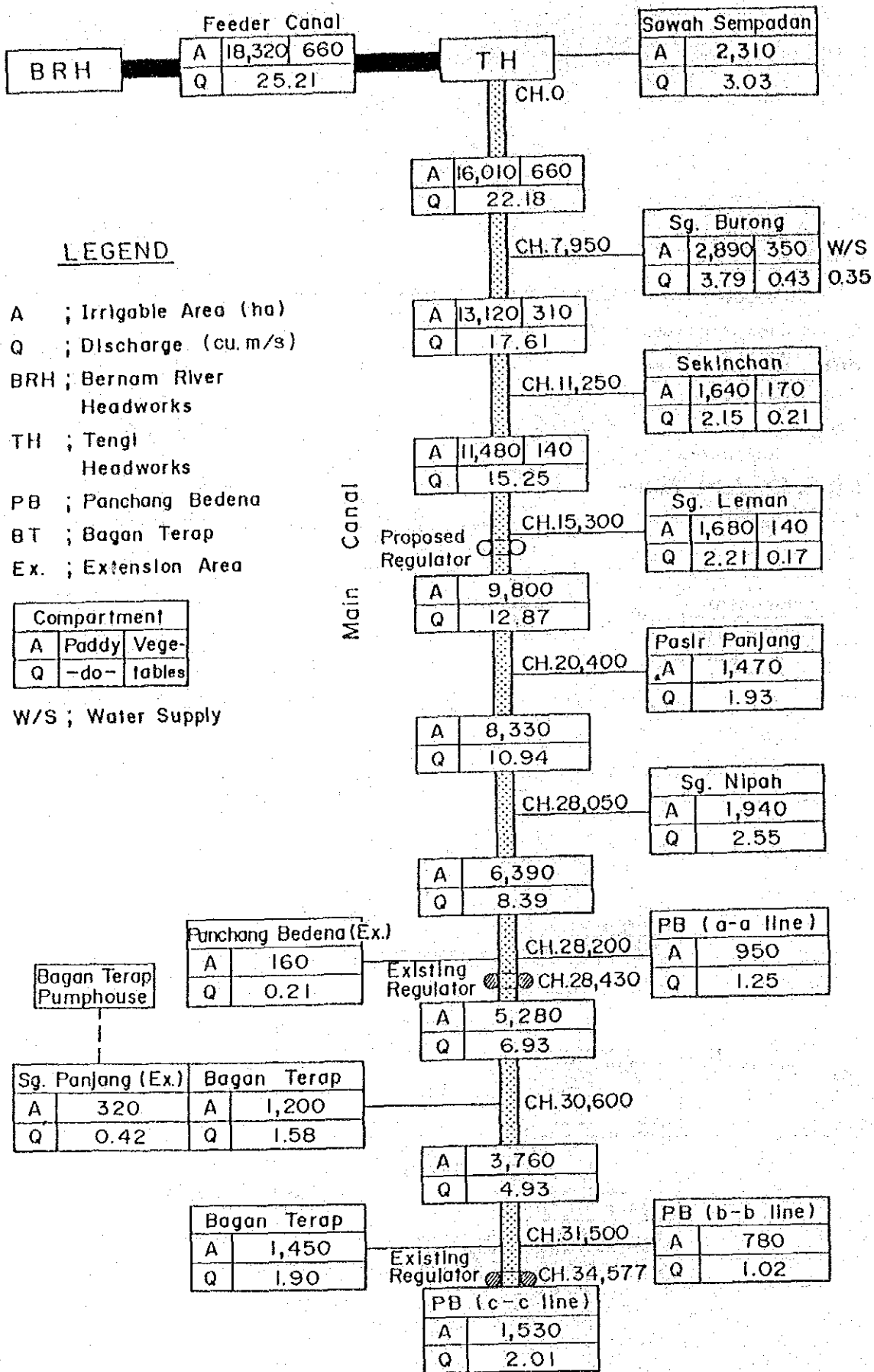


圖. 47 計畫用水量系統圖
 (4/4) (Case 3, Normal Irrigation for Whole Area)

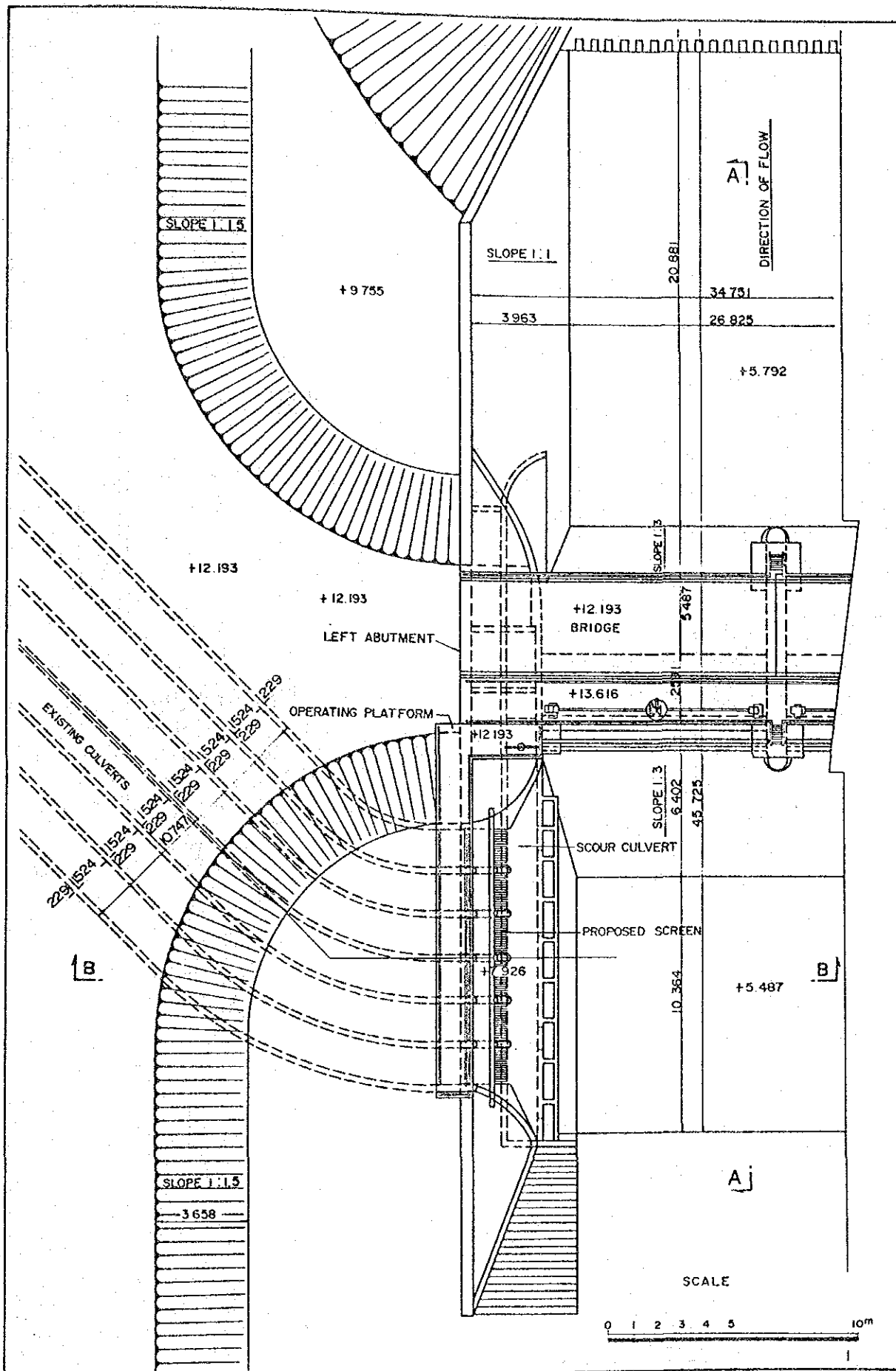


図. 48 ベルナム頭首工施設改善計画 (1/2)

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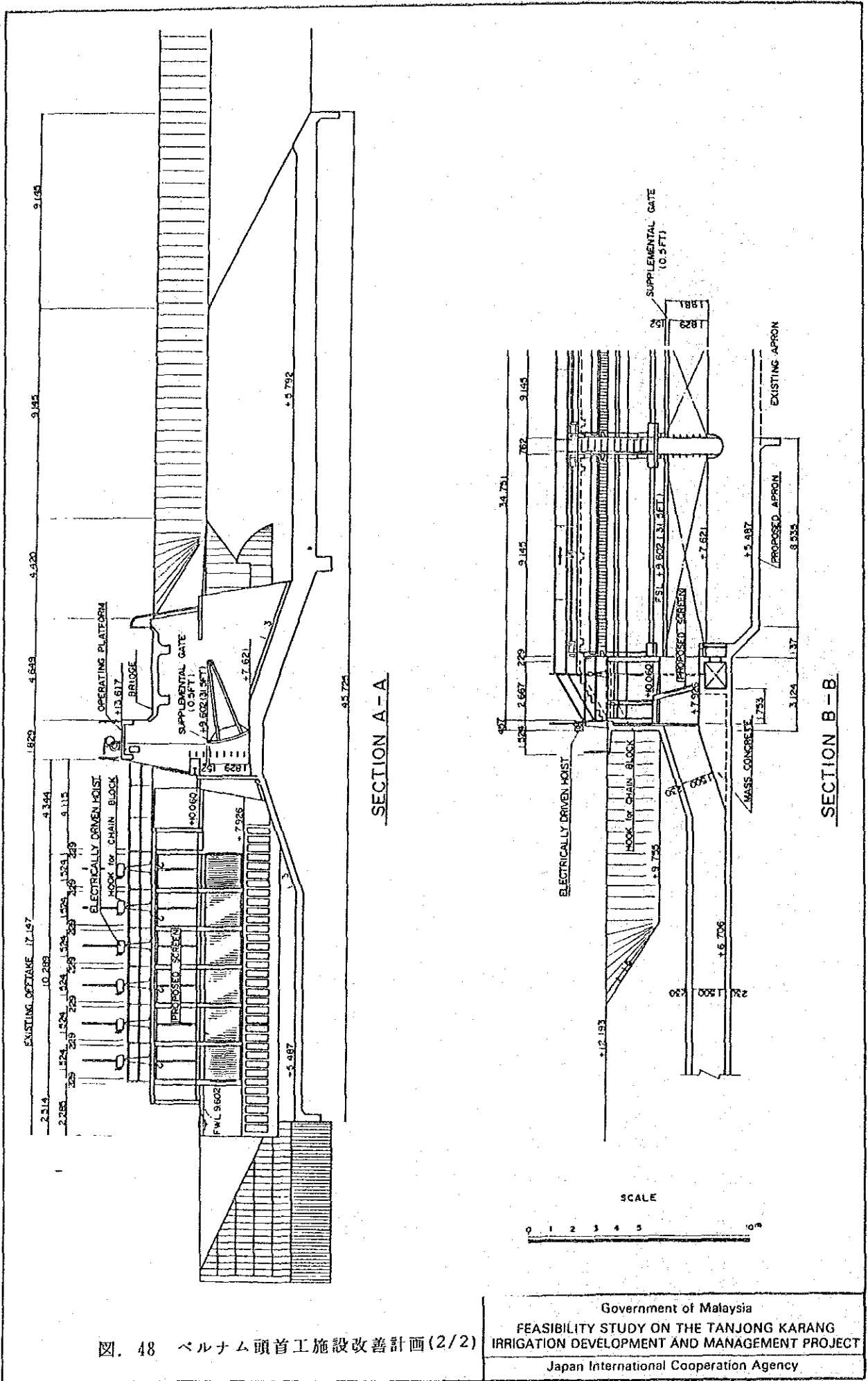
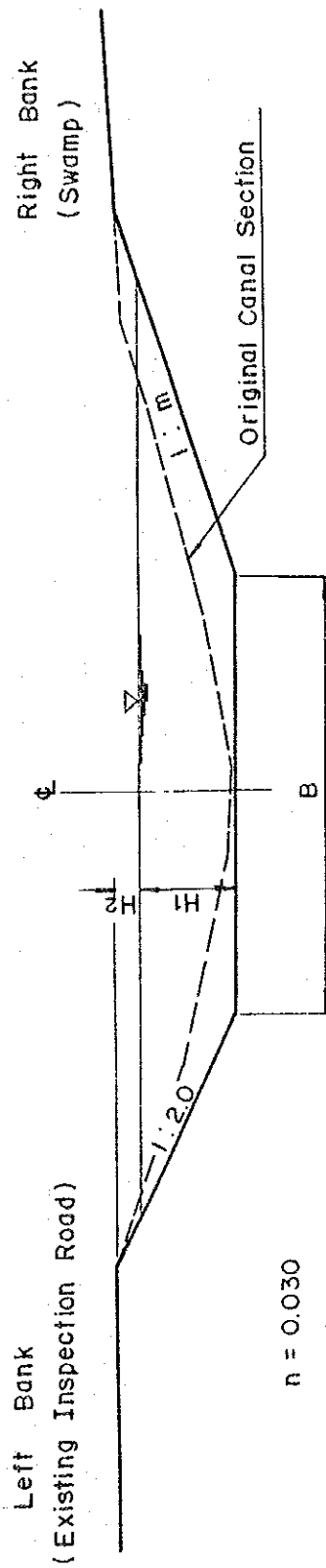


図. 48 ベルナム頭首工施設改善計画(2/2)

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Location	Discharge (cu. m/s)	Hydraulic gradient	Canal base slope	B (m)	H1 (m)	H2 (m)	m
CH.7950	27.6	1/44,000	1/47,000	27	2.9	0.6	3.0
CH.11250	23.0	1/52,000	1/47,000	24	2.9	0.6	3.0
CH.15300	20.7	1/55,000	1/47,000	22	2.9	0.6	3.0
CH.20400	18.3	1/57,000	1/47,000	20	2.9	0.6	3.0
CH.28050	16.4	1/55,000	1/47,000	17	2.9	0.6	3.0
CH.28200	13.8	1/75,000	1/47,000	17	2.9	0.6	3.0
CH.28430	12.3	1/115,000	1/47,000	17	2.9	0.6	3.0
CH.30600	12.3	1/57,000	Level	14	2.8	0.6	2.0
CH.31500	8.8	1/113,000	Level	14	2.8	0.6	2.0
CH.34577	3.6	1/147,000	Level	5	2.8	0.6	2.0

圖. 49 幹線水路標準橫斷圖

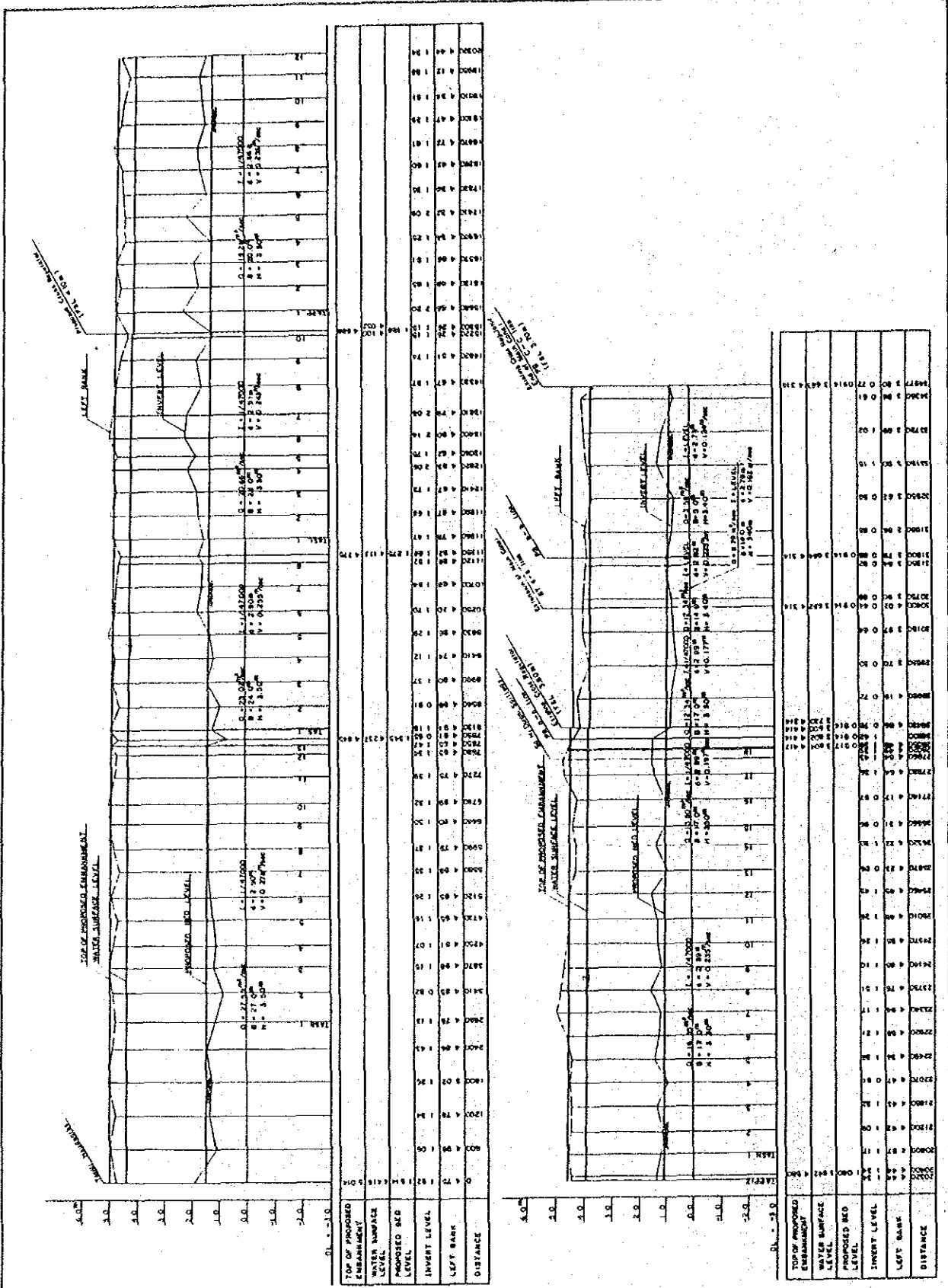


圖. 50 幹線水路計畫縱断面圖

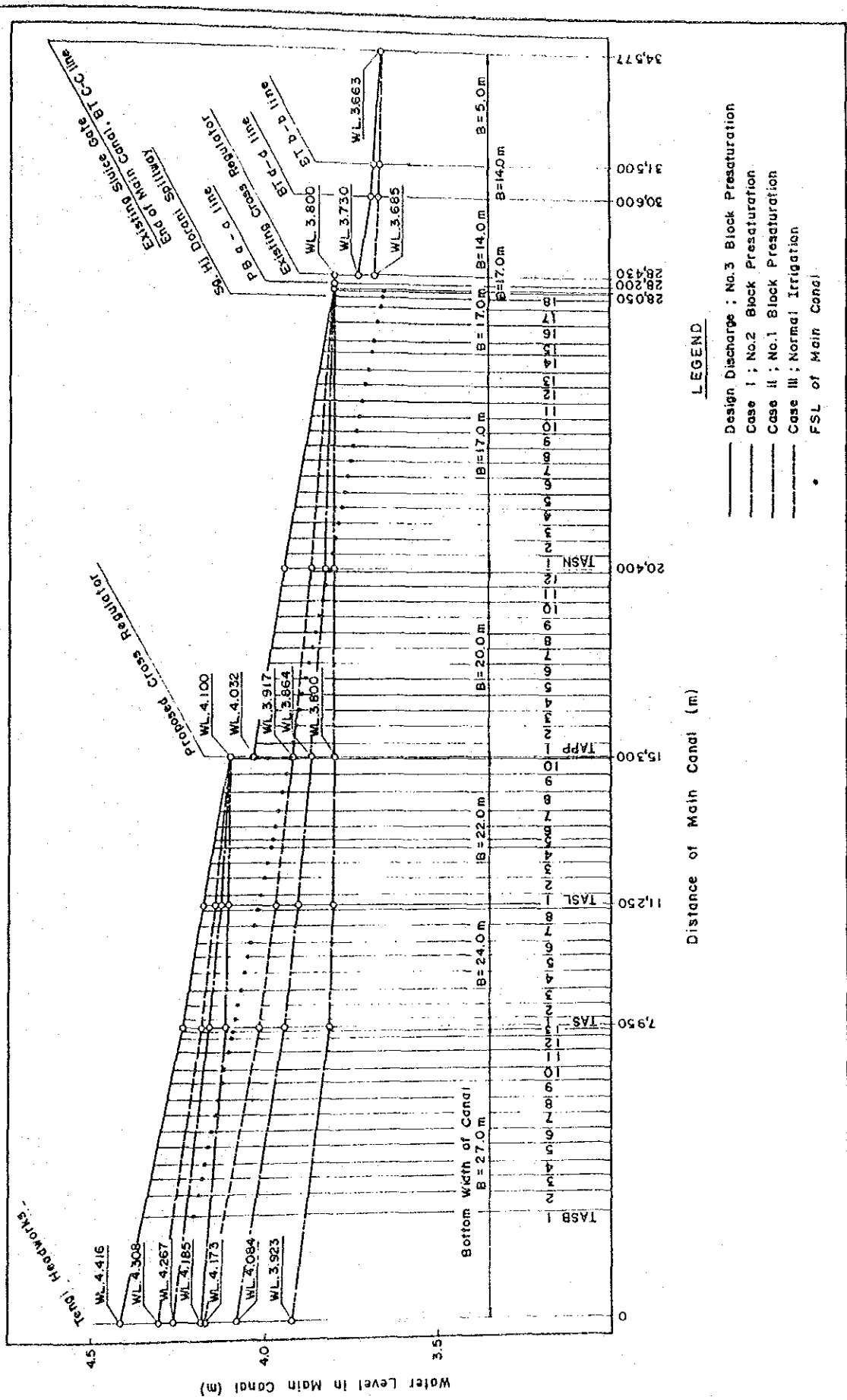
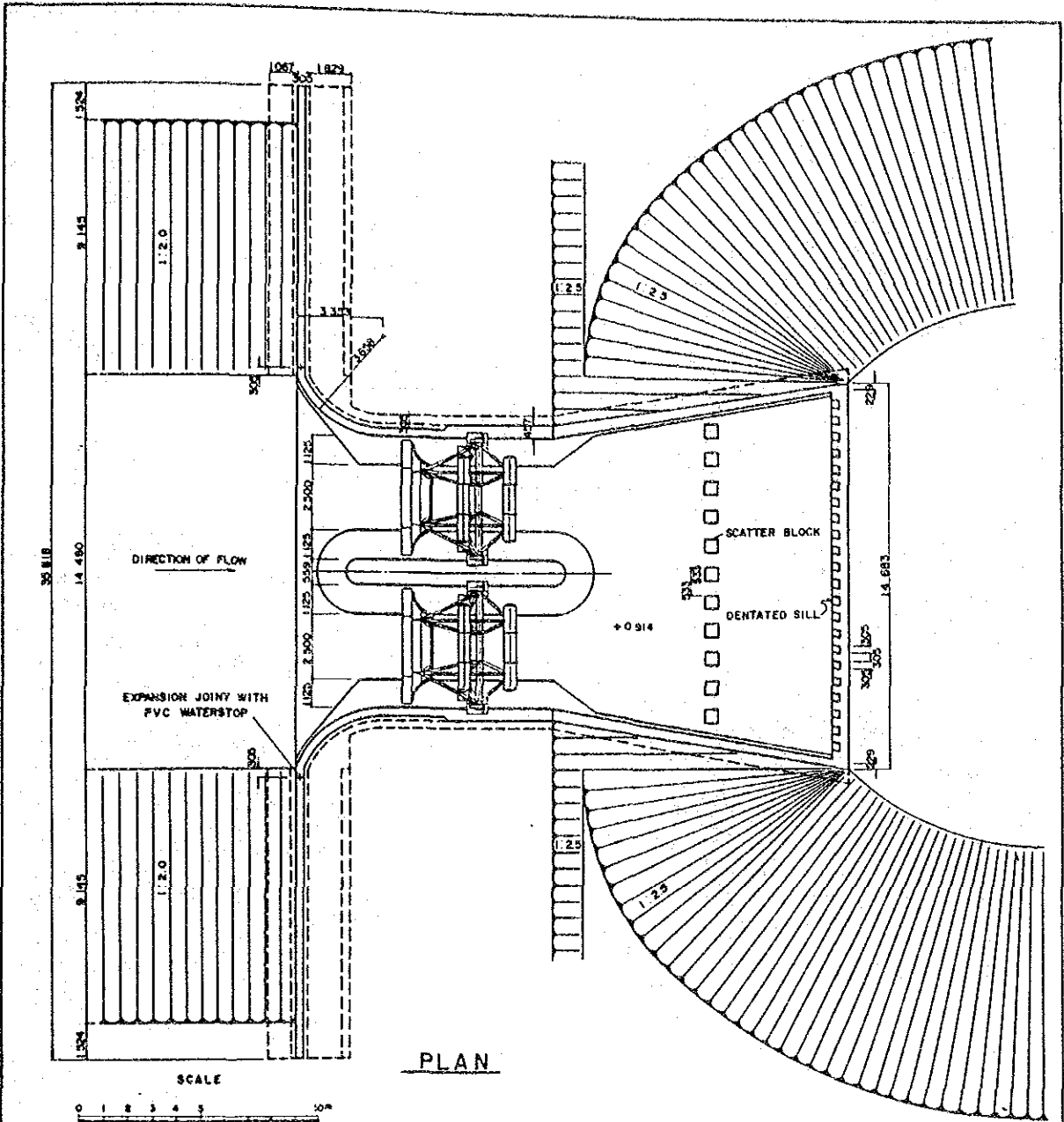
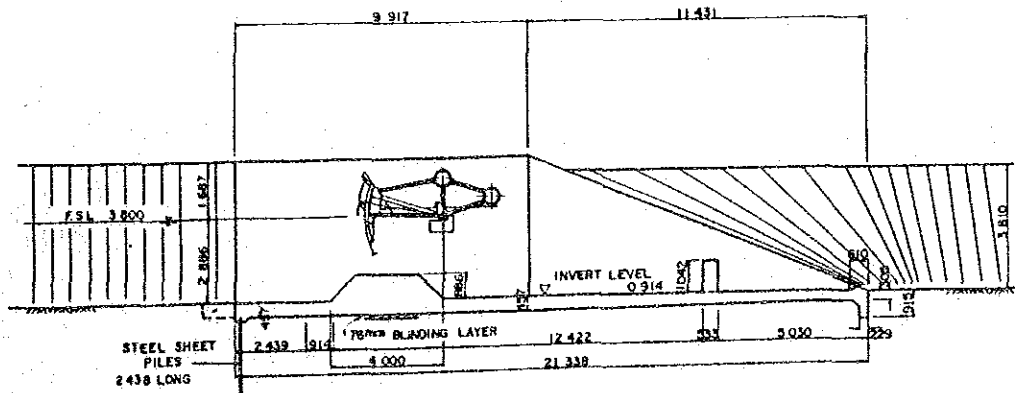


図. 51 幹線水路流量変化と水位変動の対比



PLAN



PROFILE

图. 53 幹線水路既設水位制御施設改善計画図

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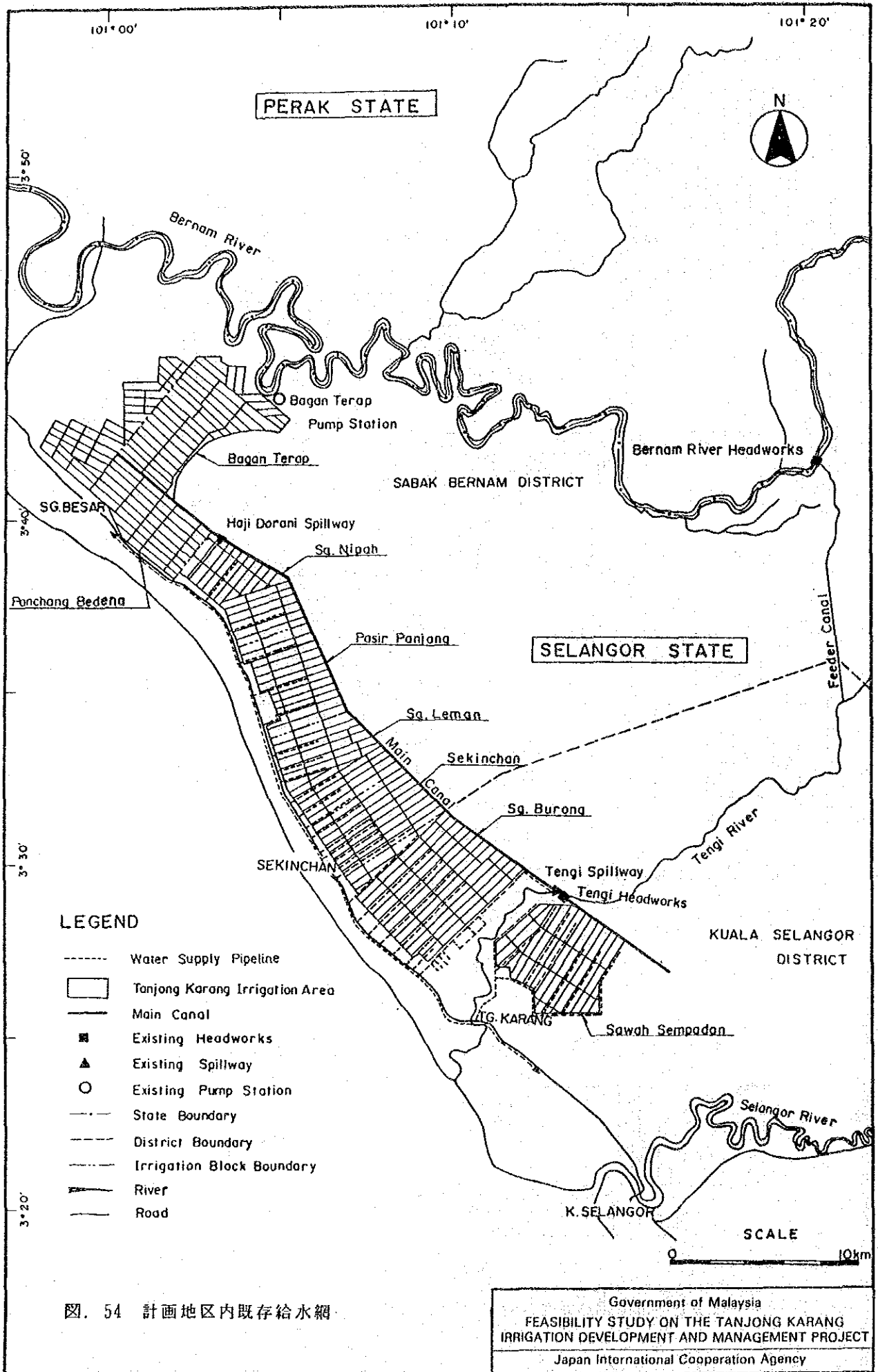


图. 54 計画地区内既存給水網

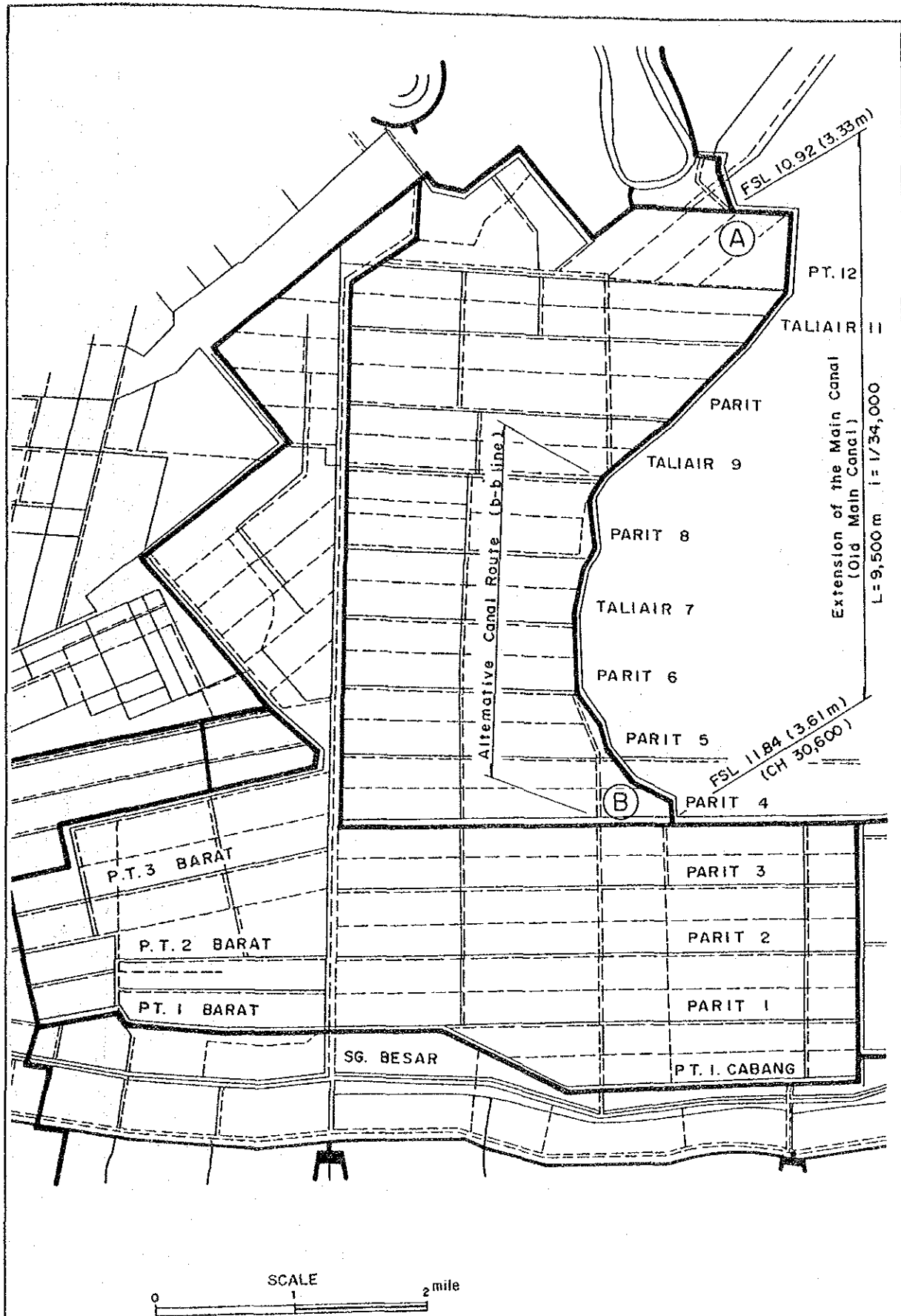


圖. 55 幹線水路延長代替案路線圖

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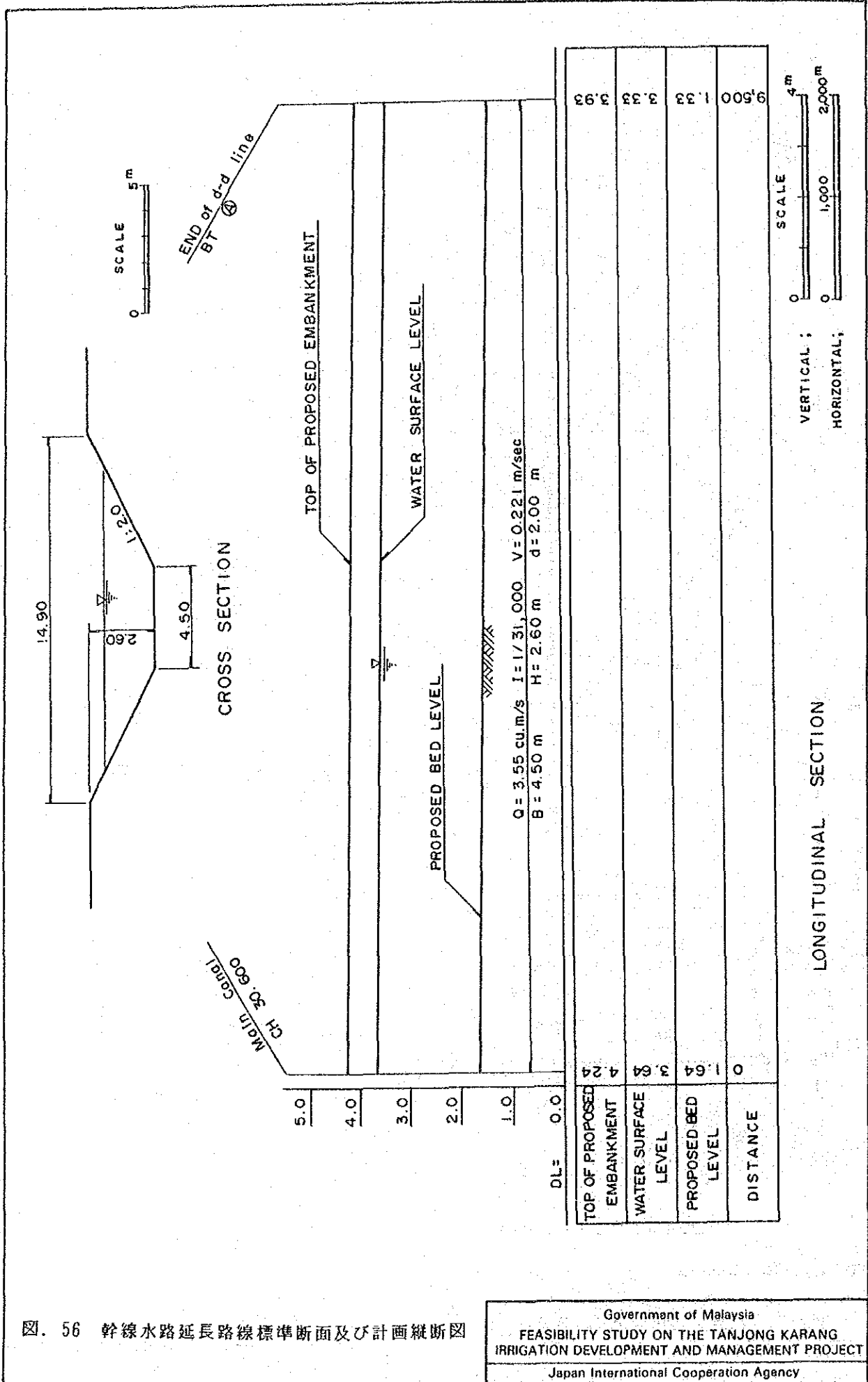
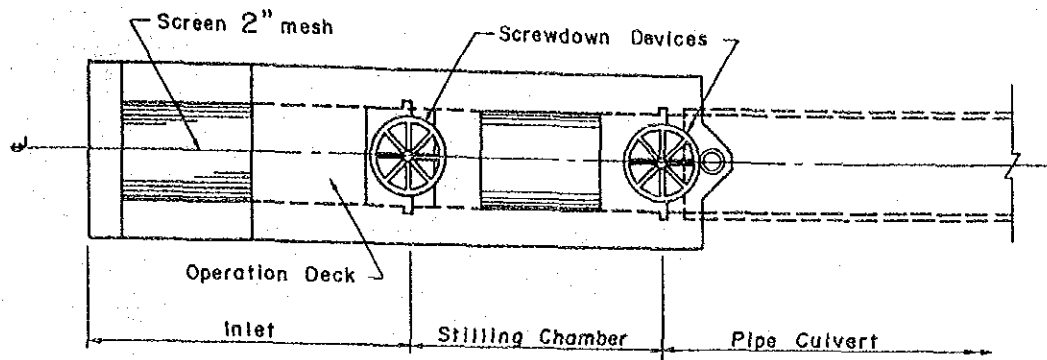
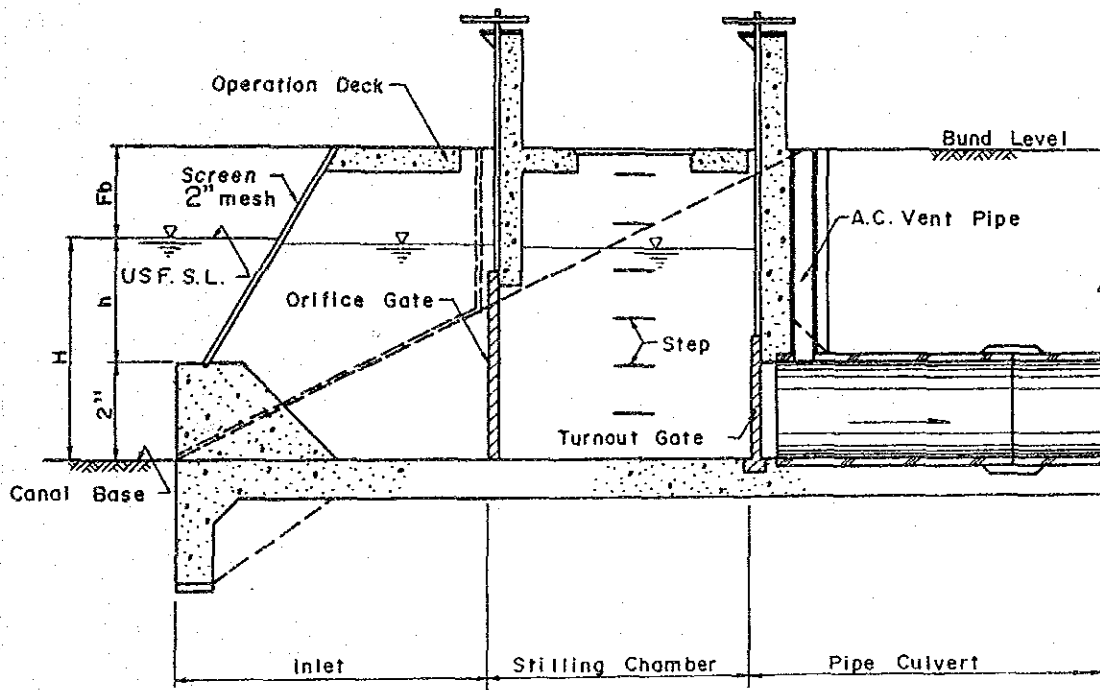


図. 56 幹線水路延長路線標準断面及び計画縦断面図



PLAN



PROFILE

DIMENSION TABLE

Type	Concrete Pipe	Orifice Gate	H	Fb	h
2'-0"	2'-0"	2'-4" x 2'-4"	4'-6"	2'-0"	2'-6"
3'-0"	3'-0"	4'-10" x 3'-8"	5'-6"	2'-0"	3'-6"
4'-0"	4'-0"	4'-4" x 4'-5"	6'-6"	2'-0"	4'-6"

图. 57 分水工改修計画图

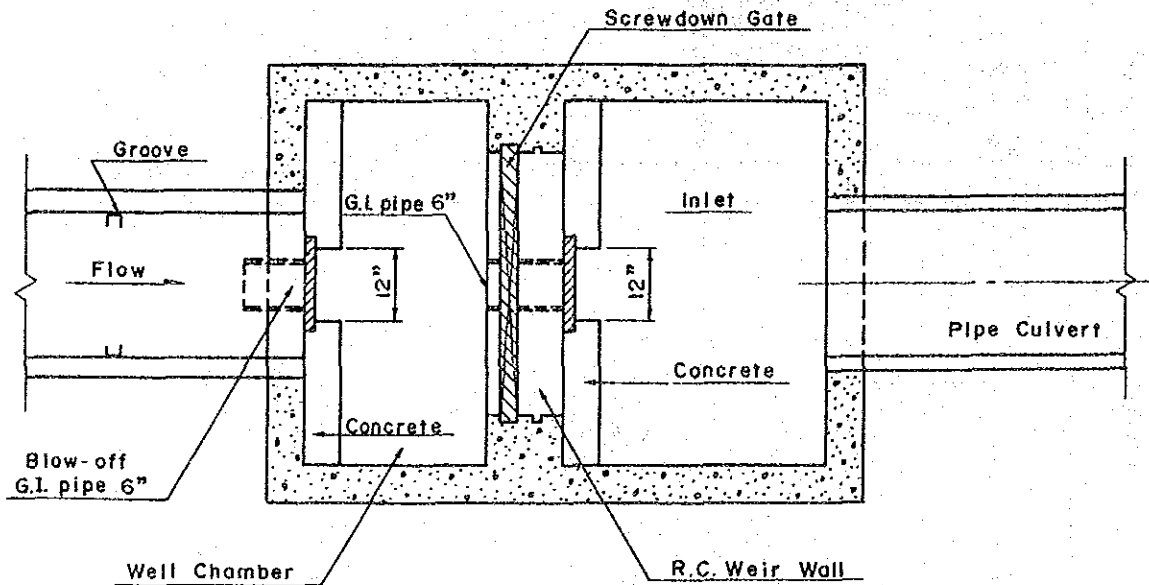
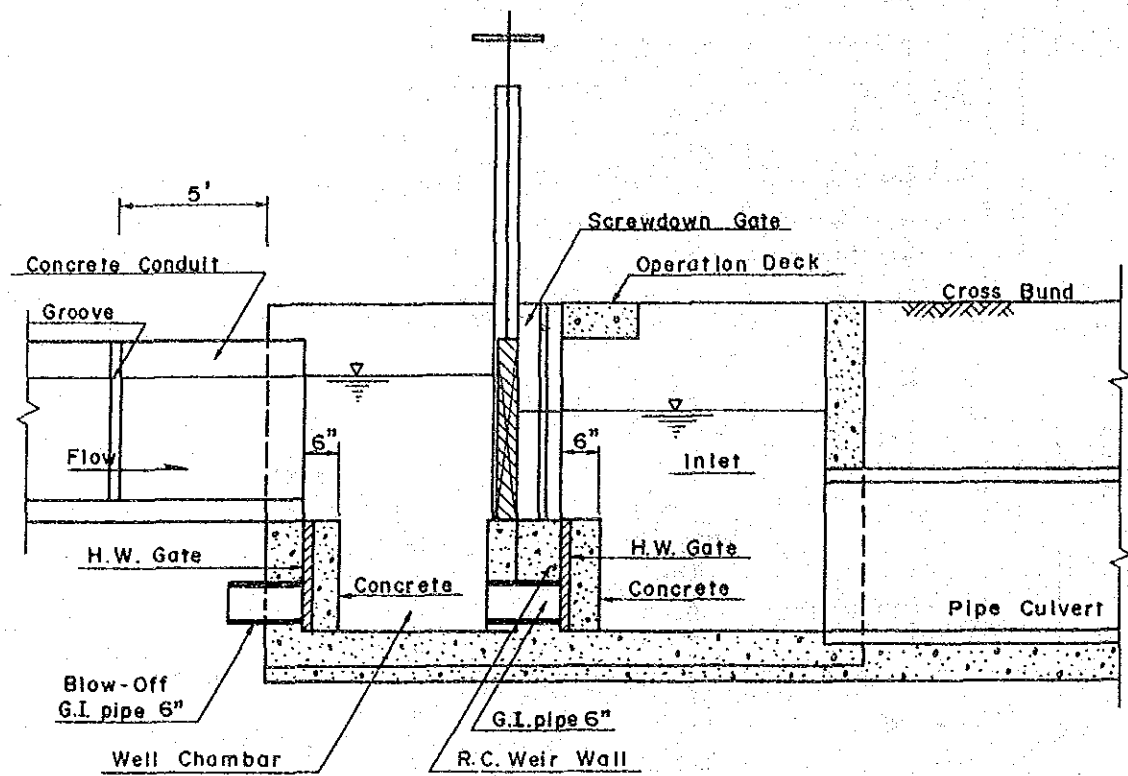
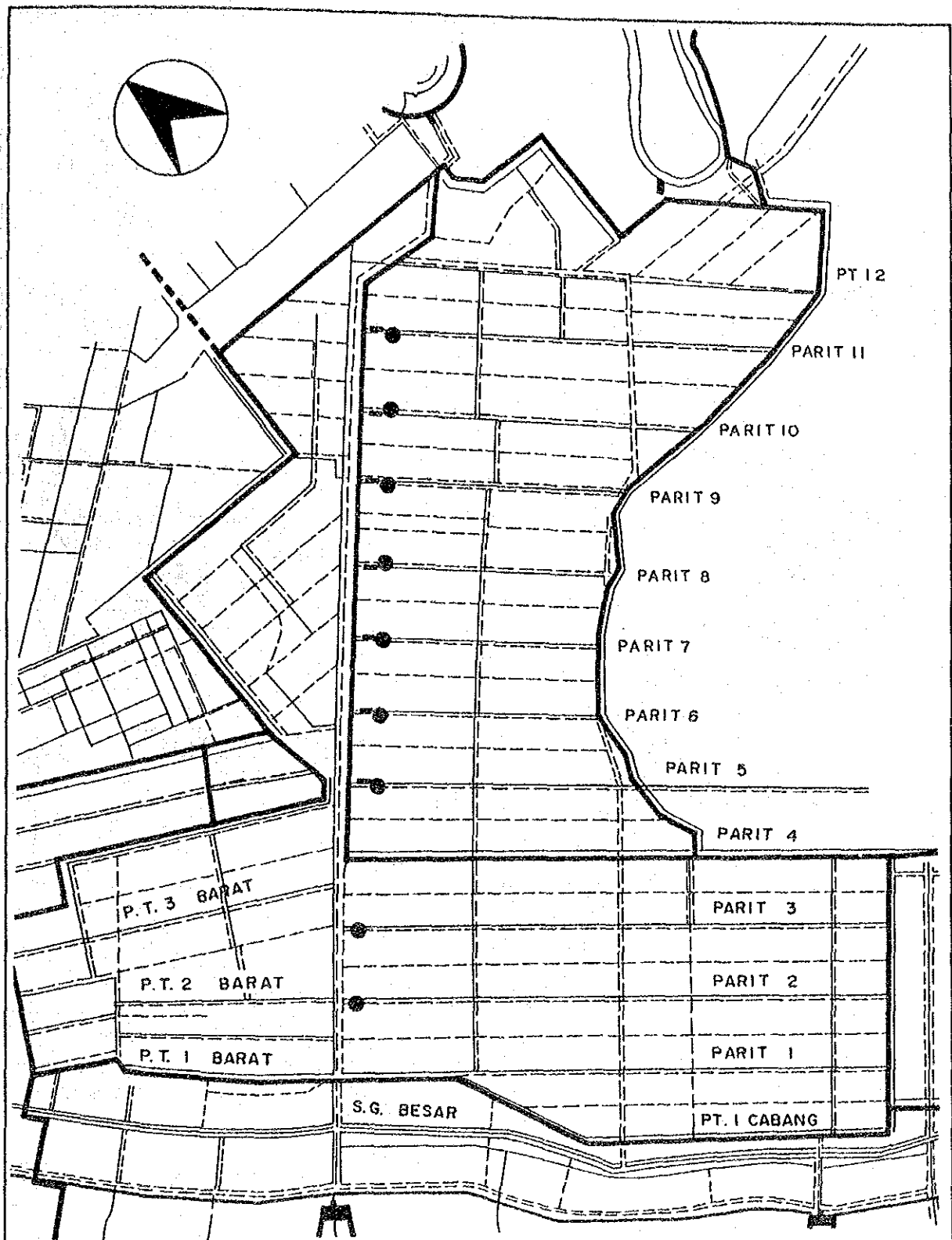


圖. 58 三次水路水位調節施設改善計画図



LEGEND

- Proposed Drainage Control
- - - Proposed Culvert or Bridge
- - - ○ - - - Drain Under Construction

図. 59 既存排水施設改修計画図

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 Japan International Cooperation Agency

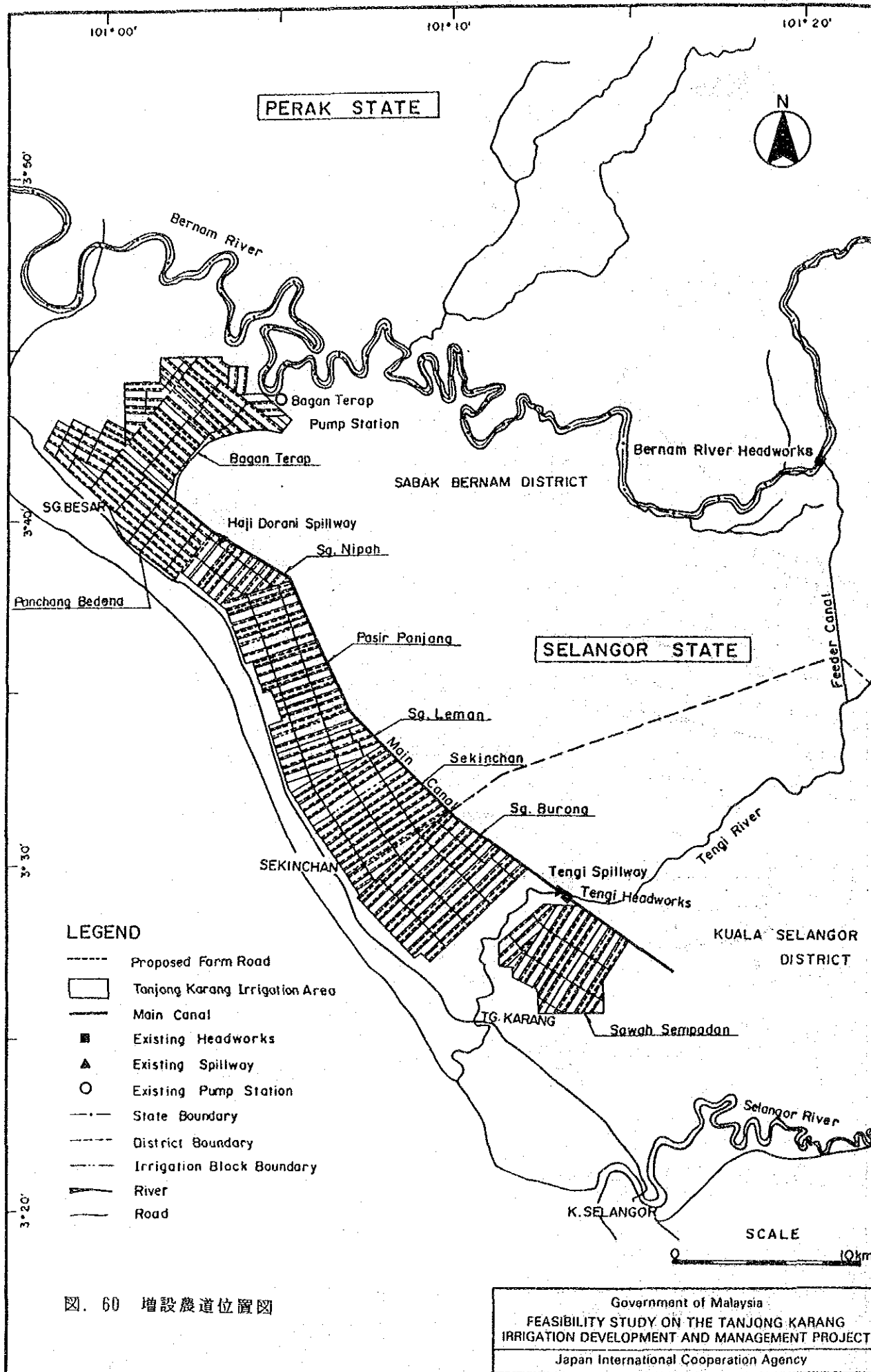
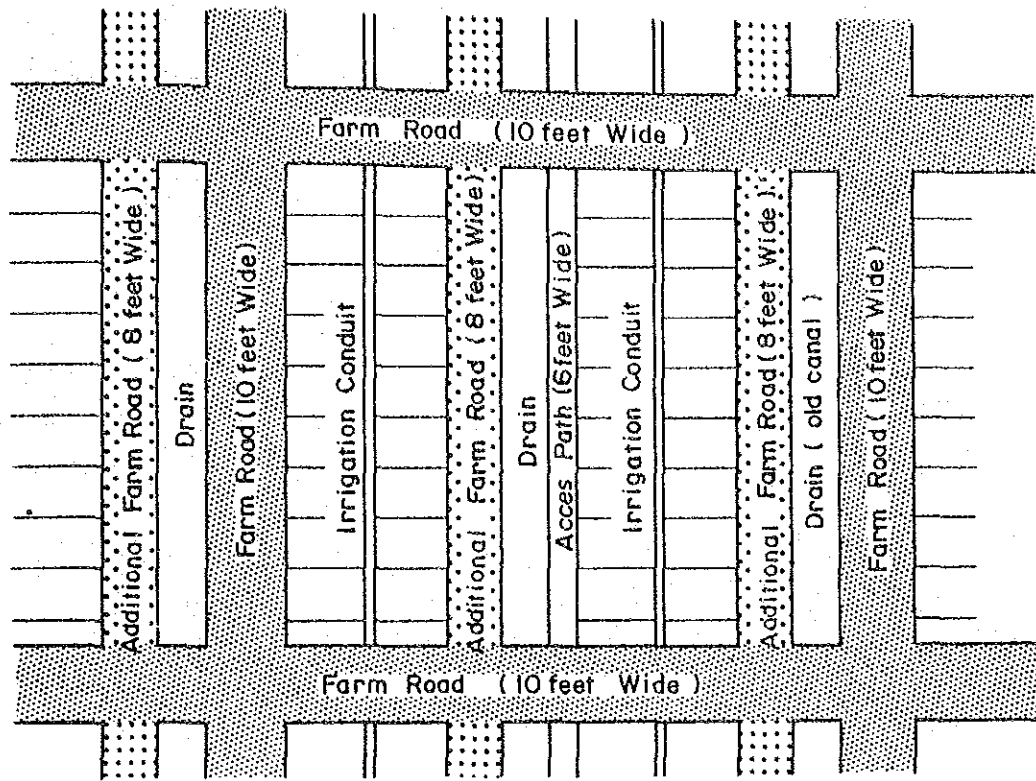
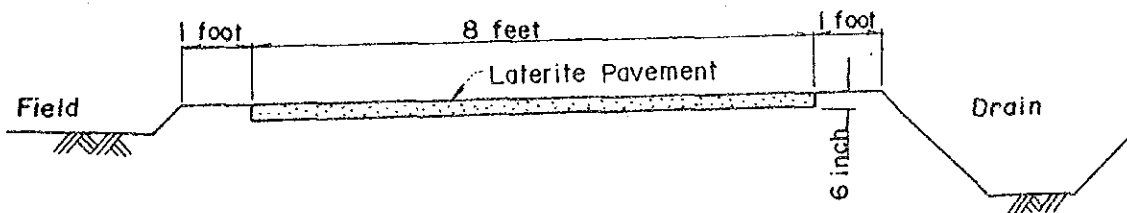


图. 60 增設農道位置圖

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Typical Layout of Additional Farm Road



Typical Cross Section of Additional Farm Road

図. 61 増設農道標準配置及び断面図

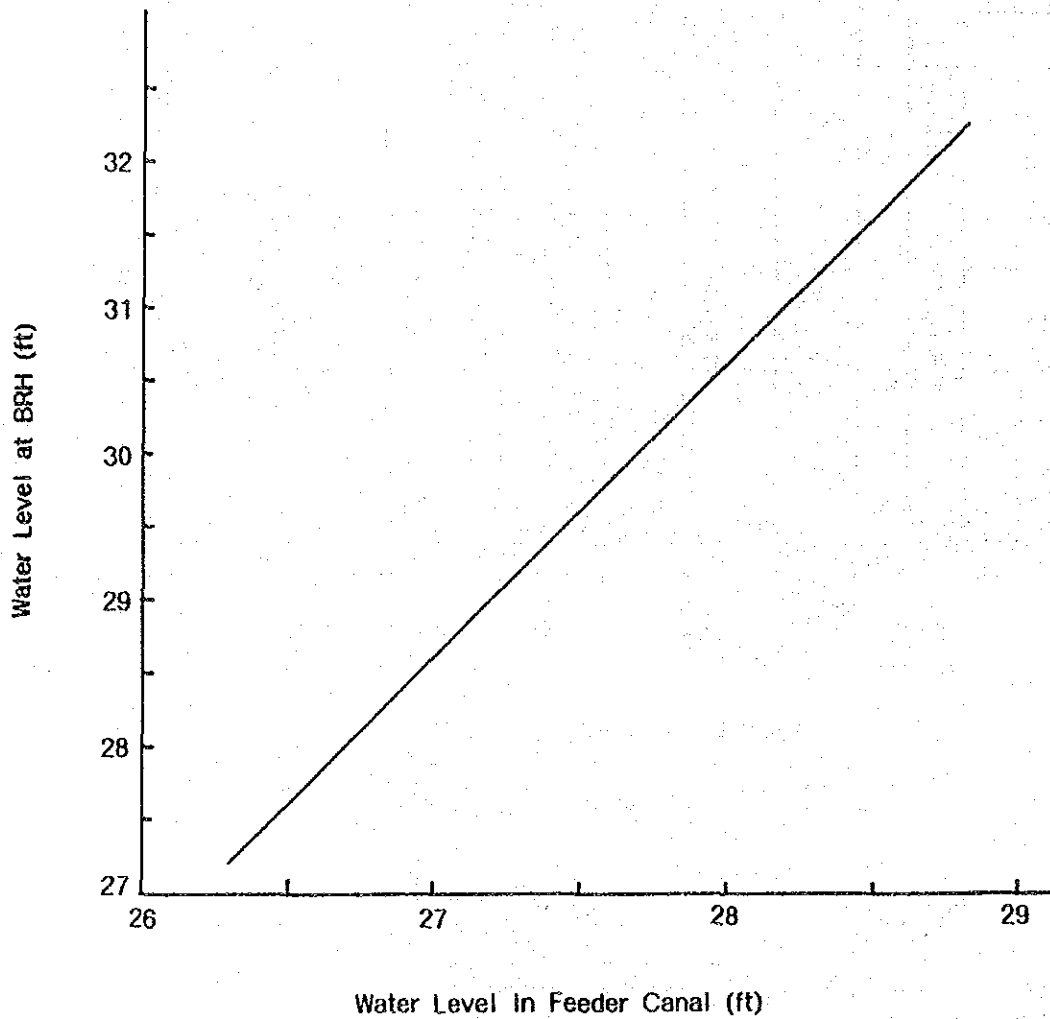


図. 62 ベルナム頭首工上流側水位と導水路起点
水位の相関関係図

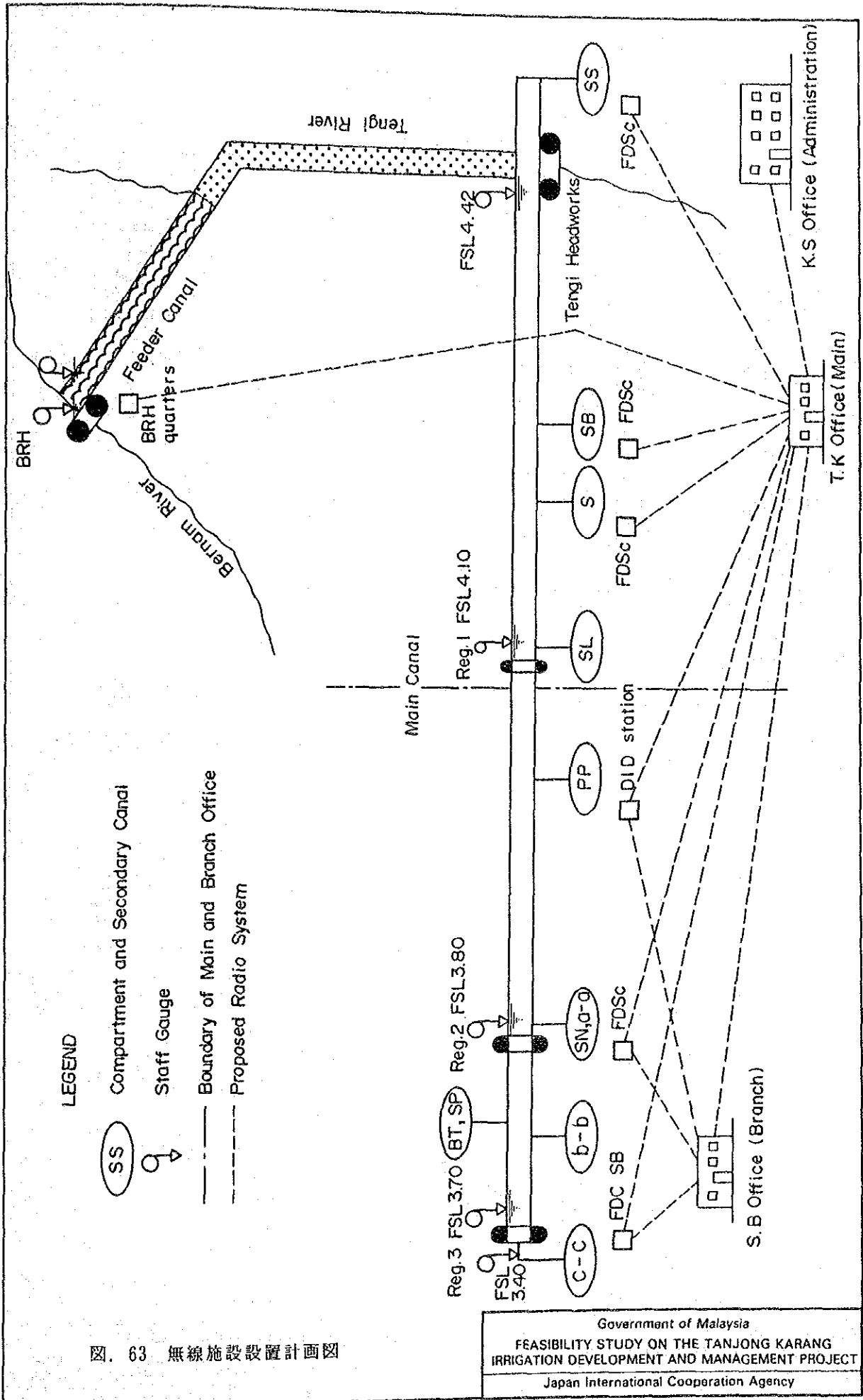
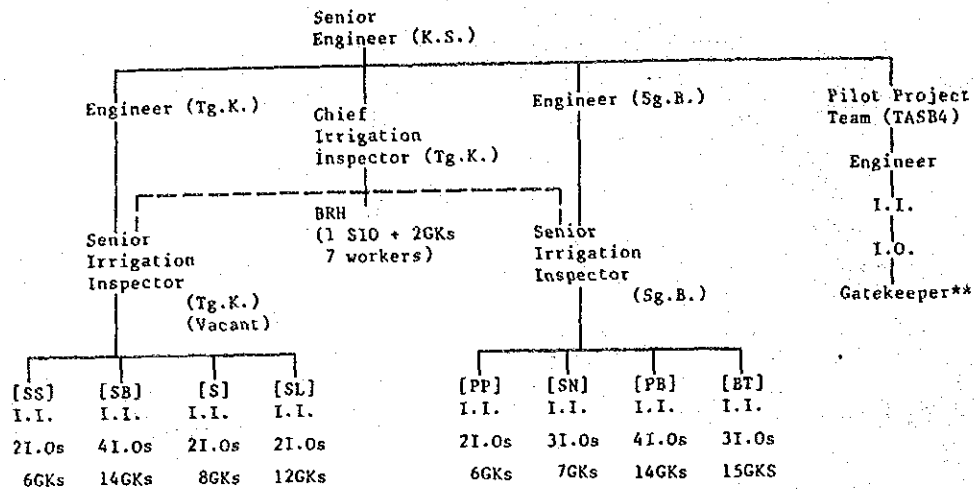


圖. 63 無線施設設置計畫圖

Government of Malaysia
 FEASIBILITY STUDY ON THE TANJONG KARANG
 IRRIGATION DEVELOPMENT AND MANAGEMENT PROJECT
 Japan International Cooperation Agency

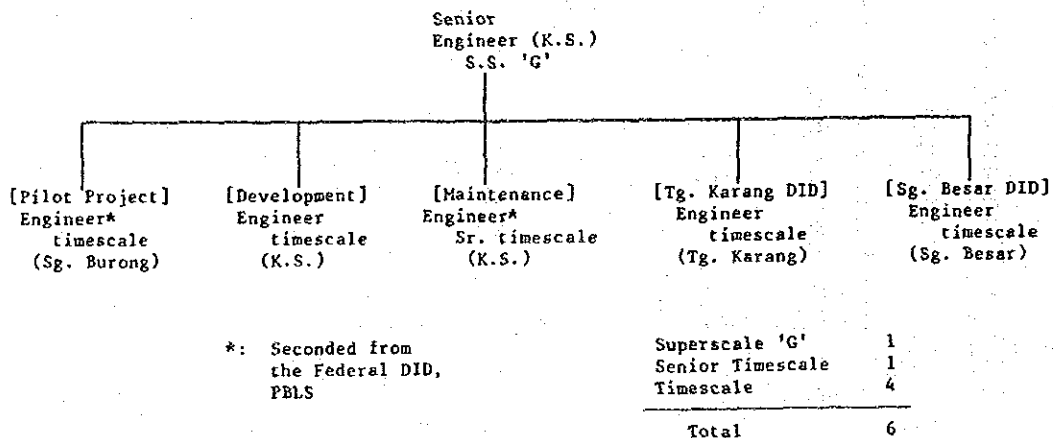
(1) Irrigation staff



	[SS] I.I. 2I.Os 6GKs	[SB] I.I. 4I.Os 14GKs	[S] I.I. 2I.Os 8GKs	[SL] I.I. 2I.Os 12GKs	[PP] I.I. 2I.Os 6GKs	[SN] I.I. 3I.Os 7GKs	[PB] I.I. 4I.Os 14GKs	[BT] I.I. 3I.Os 15GKs
Spillway Operators	2	-	-	-	-	-	1	-
Cross Regulator Operators	-	-	-	-	-	-	(1)*	-
Secondary Canal Gatekeepers	-	-	-	-	-	-	2	-
Drainage Control Gatekeepers	1	2	1	-	1	1	3	-

Remark: *: Operated by a-a line gatekeeper who is included in secondary canal gatekeepers.
 **: Included in the number of GK in SB.
 GK: Gatekeeper
 I.I.: Irrigation Inspector
 I.O.: Irrigation Overseer

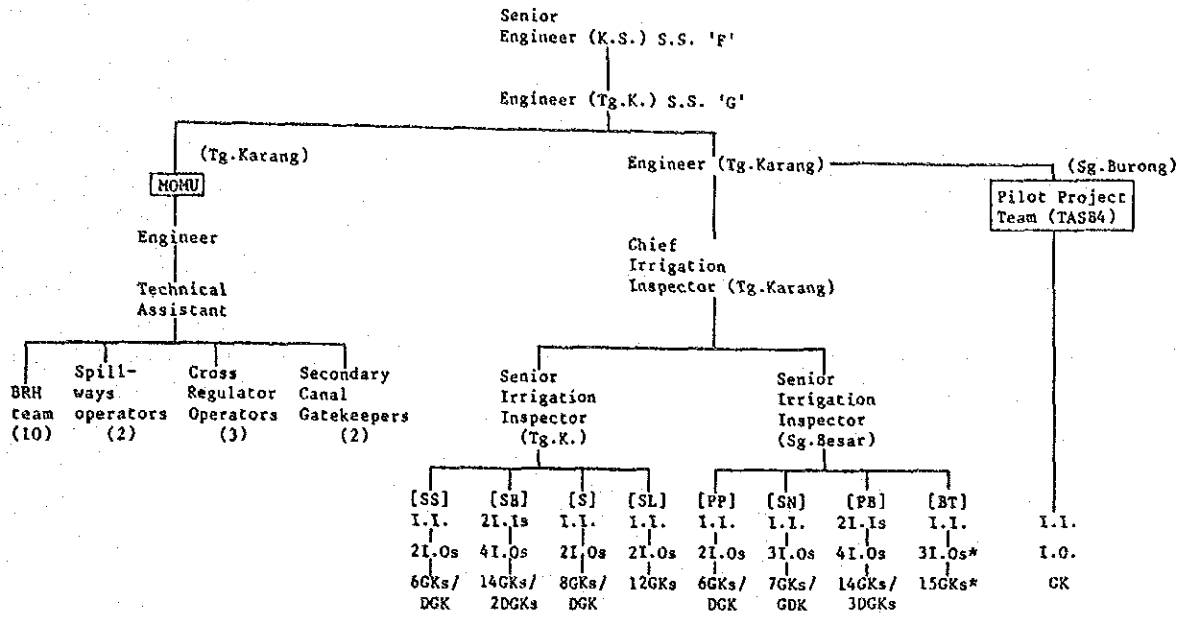
(2) Dispositon of Engineer



*: Seconded from the Federal DID, PBLs

图. 64 計画地区灌溉部門現行組織図

(1) Irrigation staff



Remarks: (1): MOMU: Main Conveyance System Operation/Maintenance Unit
 (2): *: Including Irrigation Overseer and gatekeepers for Sg. Panjang
 (3): (): location or number of staff
 (4): I.I.: Irrigation Inspector I.O.: Irrigation Overseer
 (5): GK: Gatekeeper, DGK: Drainage Gatekeeper

(2) Disposition of Engineer

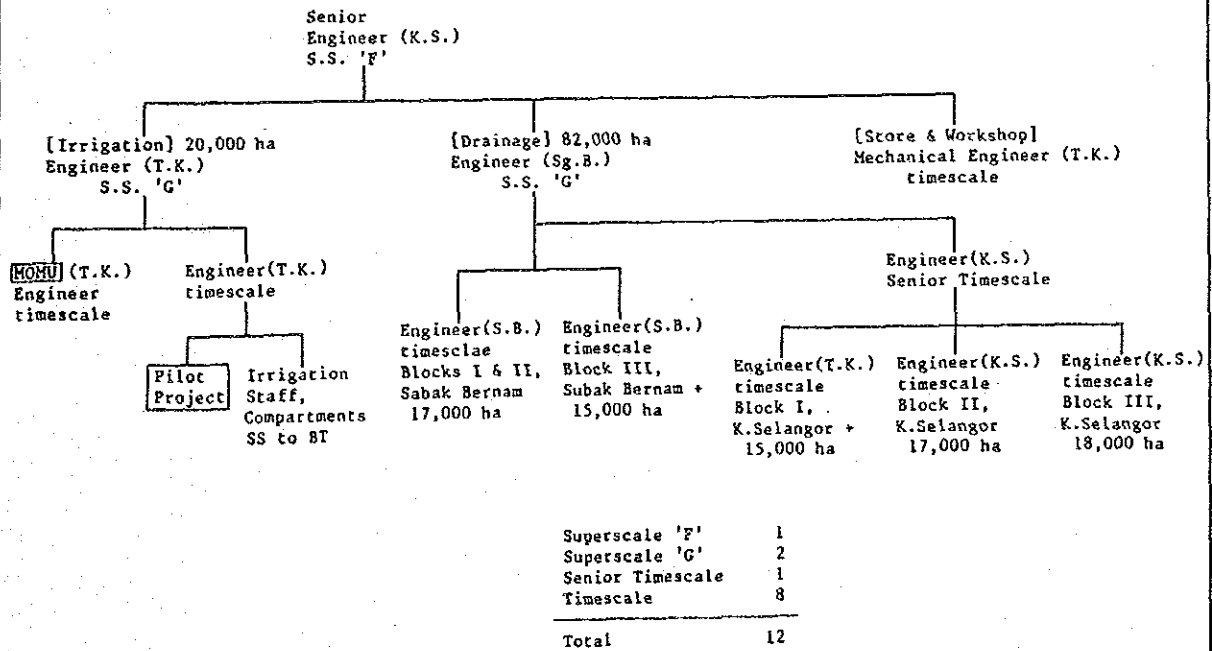


图. 65 計画地区灌溉部門改善組織図

APPENDIX

APPENDIX A SCOPE OF WORK FOR THE STUDY

SCOPE OF WORK
FOR
FEASIBILITY STUDY
ON
THE TANJONG KARANG IRRIGATION DEVELOPMENT
AND MANAGEMENT PROJECT
IN
MALAYSIA

AGREED UPON BETWEEN
THE ECONOMIC PLANNING UNIT
OF
THE PRIME MINISTER'S DEPARTMENT
ON BEHALF OF
THE GOVERNMENT OF MALAYSIA
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

14th March, 1986
KUALA LUMPUR



(Dato Seri Radin Soenarno Al-Haj)
Director General
Economic Planning Unit
Prime Minister's Department
on behalf of
The Government of Malaysia



(Masakuni Kawamata)
Leader of the Japanese
Preliminary Study Team
on behalf of
The Japan International
Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of Malaysia, the Government of Japan has decided to conduct a Feasibility Study on the Tanjong Karang Irrigation Development and Management Project (hereinafter referred to as "the Study"), and in accordance with the relevant laws and regulations in force in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programme of the Government of Japan will undertake the Study in close cooperation with the relevant Government authorities of Malaysia, at both the Federal and State levels.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVE OF THE STUDY

The objective of the Study is:

To identify water-related problems faced in the irrigation management of the Tanjong Karang Irrigation Project and recommend a solution to these problems in order to stabilize and sustain rice production in the project area as a national "granary".

III. SCOPE OF THE STUDY

1. Project Area

The project area covers the existing Tanjong Karang Irrigation Project of approximately 20,000 ha in the Northwest Selangor Integrated Agricultural Development Project and is located in the districts of Sabak Bernam and Kuala Selangor in the State of Selangor, Malaysia.

2. Scope of the Study

The activities to be undertaken by the Japanese Study Team will be in two phases as follows:

(1) Phase I - Prefeasibility Study

To identify water-related problems by reviewing prevailing conditions in and around the project area, develop various alternatives for resolving these problems and recommend a preferred solution.

(2) Phase II - Feasibility Study

To proceed with a feasibility study of the selected solution following discussion with the government, with a view to establishing technical feasibility, economic viability and socio-economic acceptability.

2.1 Work Plan for the Phase I Study

The Study will cover the following items:

- (1) To collect, review and evaluate data and information necessary for the Study including but not restricted to the following:
 - a) land use data, present and future projection
 - b) topography
 - c) meteorology
 - d) hydrology
 - e) geology and hydrogeology
 - f) soil
 - g) irrigation and drainage, and water management systems
 - h) agricultural practices and management
 - i) agro and regional economy, and agro-based institutions
 - j) construction materials and costs
 - k) socio-economic and demographic situation
- (2) To undertake the necessary surveys in and around the project area for additional data required for the Study.

- (3) To prepare and present the prefeasibility report.

2.2 Work Plan for the Phase II Study

The Study will cover the following items:

- (1) To undertake field survey for additional data including but not restricted to the following:
 - a) soil and land classification survey
 - b) geological survey
 - c) socio-economic survey
 - d) regional economic and agro-institutional survey
 - e) water quality survey
- (2) To determine for the recommended irrigation development and management plan the following:
 - a) water requirement
 - b) land use and cropping pattern
 - c) irrigation and drainage canal networks and other necessary facilities
 - d) agro-institutional plan
 - e) others
- (3) To formulate and present the following:
 - a) farming practices including farm mechanization programme
 - b) a layout for the project works including preliminary design of major structures, if such structures are necessary
 - c) the operation and maintenance plan for the project
- (4) To prepare and present the following:
 - a) estimated project cost and benefits
 - b) project implementation schedule
 - c) manpower requirements for project implementation
- (5) To conduct and present project evaluation

- (6) To identify and present the main adverse and beneficial socio-economic and environmental impacts of the proposed irrigation development and management plan.

IV. SCHEDULE OF THE STUDY

The Study shall be undertaken in accordance with the tentative schedule as referred to in the Annex.

V. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Malaysia in the course of the Study:

- | | |
|------------------------|--|
| Inception Report | : twenty (20) copies, at the commencement of the Phase I Study. |
| Progress Report | : twenty (20) copies, at the end of the field works of the Phase I Study. |
| Pre-feasibility Report | : fifty (50) copies, at the commencement of the Phase II Study. |
| Interim Report | : twenty (20) copies, at the end of the field works of the Phase II Study. |
| Draft Final Report | : fifty (50) copies, at the end of the home office work of the Phase II Study. |

The Government of Malaysia will provide JICA with its comments within six (6) weeks after the receipt of the Draft Final Report.

- | | |
|--------------|--|
| Final Report | : one hundred (100) copies, within eight (8) weeks after the receipt of the Government of Malaysia's comments on the Draft Final Report. |
|--------------|--|

The Japanese Study Team should ensure that all data, information, maps, materials and findings connected with the Study are kept confidential and not disposed of or revealed to any third party except with the prior written consent of the Government of Malaysia. Such maps and aerial photographs are to be returned to the Government of Malaysia immediately upon completion of the Study. All reports when finalized and submitted to the Government of Malaysia shall remain the property of the Government of Malaysia.

VI. UNDERTAKINGS OF THE GOVERNMENT OF MALAYSIA

To facilitate the smooth conduct of the Study, the Government of Malaysia shall take the following necessary measures:

- (1) To inform the members of the Japanese Study Team of any existing risk in the Study area and to take any measures deemed necessary to secure the safety of the Japanese Study Team.
- (2) To secure the necessary entry permits for the Japanese Study Team to conduct field survey in Malaysia and exempt them from consular fees.
- (3) To exempt the members of the Japanese Study Team from taxes and duties, as normally accorded under the provision of Malaysian General Circular No.1 of 1979, on equipment, machinery and other materials brought into and out of Malaysia for the conduct of the Study.
- (4) To exempt the members of the Japanese Study Team from Malaysian income tax on their official emoluments in respect of their period of assignment in Malaysia in connection with the conduct of the Study but the Government of Malaysia shall retain the right to take such emoluments into account for the purpose of assessing the amount to be applied to income from other sources.
- (5) To provide the necessary facilities to the Japanese Study Team for remittance as well as utilization of funds introduced into Malaysia from Japan in connection with the conduct of the Study.

- (6) To secure permission for entry into private properties or restricted areas for the conduct of the Study.
- (7) To provide the Japanese Study Team with medical services when needed but the expenses will be chargeable to the members of the Japanese Study Team.
- (8) To make arrangements for the Japanese Study Team to take back to Japan the data, maps and materials connected with the Study, subject to the approval of the Government of Malaysia, in order to prepare the reports.
- (9) To provide the Japanese Study Team with available data, maps and information necessary for the execution of the Study.
- (10) To appoint counterpart personnel to the Japanese Study Team during the Study period.
- (11) To provide the Japanese Study Team with suitable office space with clerical service and necessary office equipment in Kuala Lumpur and the project area.
- (12) To provide the Japanese Study Team with adequate means of local transport for official travel only.
- (13) To indemnify any member of the Japanese Study Team in respect of damages arising from any legal action against him in relation to any act performed or omissions made in undertaking the Study except when the two Governments agree that such a member is guilty of gross negligence or wilful misconduct.
- (14) To nominate the Drainage and Irrigation Department, Malaysia to act as the main counterpart agency for the Study and the Economic Planning Unit as the main coordinating body in relation to other relevant Government and non-Governmental organizations.

VII. UNDERTAKINGS OF JICA

In order to conduct the Study, JICA shall take the following measures:

- (1) To despatch, at its own expense, the Japanese Study Team to Malaysia.
- (2) To pursue technology transfer to the Malaysian counterpart personnel in the course of the Study.

VIII. CONSULTATION

JICA and the Government of Malaysia shall consult each other in respect of any matter that is not agreed upon in this document and which may arise from or in connection with the Study.

APPENDIX B THE STUDY ORGANIZATIONS

Personnel directly involved in or concerned to the Study are as follows:

<u>Name</u>	<u>Speciality</u>	<u>Assignment Period (in Malaysia)</u>
Advisory Committee, Japan		
(1) Mr. M. Kawamata	Chairman	June 1 - 18, 1986 Nov. 2 - 7, 1986 Mar. 16 - 21, 1987
(2) Mr. Y. Yamamoto	Irrigation	June 1 - 18, 1986
(3) Mr. H. Yoshino	Water management	June 1 - 18, 1986 Nov. 2 - 7, 1986
(4) Mr. S. Imai	Coordinator	June 1 - 18, 1986 Nov. 2 - 7, 1986 Mar. 14 - 21, 1987
JICA Study Team		
(1) Mr. K. Irie	Team leader	June 1 - July 9, 1986 July 31 - Aug. 29, 1986 Oct. 29 - Nov. 27, 1986 Jan. 6 - 20, 1987 Mar. 16 - 21, 1987
(2) Mr. Y. Matsumoto	Agricultural development planner/ Co-team leader	June 1 - Dec. 24, 1986 Mar. 16 - 21, 1987
(3) Mr. H. Tomiyama	Water management	June 1 - Aug. 29, 1986 Oct. 29, '86 - Jan. 20, '87 Mar. 16 - 21, 1987
(4) Mr. S. Sato	Irrigation & drainage	June 1 - Aug. 29, 1986 Oct. 29, '86 - Jan. 20, '87
(5) Mr. H. Matsuura	Hydrology	June 16 - Aug. 29, 1986
(6) Mr. A. Yuasa	Hydraulic simulation	Oct. 13 - Dec. 24, 1986
(7) Mr. T. Murono	Agro-economy	July 31 - Aug. 29, 1986 Nov. 13 - Dec. 24, 1986

<u>Name</u>	<u>Speciality</u>	<u>Assignment Period (in Malaysia)</u>
(8) Mr. N. Tsuchihashi	Institution	June 1 - Aug. 29, 1986 Nov. 13, - Dec. 24, 1986
(9) Mr. S. Azegami	Irrigation & drainage	June 16 - Aug. 29, 1986 Nov. 13, '86 - Jan. 20, '87
(9) Mr. S. Otani	Structural design	June 16, '86 - Jan. 5, '87
(10) Mr. T. Kajimoto	Survey	June 1 - Aug. 10, 1986

Officials of the Government of Malaysia

Steering Committee, Malaysia

- (1) Dr. Nik Ibrahim Nik Mahmood
Former Director of Agriculture, EPU
- (2) Dr. Abdul Aziz bin Mohd. Yaacob
Director of Agriculture, EPU
- (3) Miss Lim Mui Kiang
Principal Assistant Director,
Agriculture Section, EPU
- (4) Miss Wong Peg Har
Principal Assistant Director,
External Assistant Section, EPU
- (5) Mr. Abdul Latib Markom
Assistant Director,
Agriculture Section, EPU

Technical Committee and Counterpart Team, Malaysia

- (1) Mr. Cheong Chup Lim
Deputy Director General, DID
- (2) Mr. D. N. Welch
Assistant Director General, DID
- (3) Mr. Lung Heng Toh
Assistant Director General, DID
- (4) Mr. Quah Tek Hoe
Chief Design Engineer, DID
- (5) Mr. Tan Leong Tiam
Director, State DID, Selangor
- (6) Mr. A. Thurai Raj
Project Engineer, PBLs, Kuala Selangor
- (7) Mr. Sardar Ali bin Raunkee
Chief Planning Engineer, DID
Director of Coastal Engineering
Technical Unit, DID
- (8) Mr. Sieh Kok Chi
District Engineer, Kuala Selangor, DID
- (9) Mr. Tan Jiak Kim
Senior Planning Engineer, DID
- (10) Mr. Lee Chock Seng
Senior Design Engineer, DID
- (11) Mr. Wong Kok Fiu
Senior Engineer, PBLs, Sungai Besar
- (12) Mr. Ng Sin Fook
Senior Engineer, PBLs, Kuala Selangor
- (13) Mr. Khoo Chee Ngion
Senior Engineer, PBLs, Kuala Selangor
- (14) Mr. Abd. Mutalib bin Mat Hassan
Engineer, PBLs, Kuala Selangor
- (15) Mr. Zulkifli bin Hassan
Engineer, DID, Sungai Besar
- (16) Tuan Hj. Shahrudin bin Ibrahim
Engineer, DID, Sungai Burong
- (17) Mr. Soong Sin Onn
Engineer, DID, Tanjong Karang
- (18) Mr. Ismail Md. Said
Chief Irrigation Inspector, DID, Tanjong

- (19) Tuan Hj. Hamed Puasa
Karang
Senior Irrigation Inspector, DID, Sungai Besar
- (20) Mr. K. Harada
JICA Expert, DID
- (21) Mr. A. Makino
JICA Expert, DID
- (22) Mr. Hamzah bin Chin
Project Manager, PBLs, Kuala Selangor
- (23) Mr. Faizal bin Abdullah
Deputy Project Manager, PBLs, Kuala Selangor
- (24) Mr. Chew Teck Boon
Project Agricultural Officer, PBLs, Kuala Selangor
- (25) Mr. Zanil Abidin bin Hj. Yusof
Senior Sociologist, PBLs, Kuala Selangor
- (26) Miss Zabidah bt. Awang
Senior Economist, PBLs, Kuala Selangor
- (27) Mr. Salehuddin bin Hj. Yahya
Rice Specialist, DOA, Sungai Burong

JICA