

図 3. 2 取水口地点での流況曲線 (ムグミット 2 計画)

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 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
 JAPAN INTERNATIONAL COOPERATION AGENCY

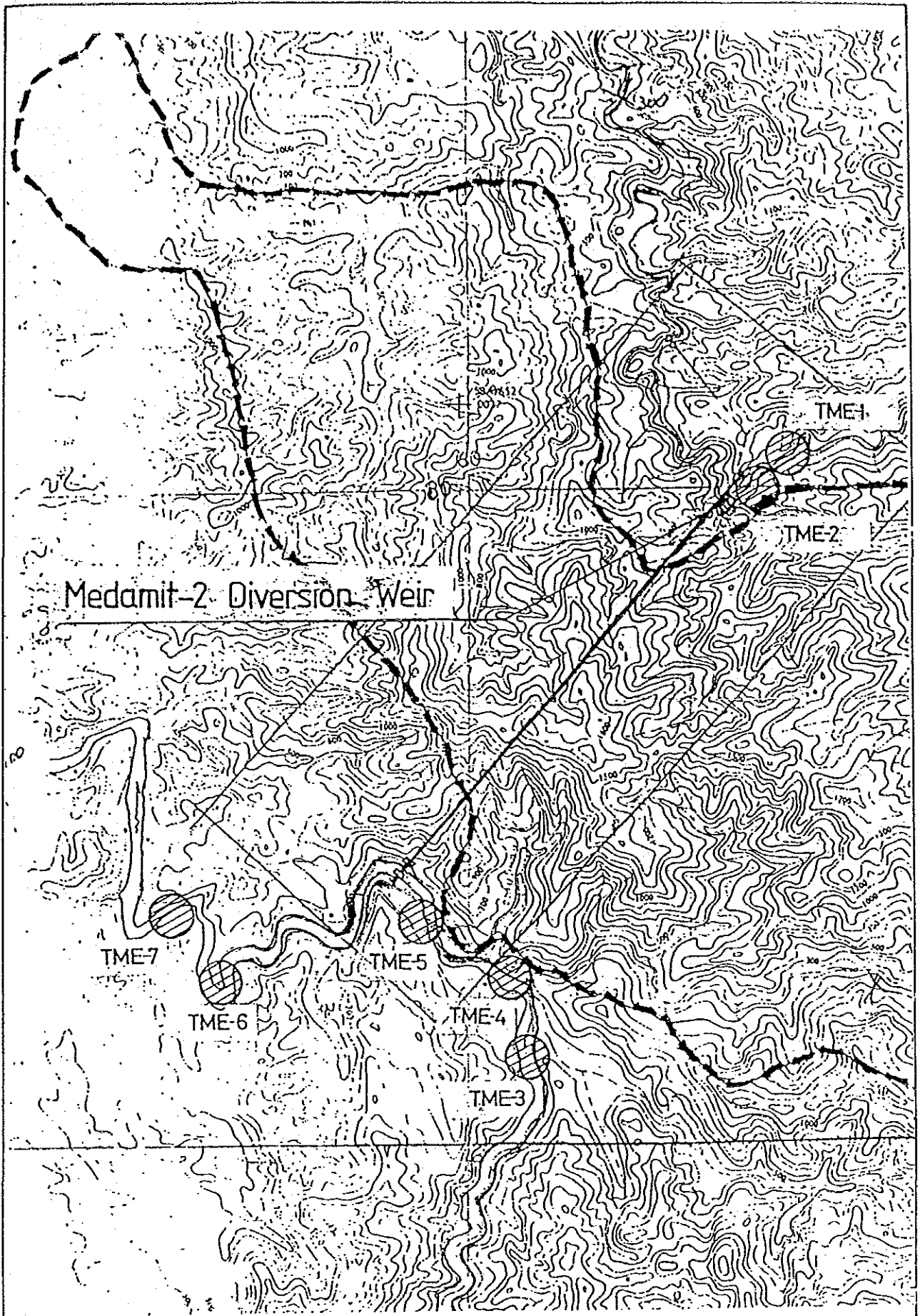
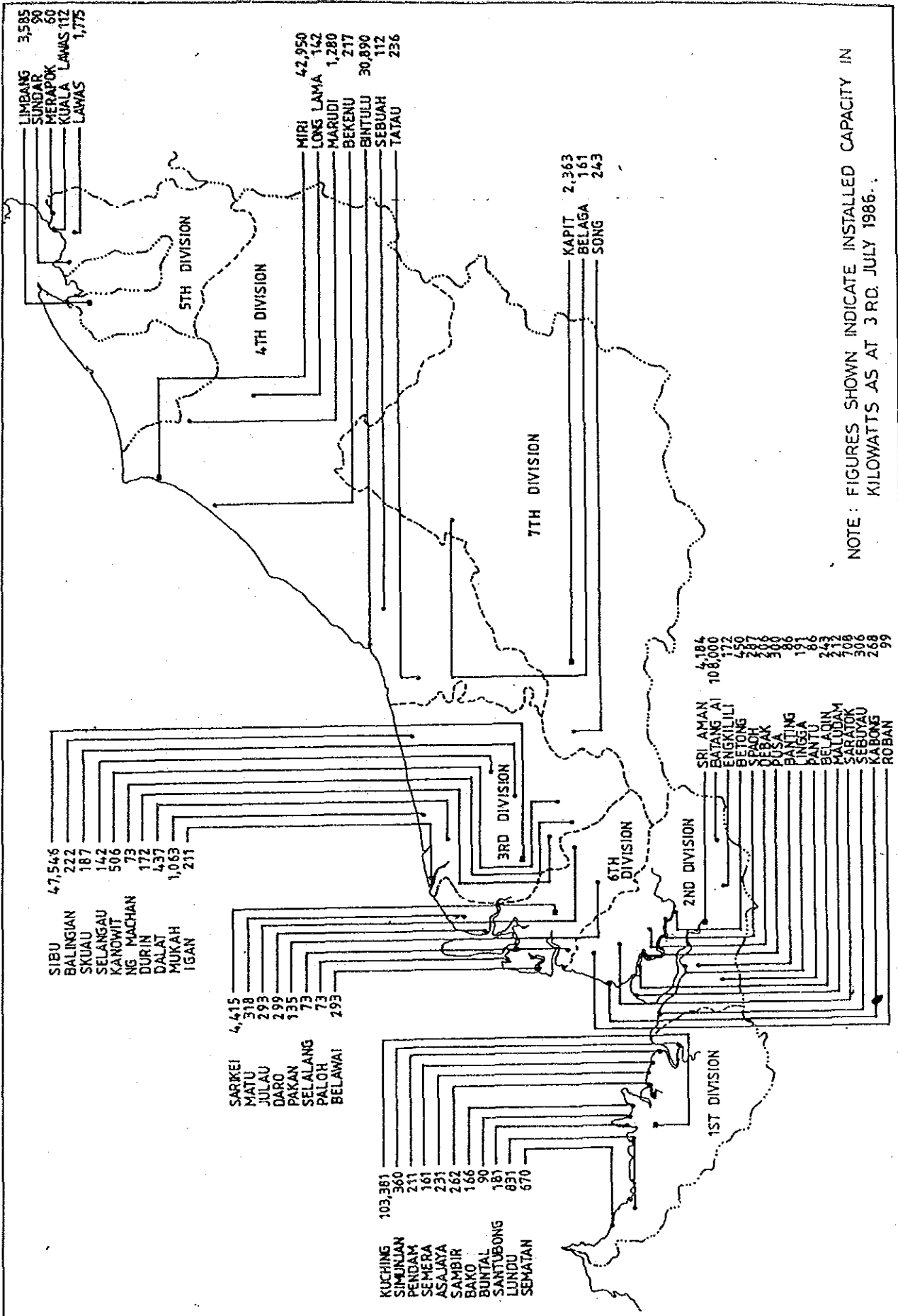


図 3.3 コンクリート骨材採取可能地域

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NOTE: FIGURES SHOWN INDICATE INSTALLED CAPACITY IN KILOWATTS AS AT 3 RD. JULY 1986.

図 4.1 SESCOの管轄区と発電所

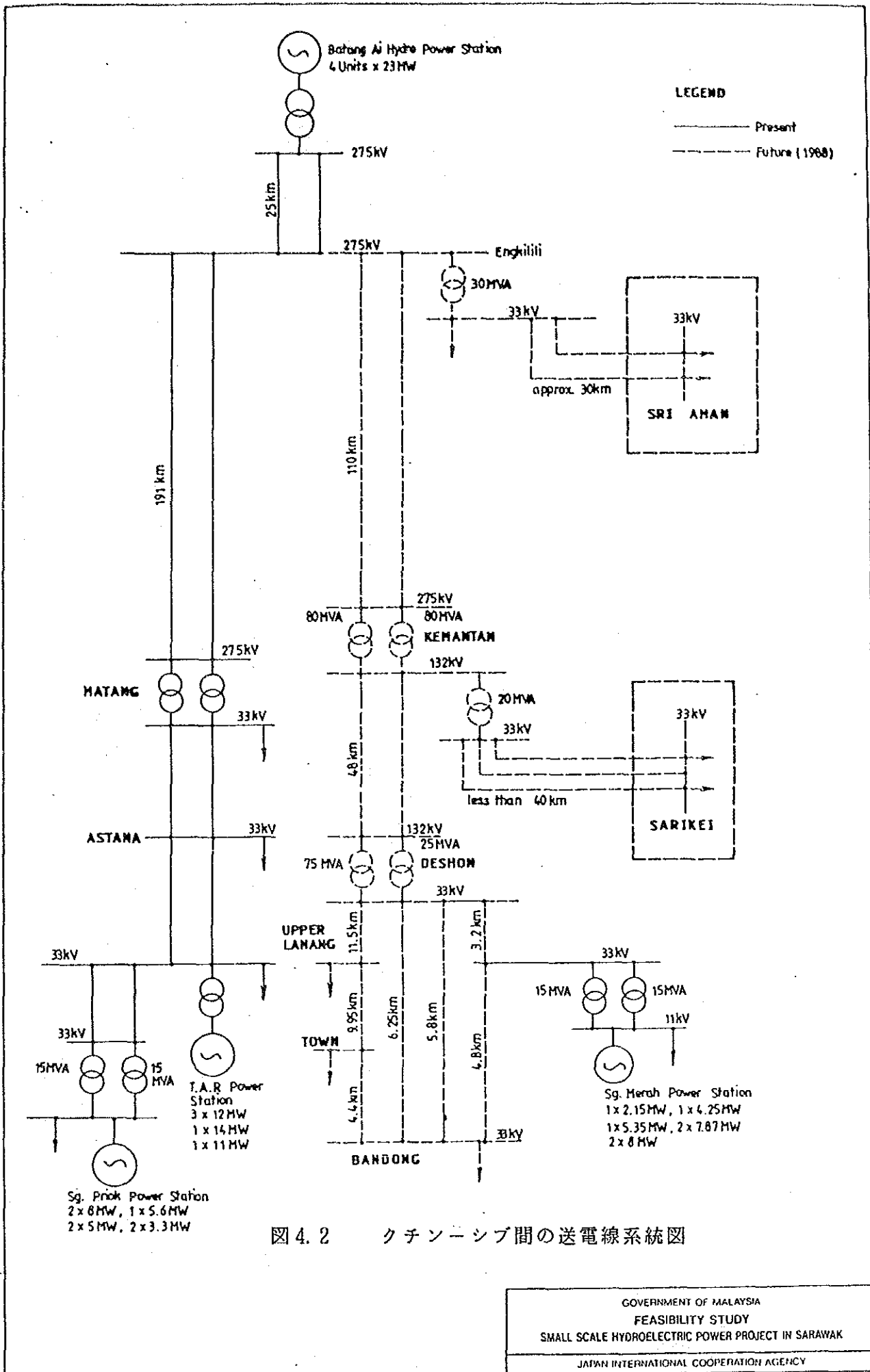


図 4.2 クチンシップ間の送電線系統図

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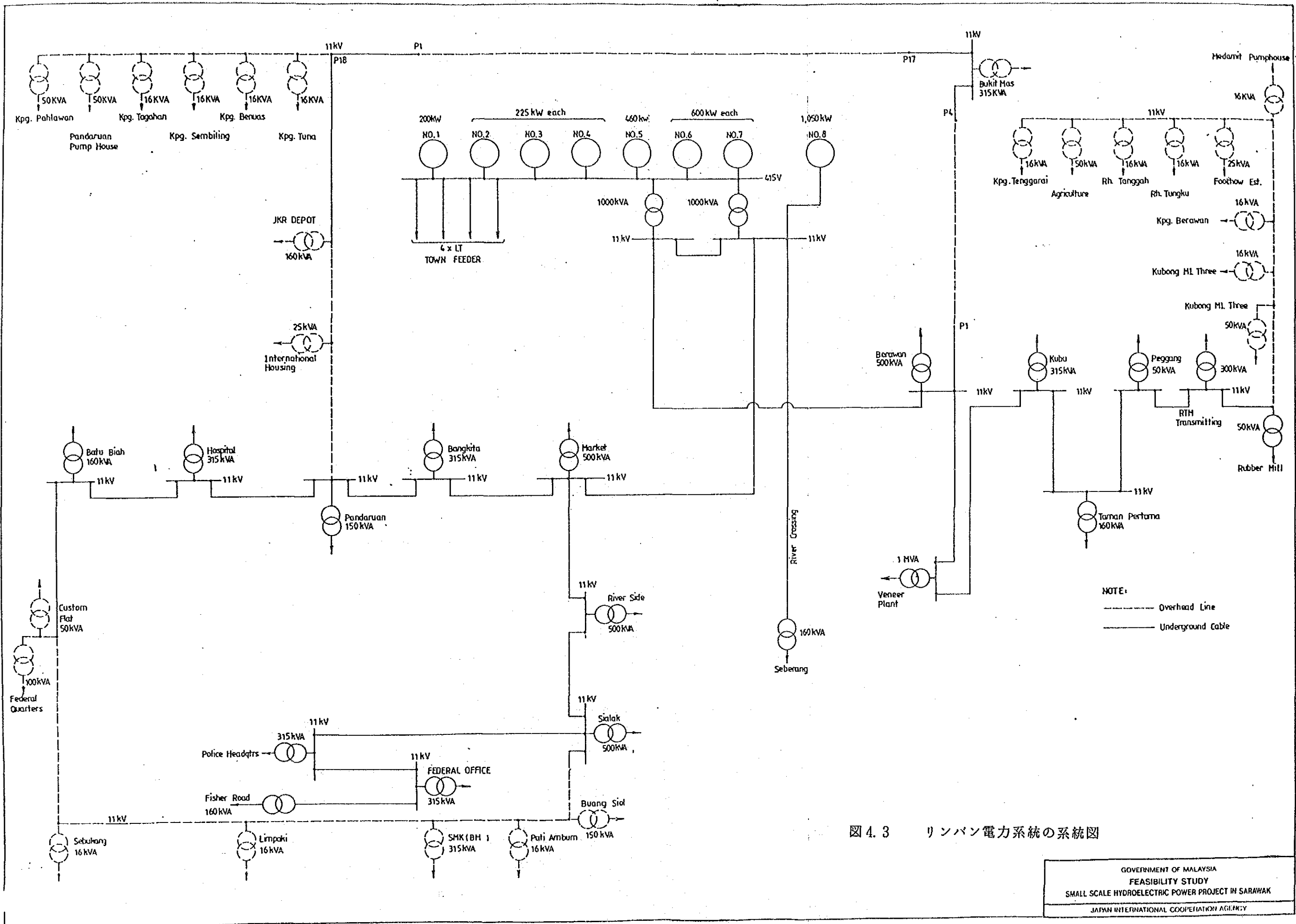


図 4.3 リンバン電力システムの系統図

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 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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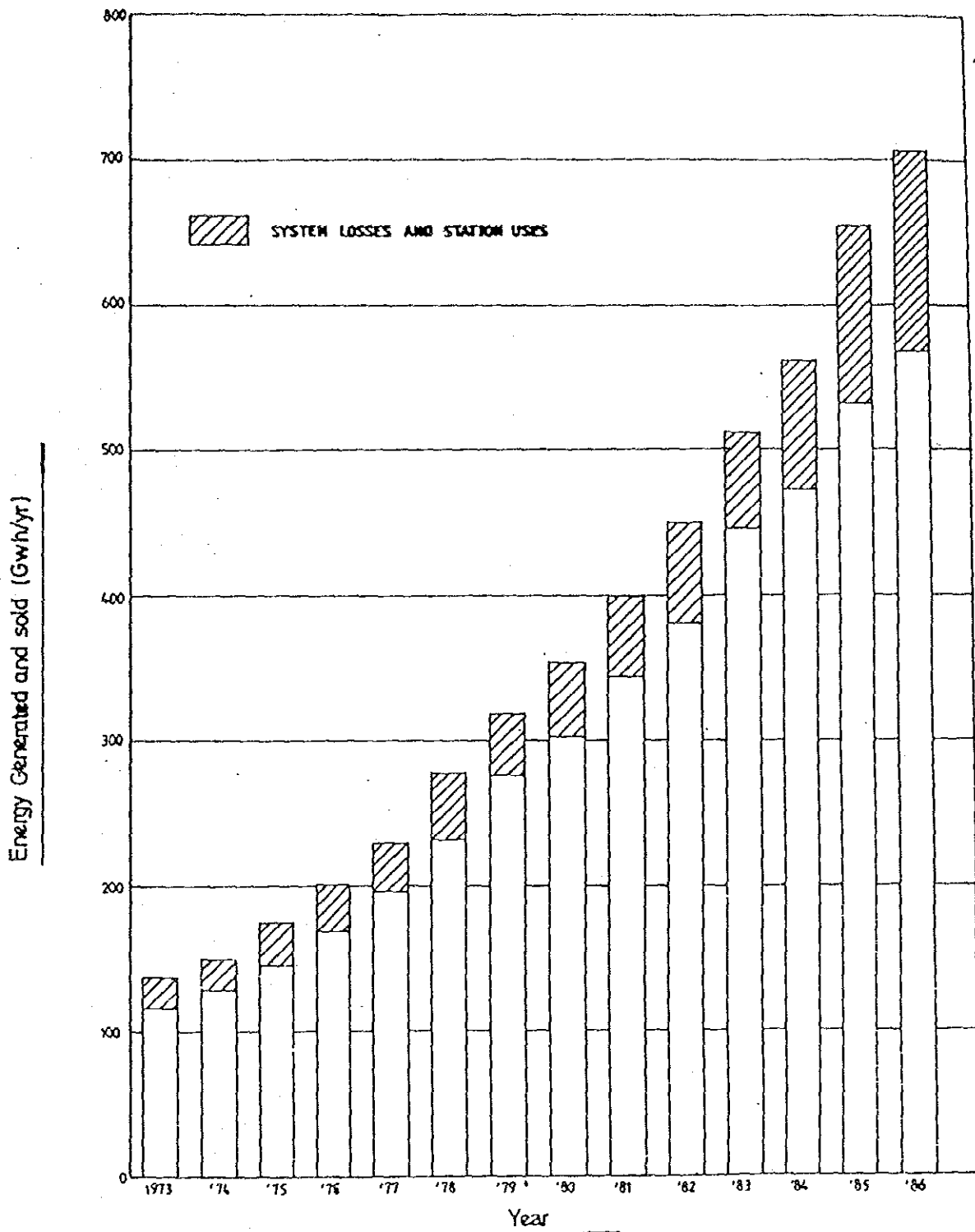


図 4.4 サラワク州における発電電力量と売電量

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 FEASIBILITY STUDY
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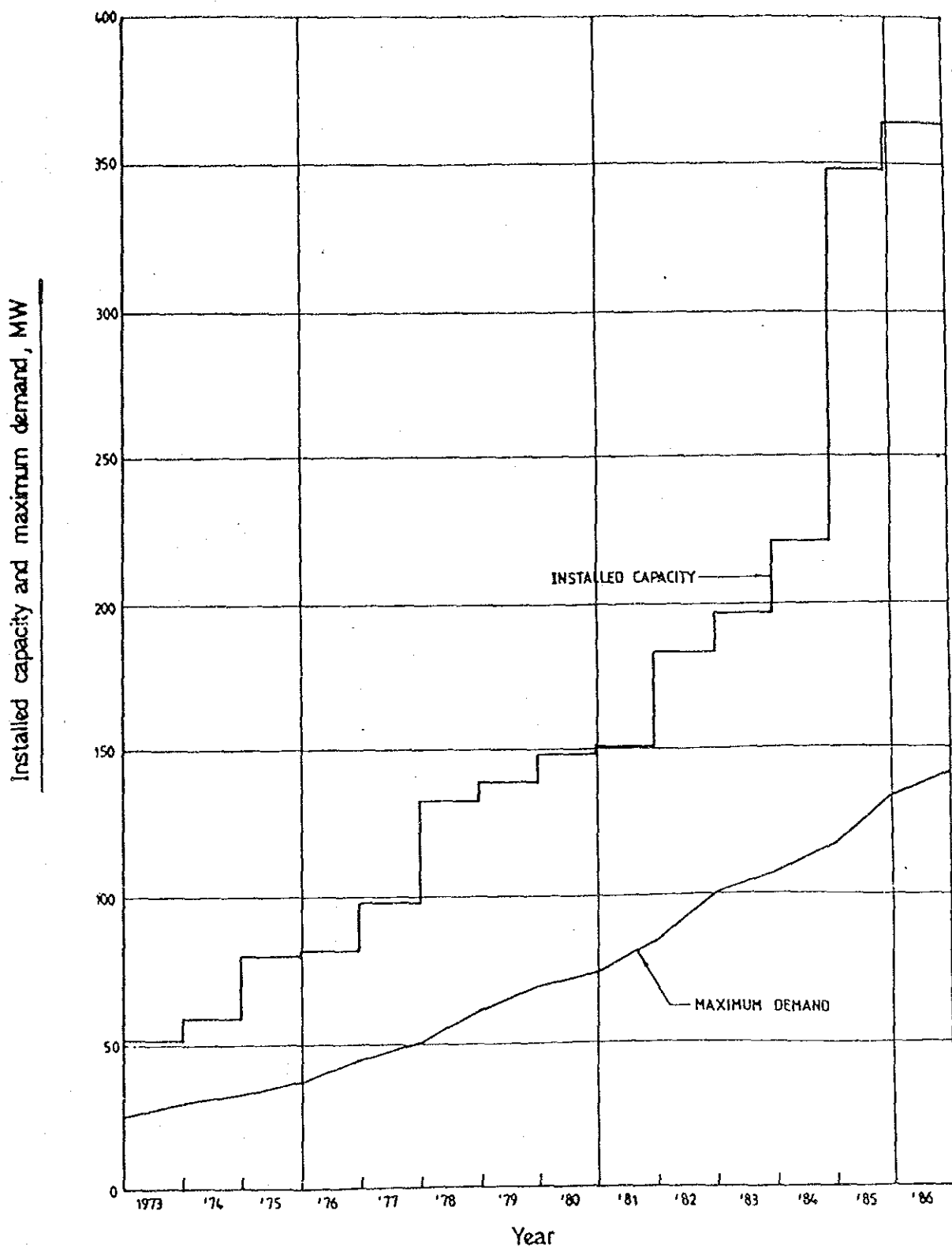


図 4.5 サラワク州における設備容量と最大電力需要

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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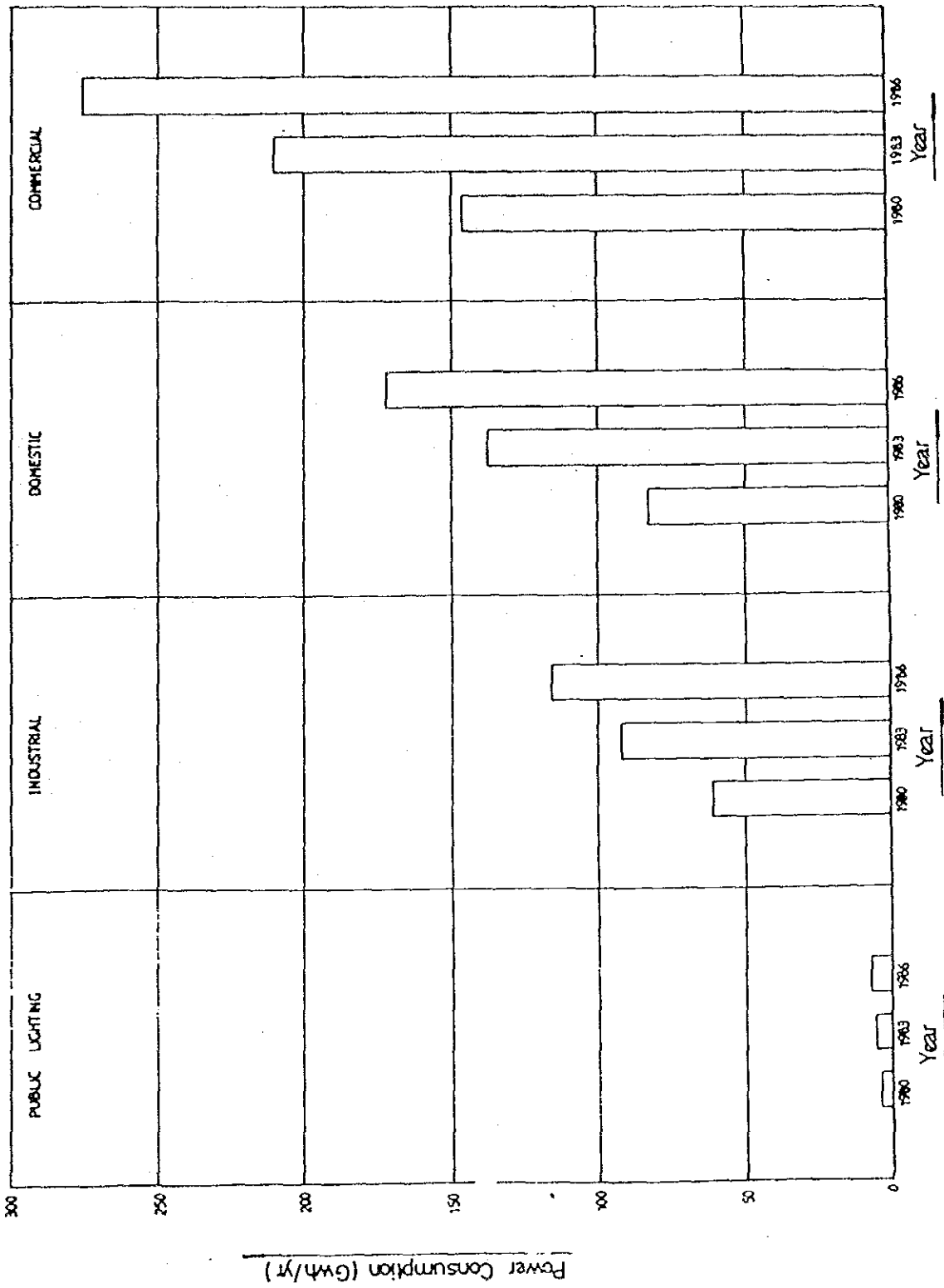


図 4.6 サラワク州における電力消費の内訳

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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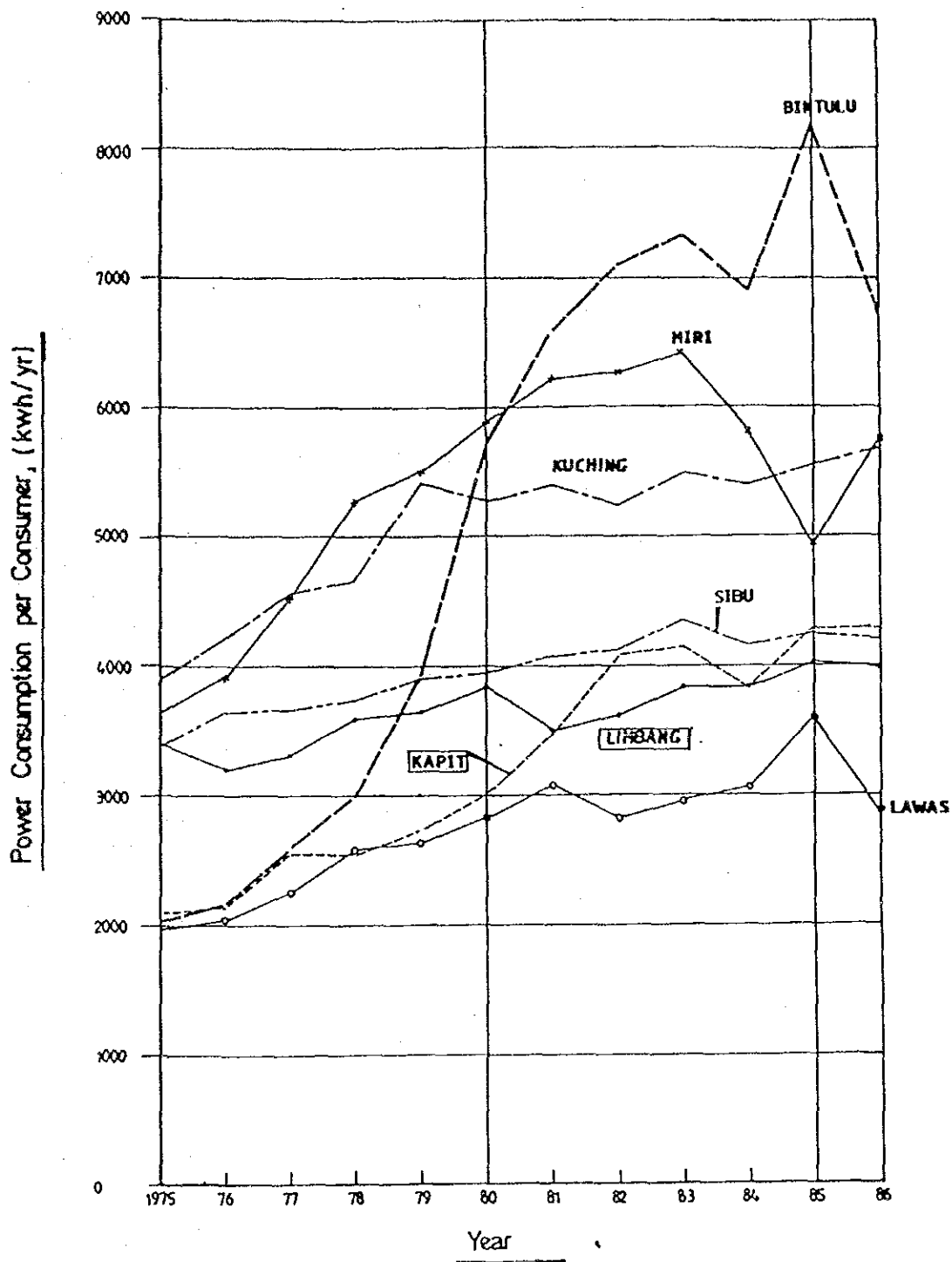


図 4.7 サラワク州における消費者あたりの年間消費電力量

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 FEASIBILITY STUDY
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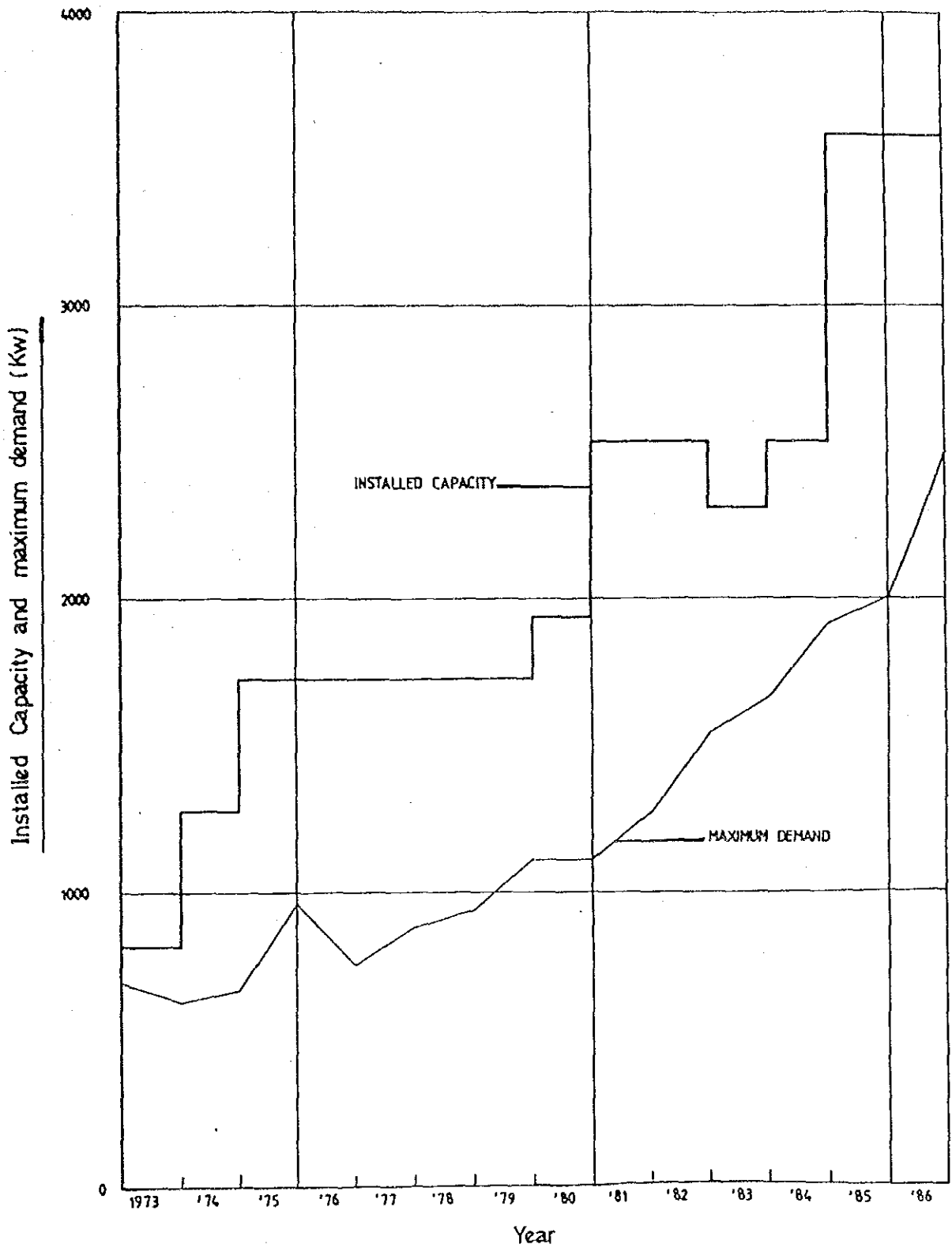


図 4. 8 設備容量および最大電力需要 (リンバン地区)

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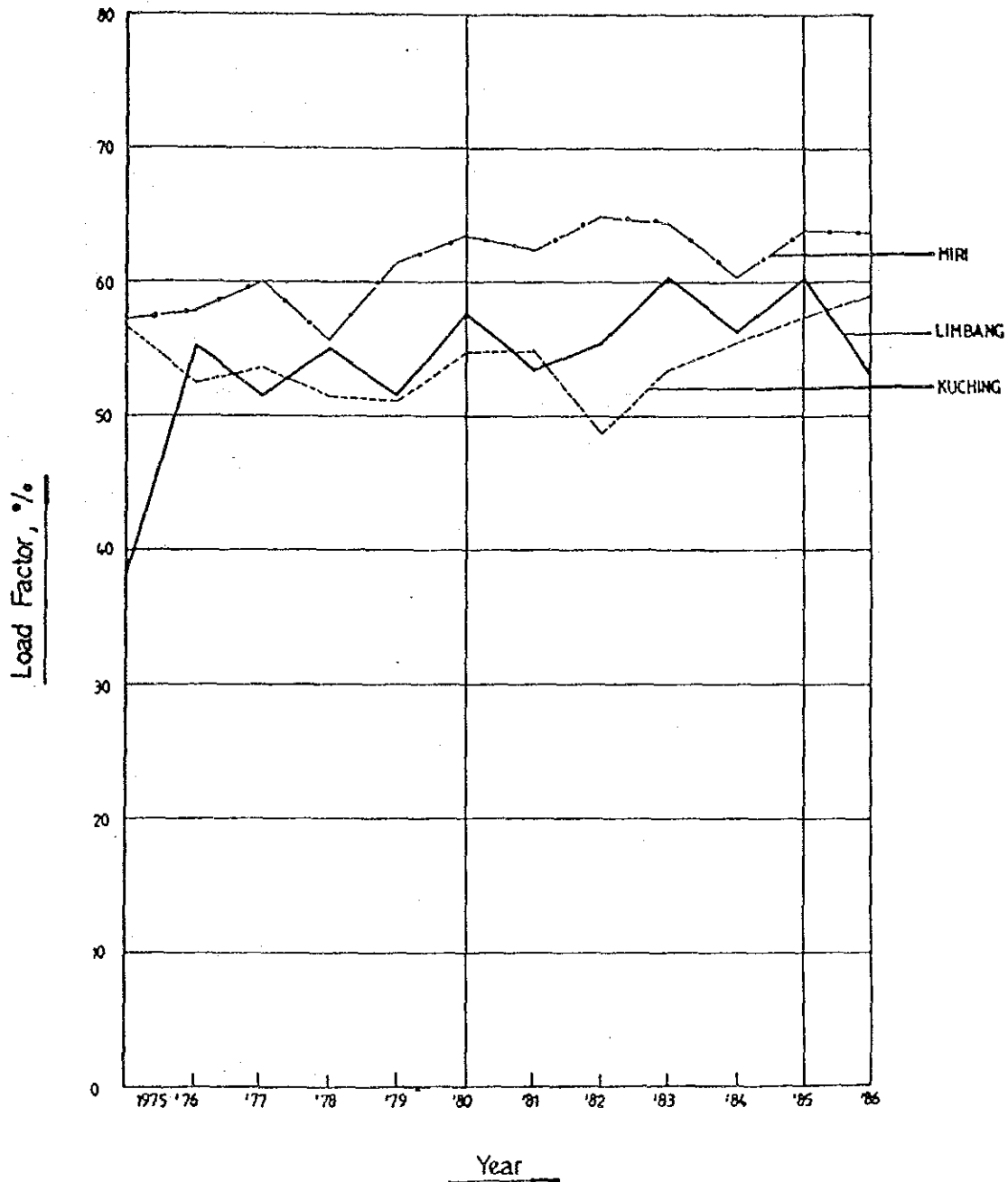


図 4.9 年負荷率の変化 (リンバン地区)

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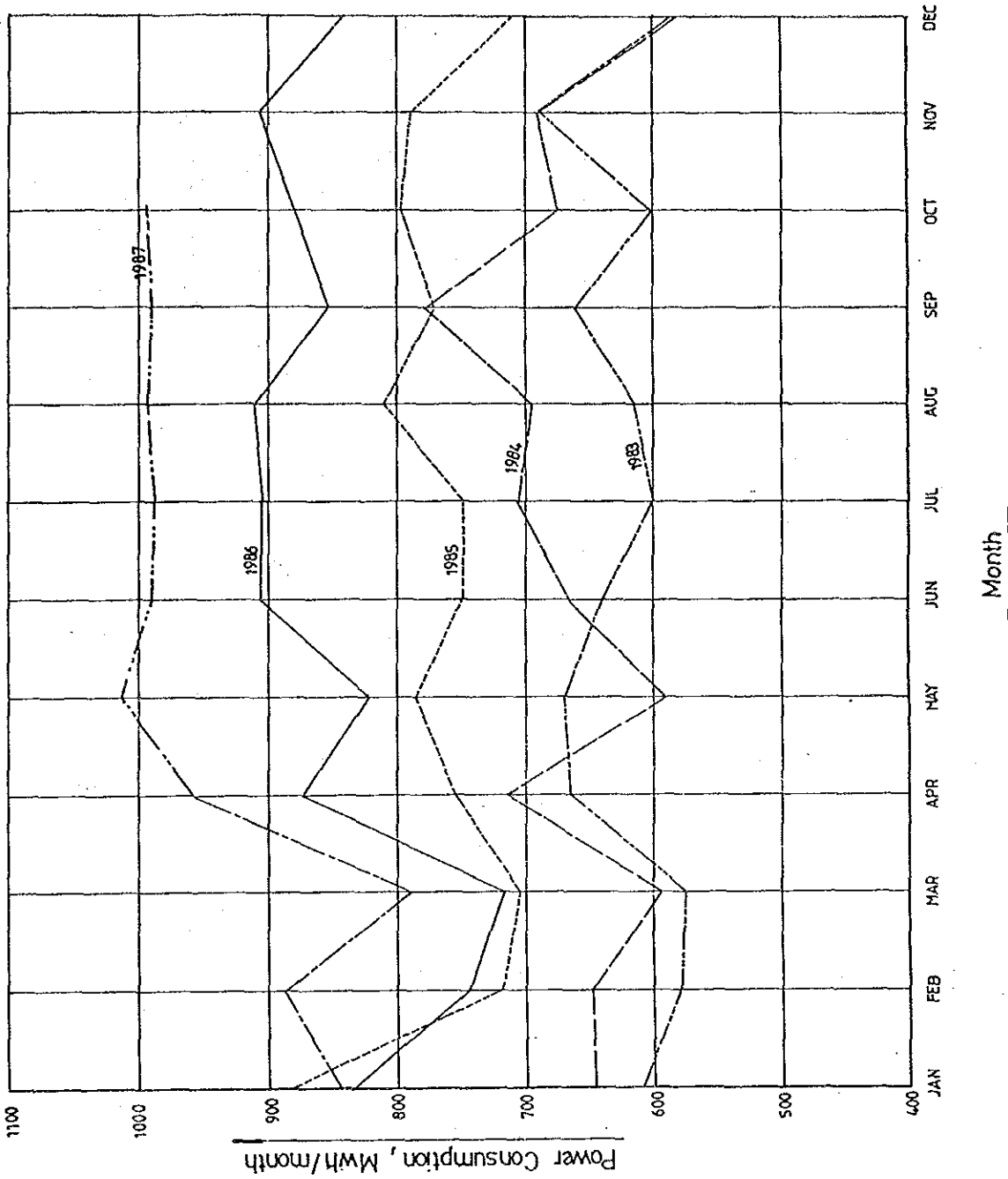


図 4.10

月別電力消費量の変化 (リンバン地区)

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
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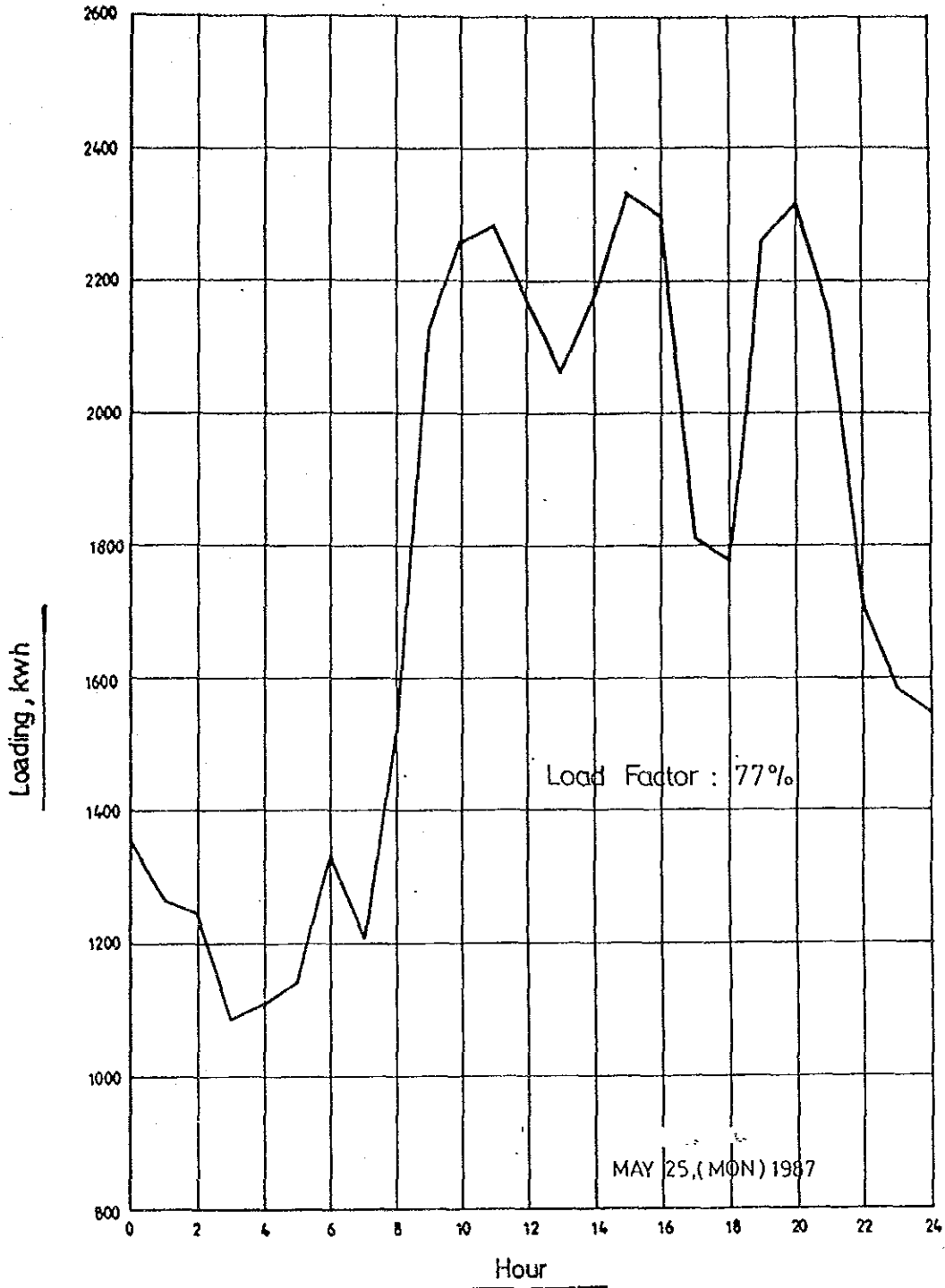


図 4.11 日負荷曲線 (リンバン地区)

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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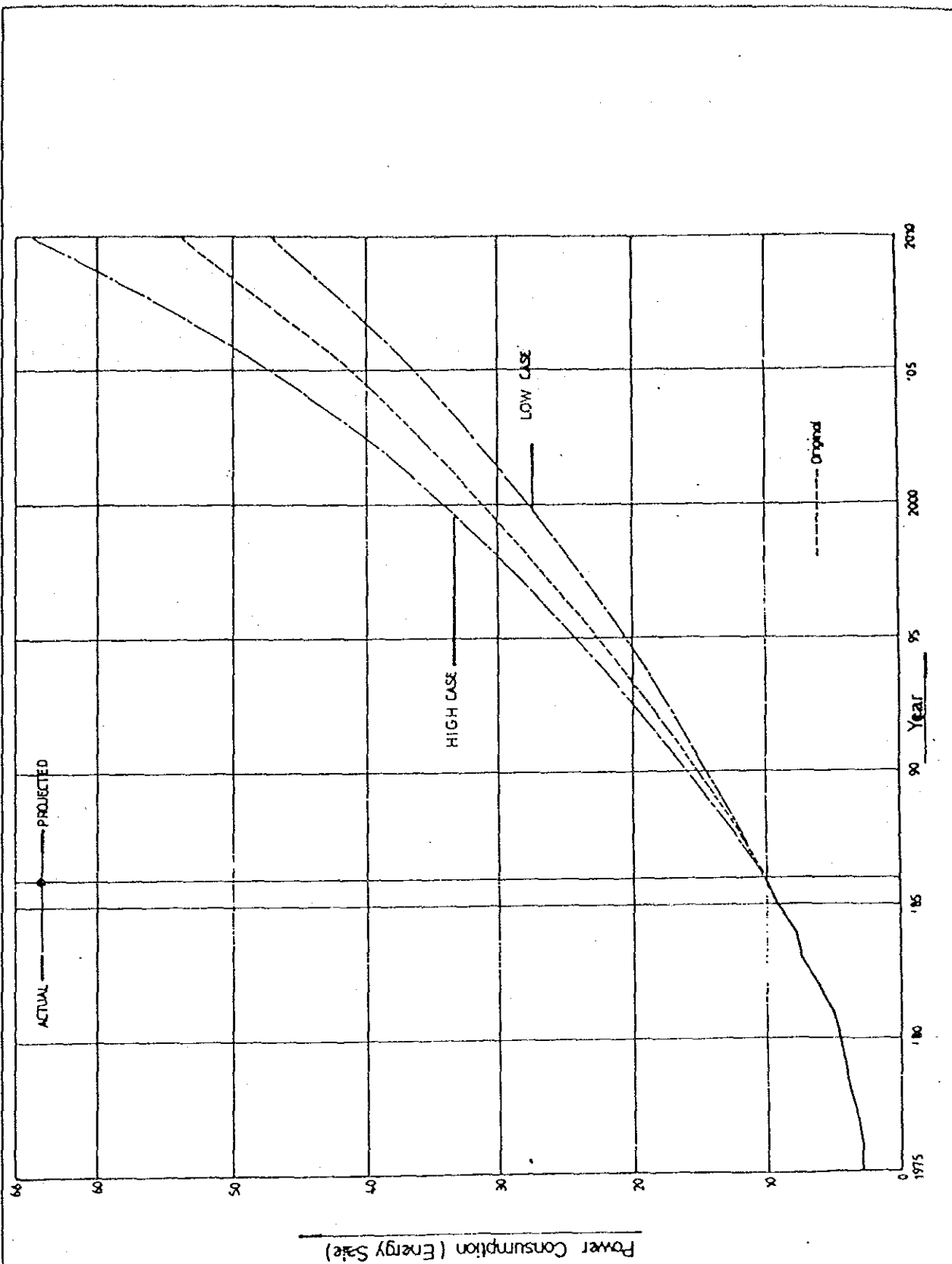


図 4.12 電力消費量予測とその上下限值

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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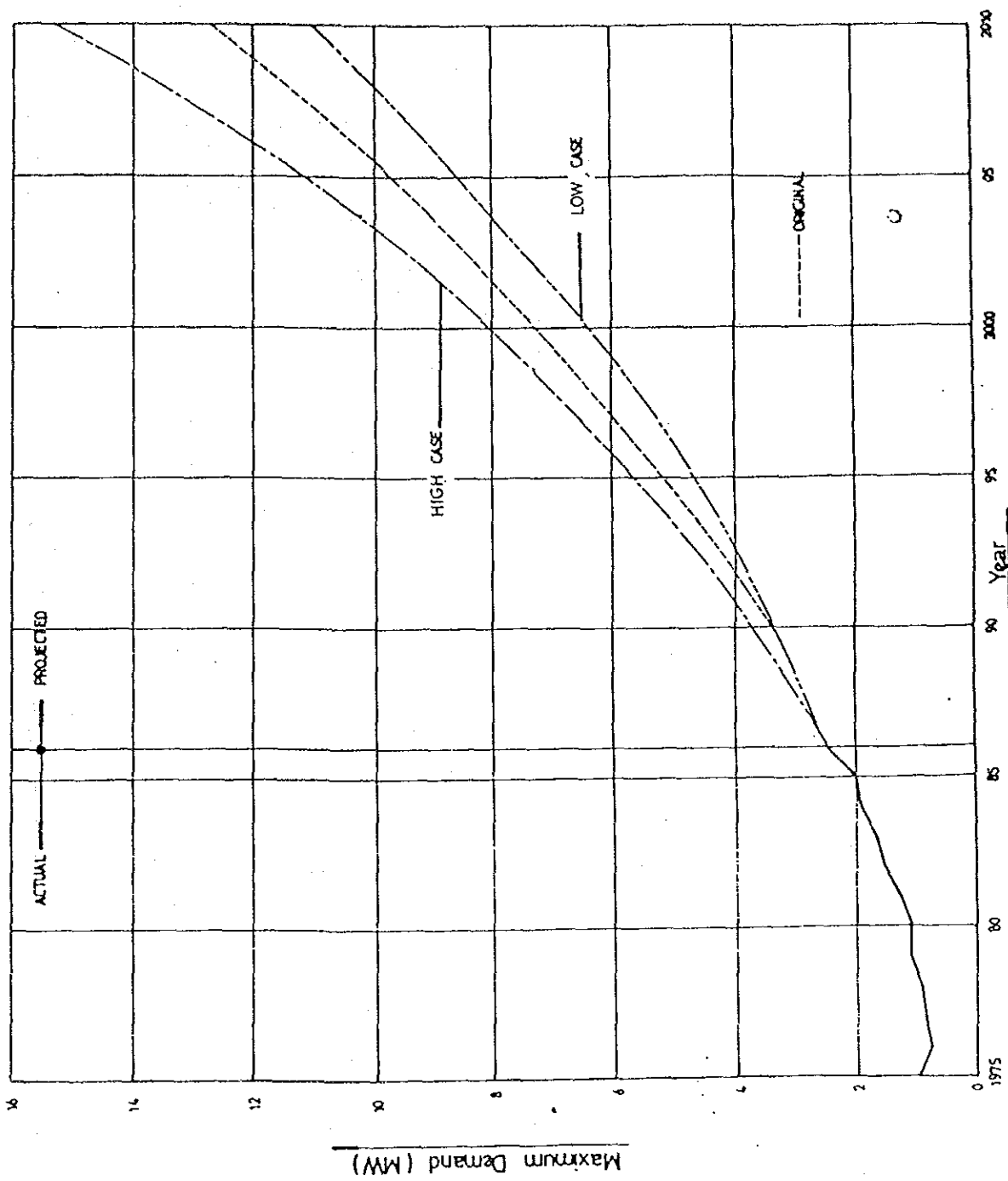


図 4.13 ピーク負荷予測とその上下限值

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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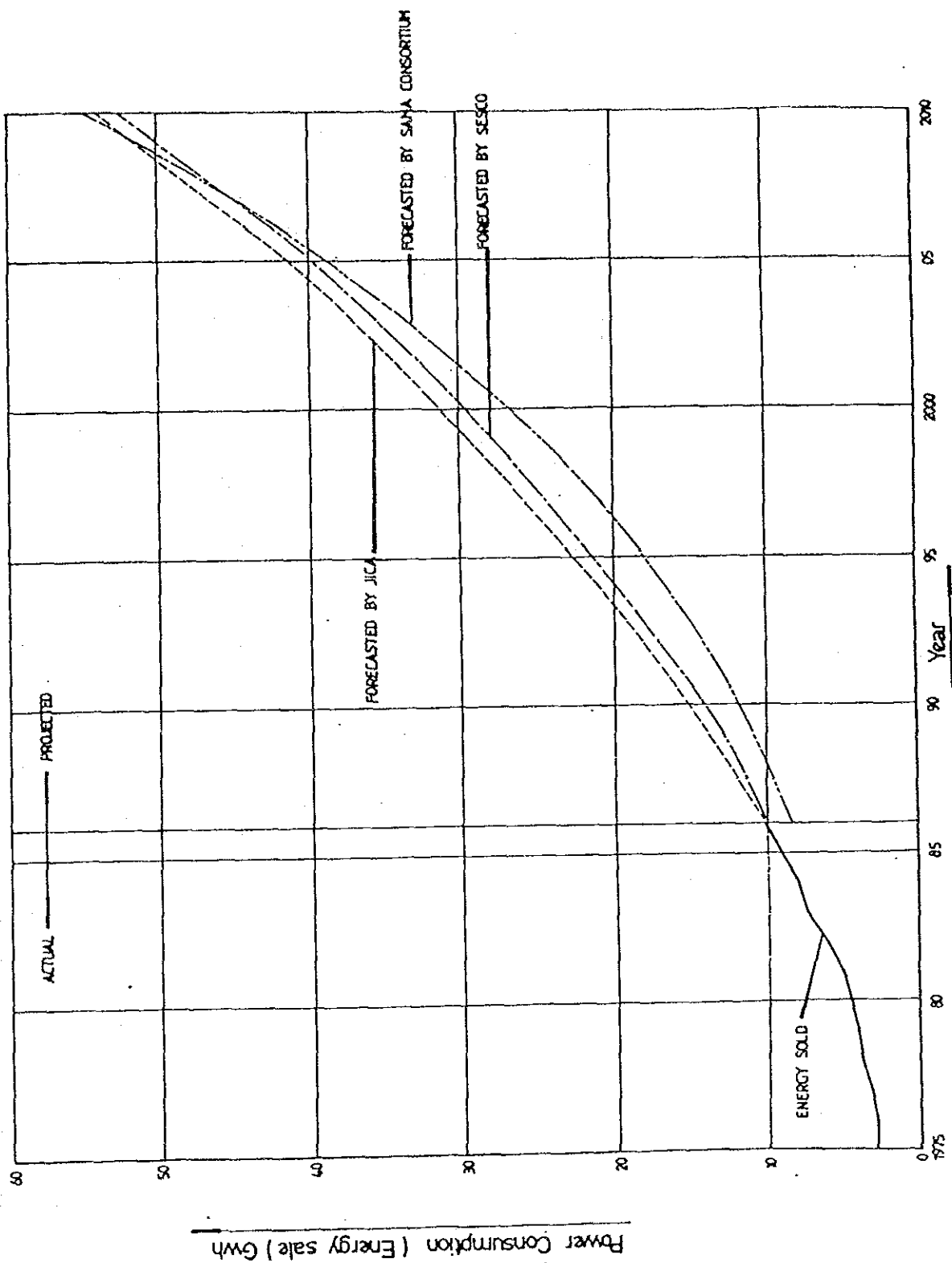


図 4.14 電力消費量予測値の比較

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
 JAPAN INTERNATIONAL COOPERATION AGENCY

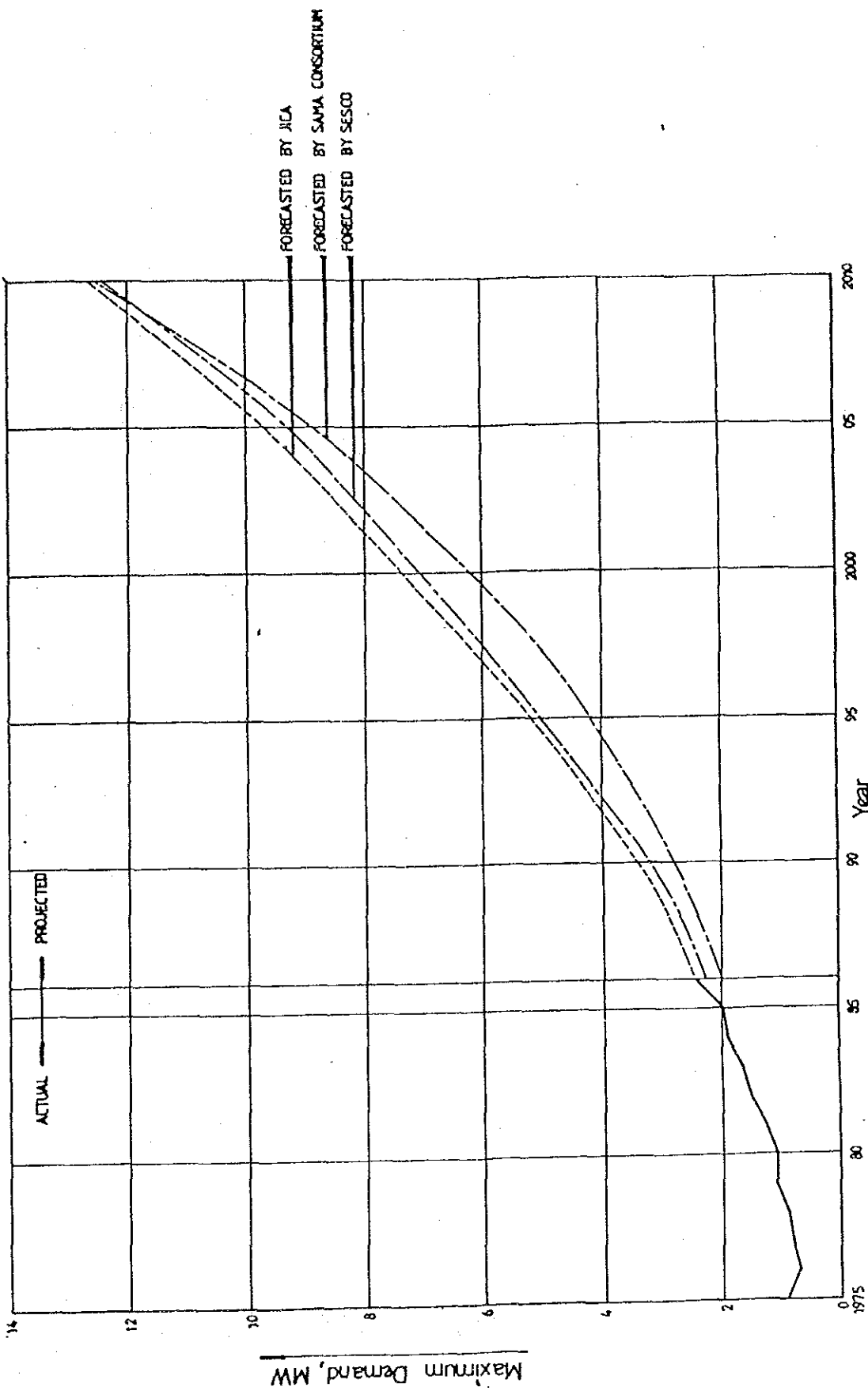
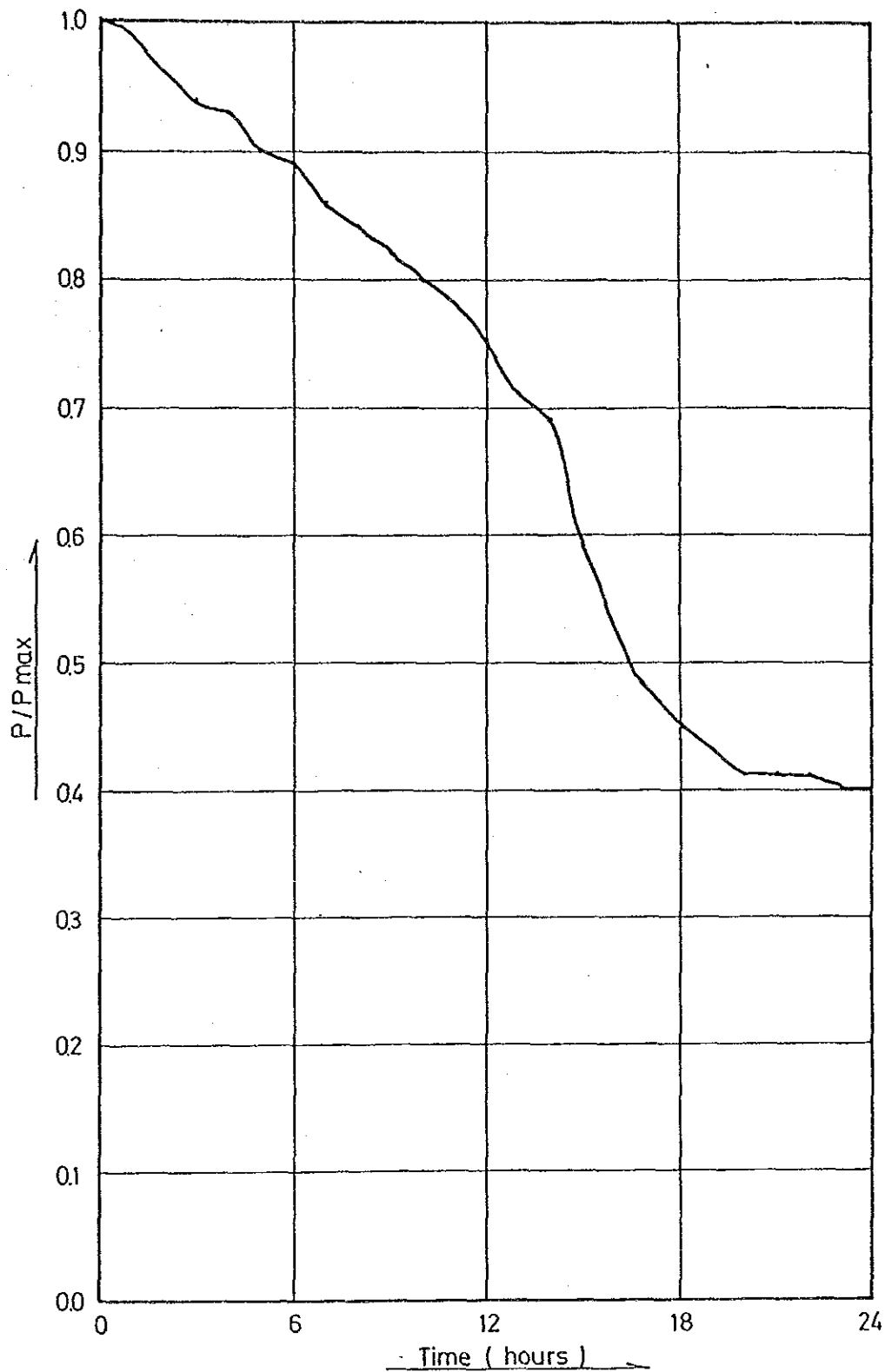


図 4.15 ピーク負荷予測値の比較

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
 JAPAN INTERNATIONAL COOPERATION AGENCY



DAILY LOAD CURVE AT LIMBANG

図5.1 日負荷曲線 (リンバン地区)

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
 JAPAN INTERNATIONAL COOPERATION AGENCY

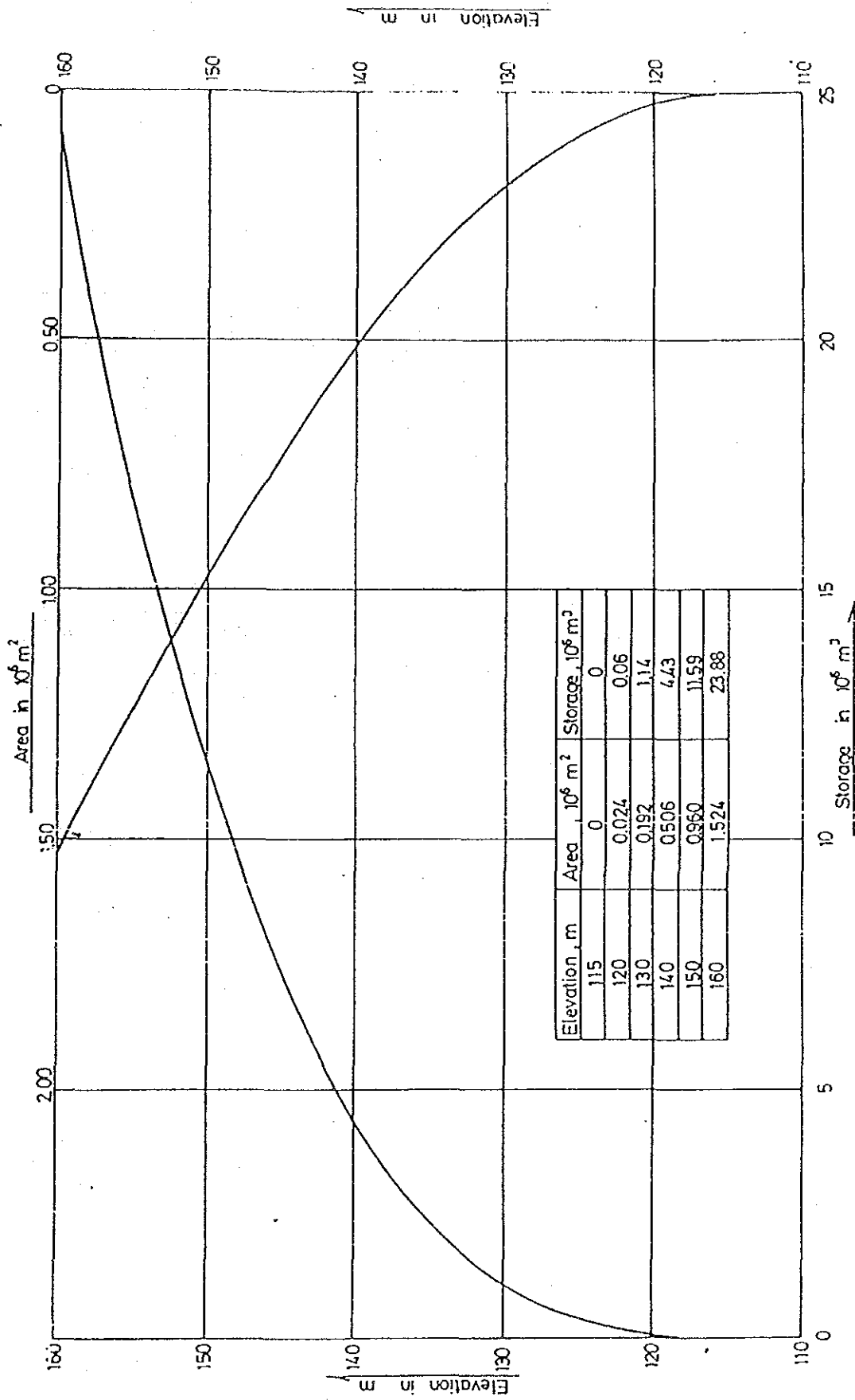
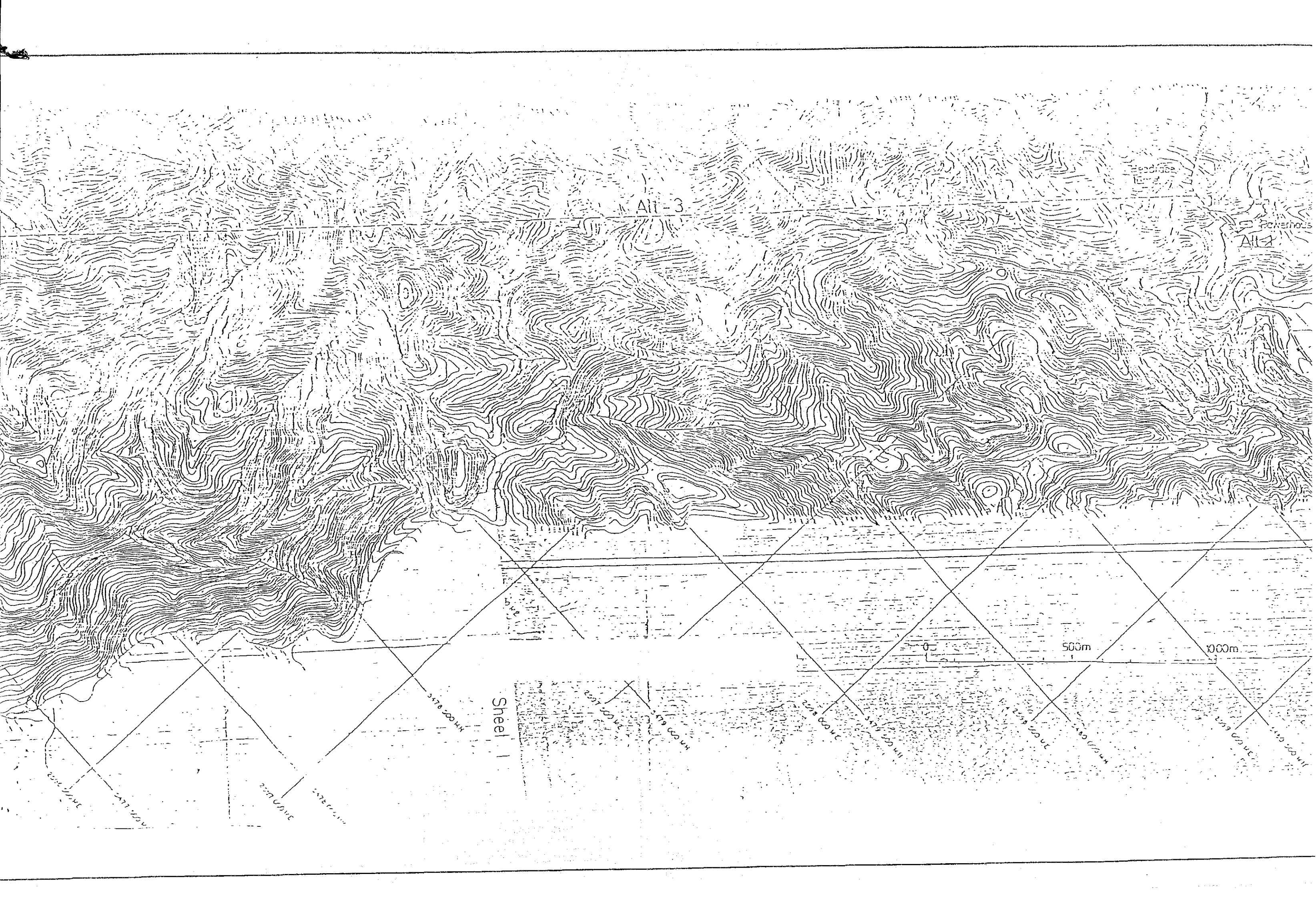


図 5. 2 調整池容量曲線 (ムダミット 2 計画)

GOVERNMENT OF MALAYSIA
FEASIBILITY STUDY
SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK

JAWAI INTERNATIONAL COOPERATION AGENCY





All-3

Powerhouse
All-3

Sheet 1

0 500m 1000m

1000m
2000m
3000m
4000m

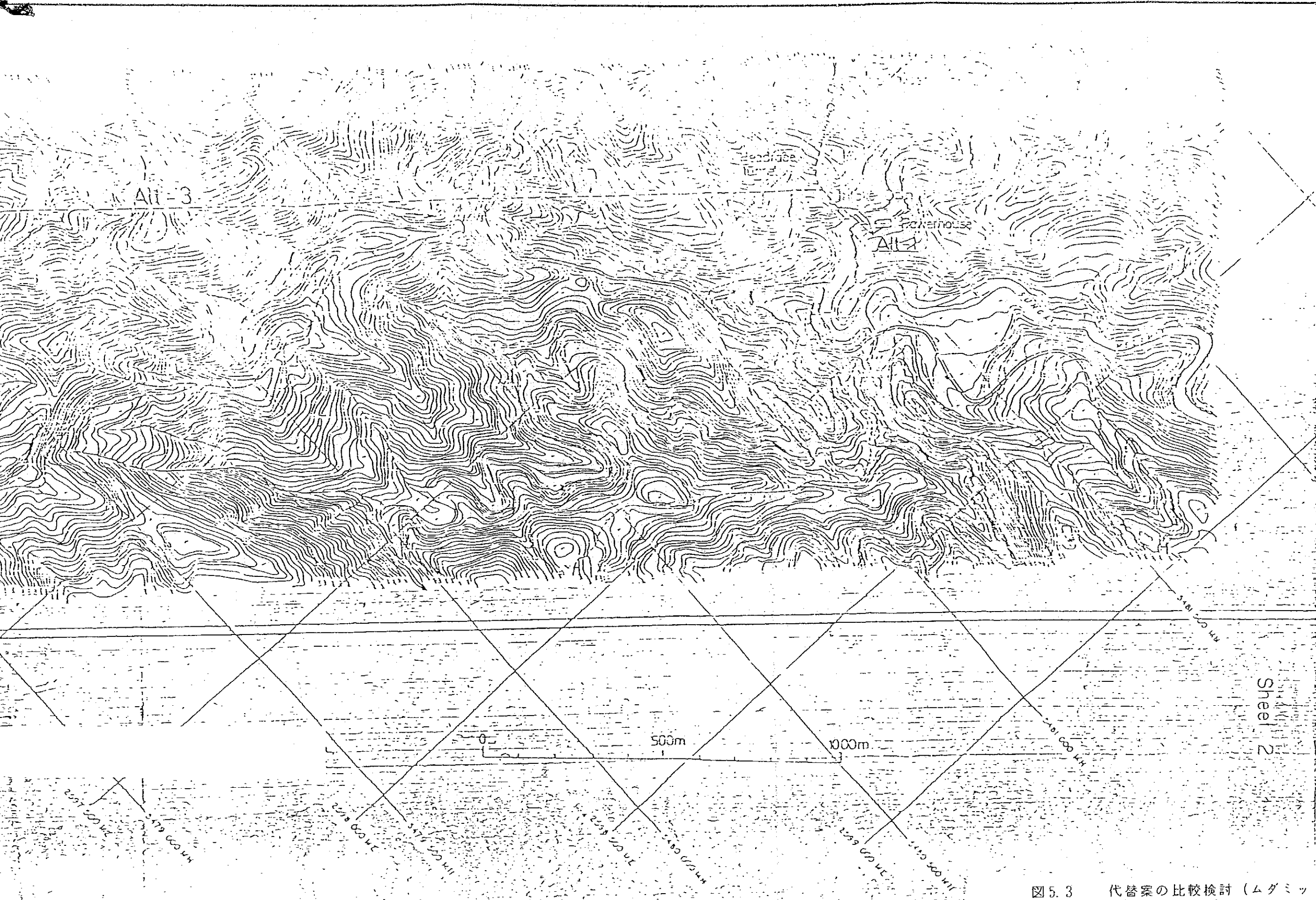


図5.3 代替案の比較検討 (ムダミット2計画)

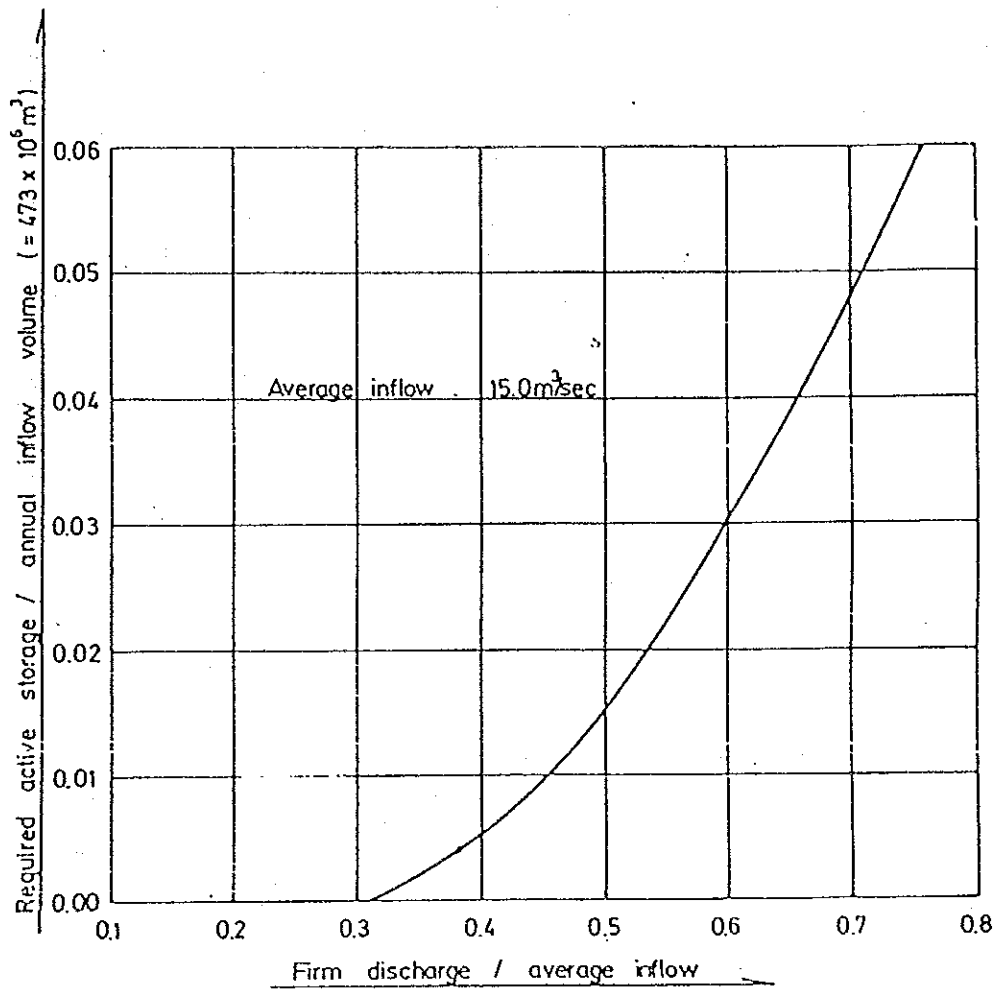


図 5. 4 貯水容量－使用水量曲線（ムダミット 2 計画）

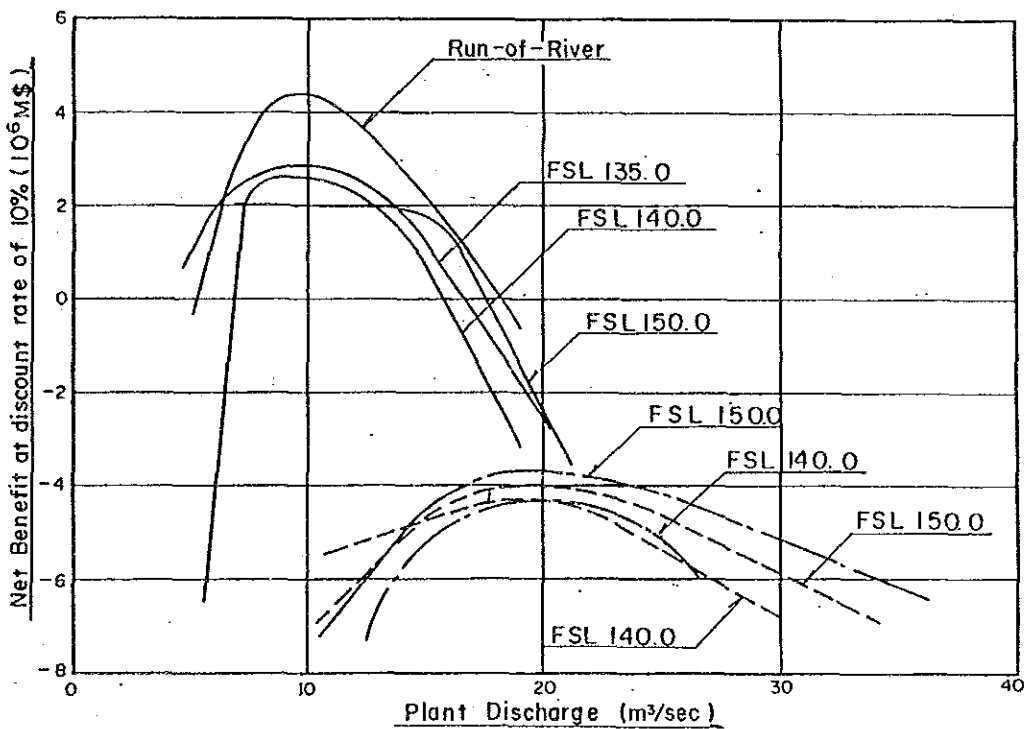
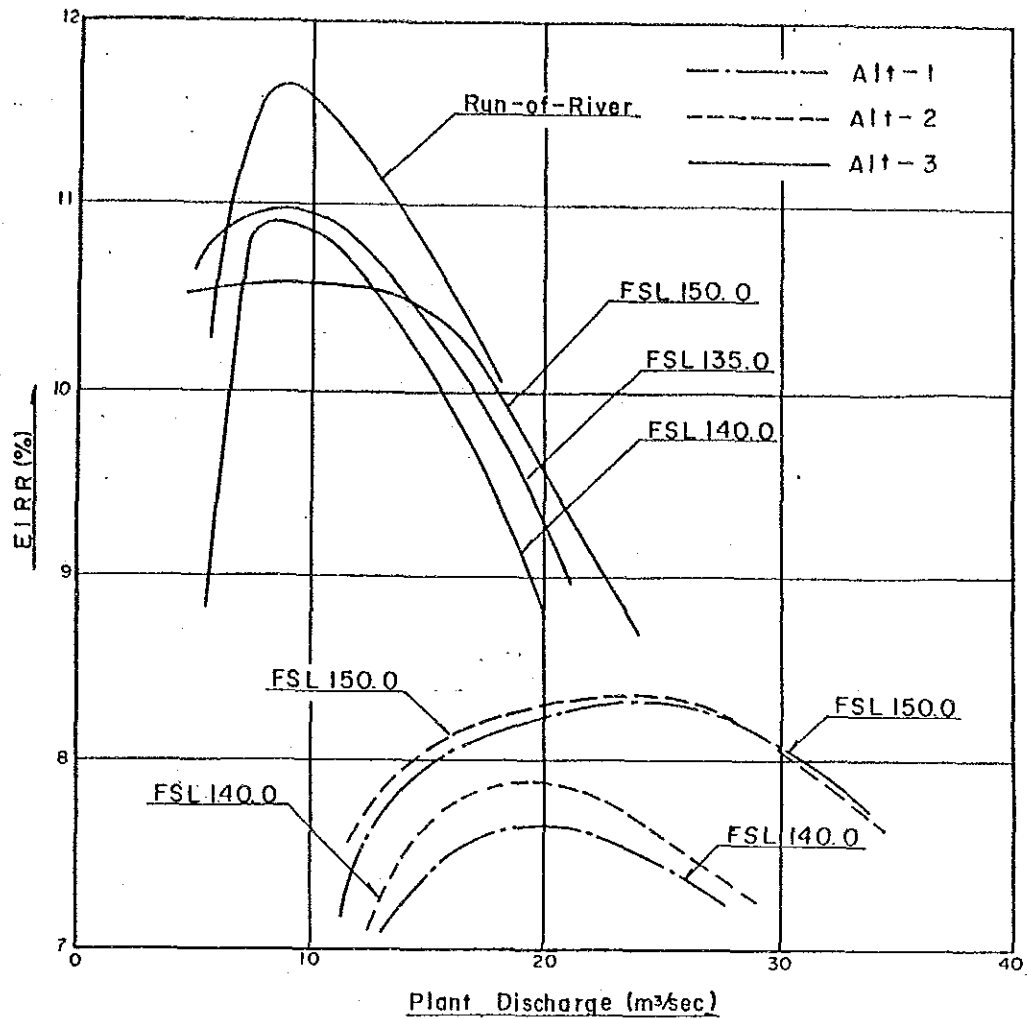


図 5.5 純便益および経済的内部収益率
(ムダミット 2 計画)

GOVERNMENT OF MALAYSIA
FEASIBILITY STUDY
SMALL SCALL HYDROELECTRIC POWER PROJECT IN SARAWAK
JAPAN INTERNATIONAL COOPERATION AGENCY

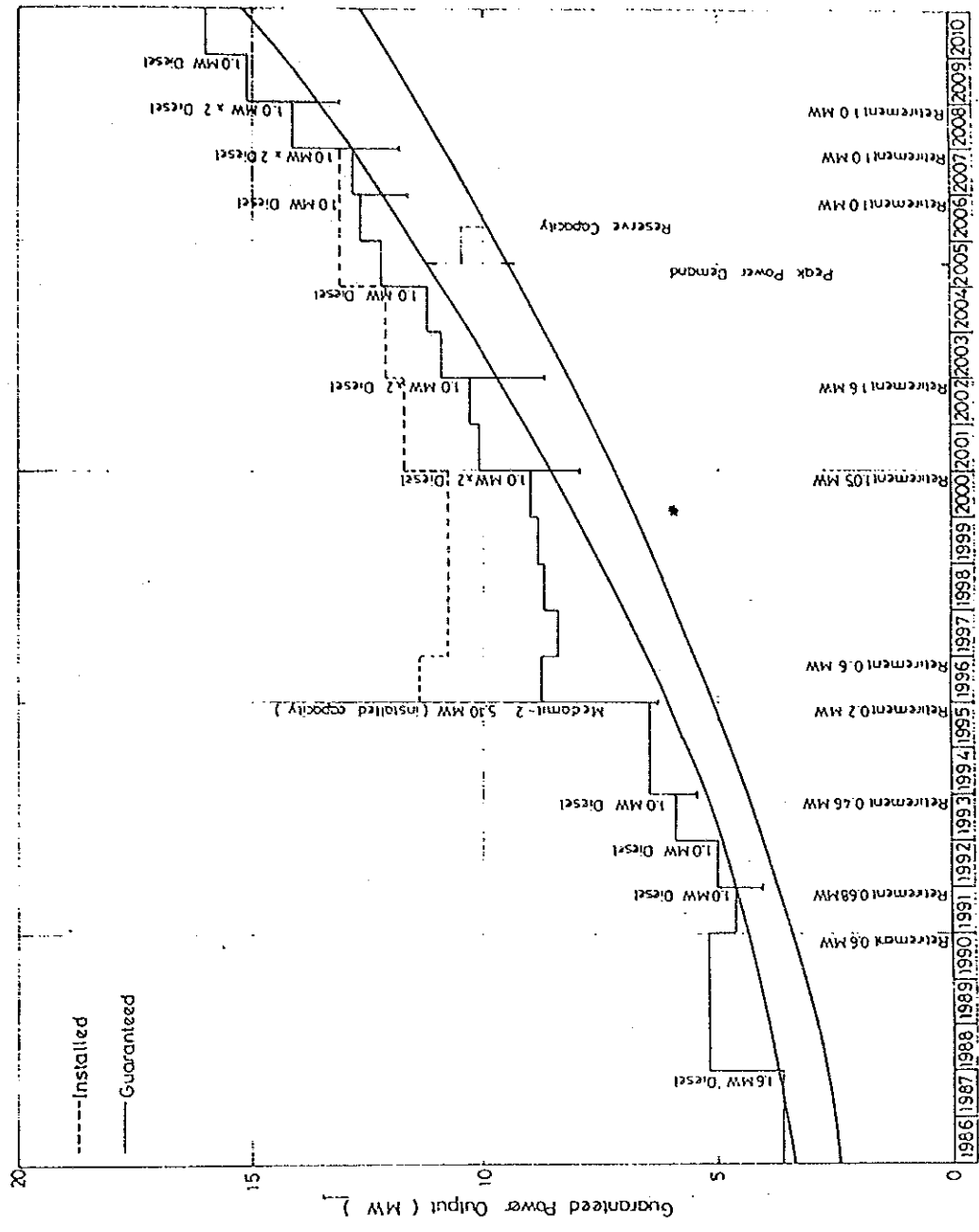


図 5.6 ピーク負荷に対する供給計画 (リンパン系統)

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALL HYDROELECTRIC POWER PROJECT IN SARAWAK
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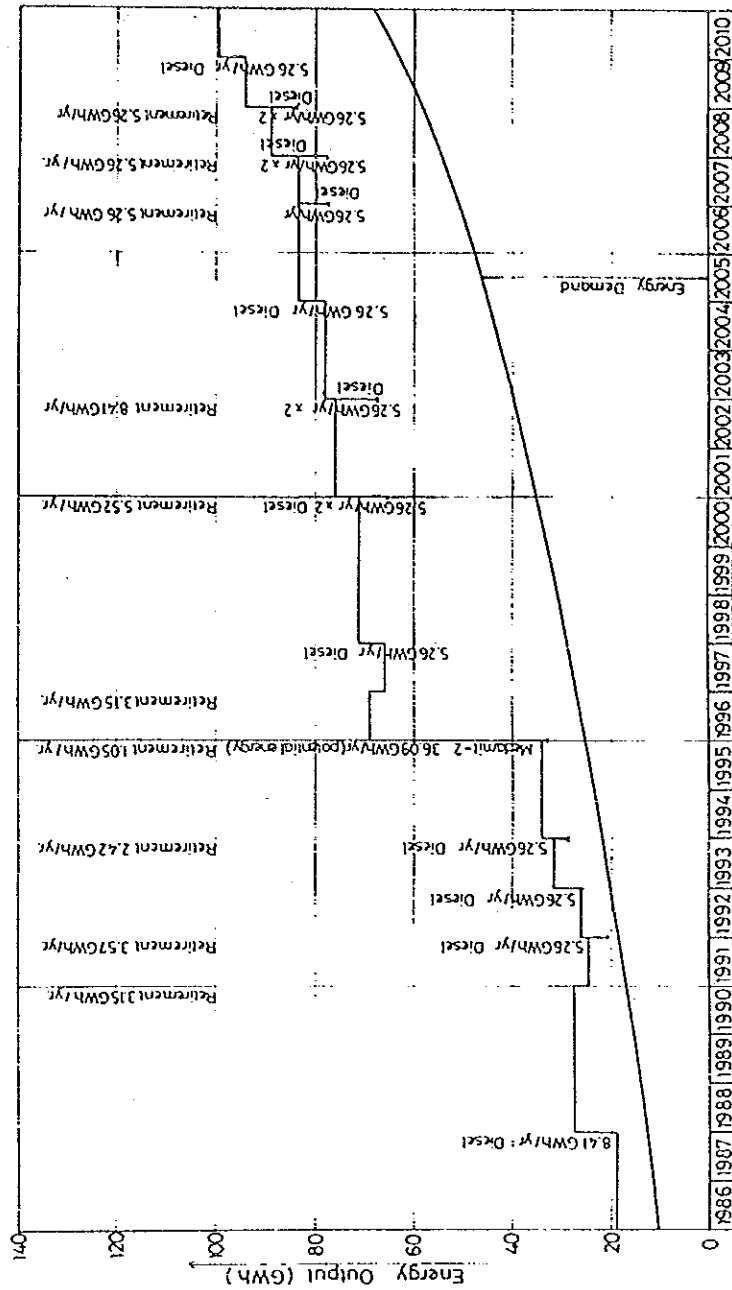


図 5.7 電力量に対する供給計画 (リンバン系統)

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALL HYDROELECTRIC POWER PROJECT IN SARAWAK
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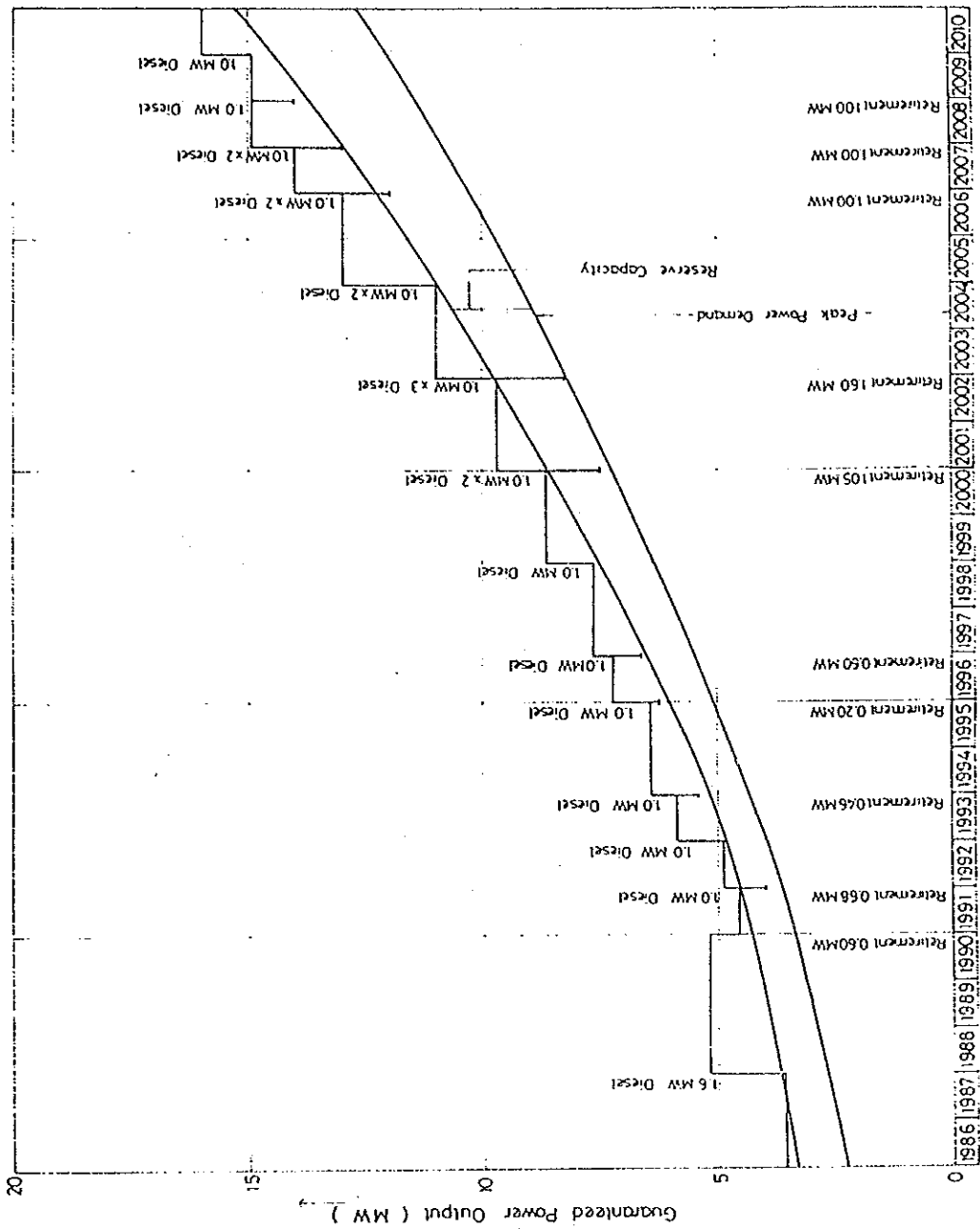


図 5.8

ディーゼル発電によるピーク負荷に対する供給計画（リンバン系統）

GOVERNMENT OF MALAYSIA
 FEASIBILITY STUDY
 SMALL SCALL HYDROELECTRIC POWER PROJECT IN SARAWAK
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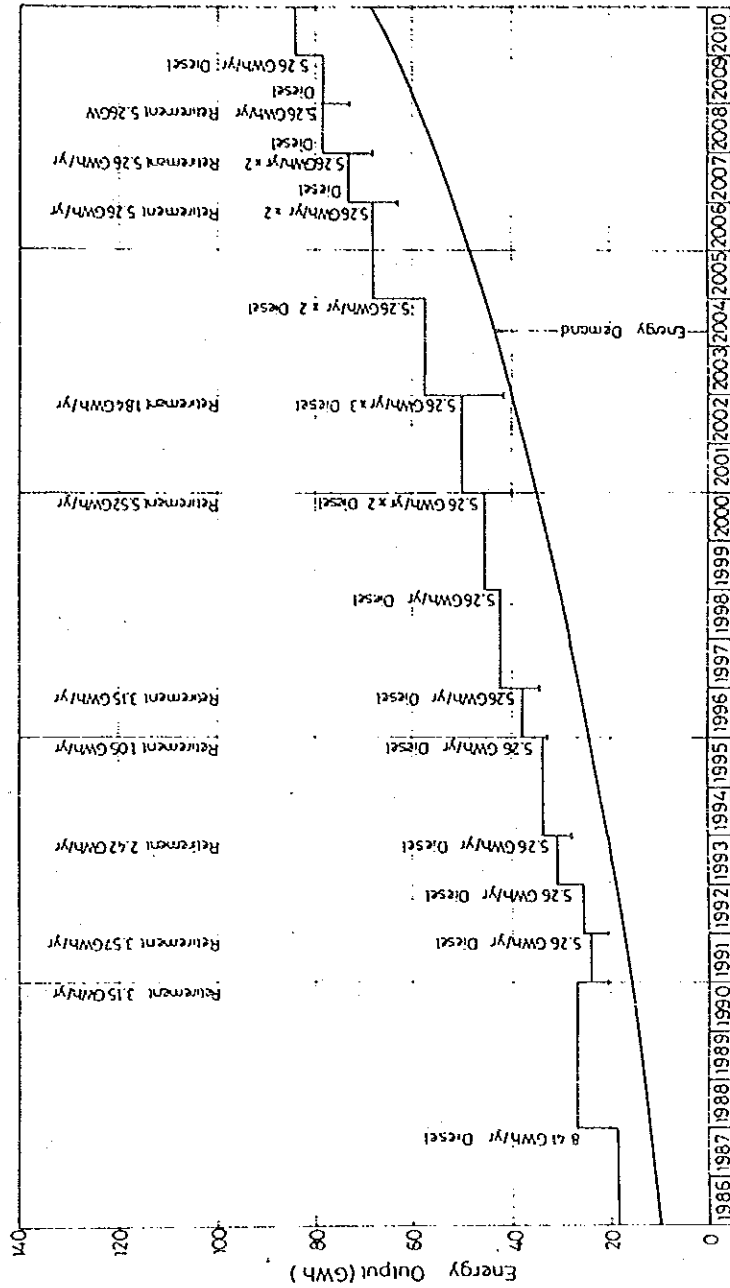


図 5.9 ディーゼル発電による電力量に対する供給計画 (リンバン系統)

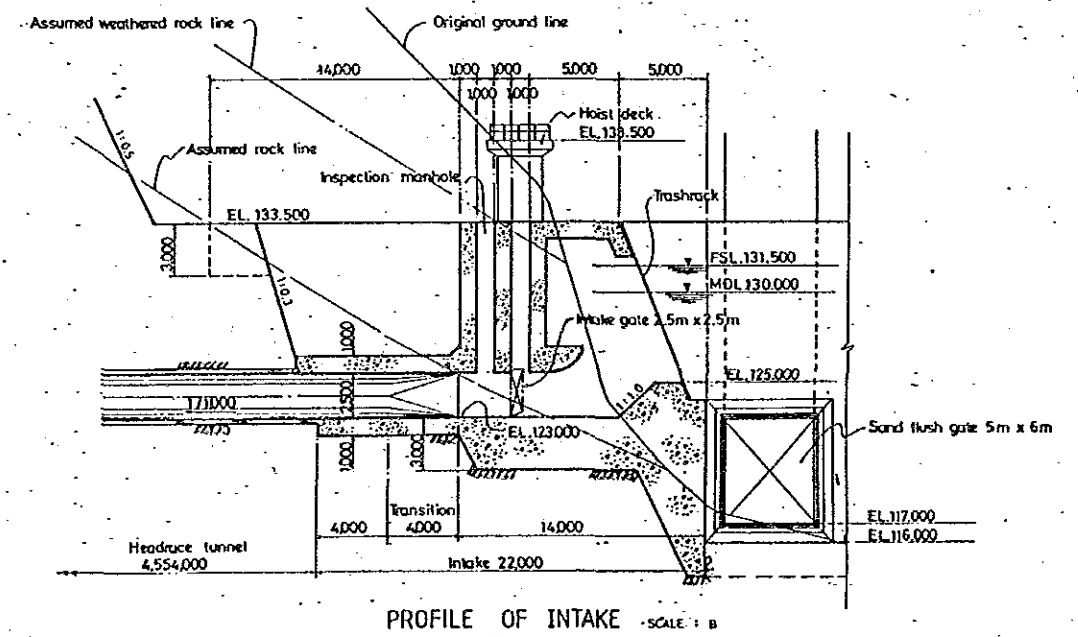
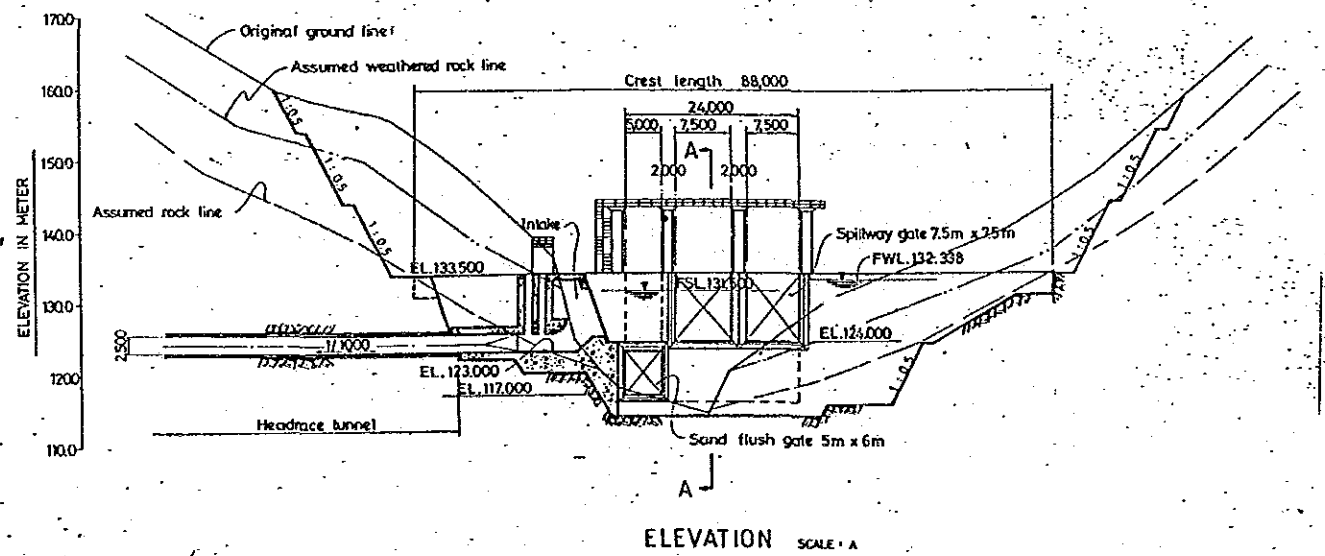
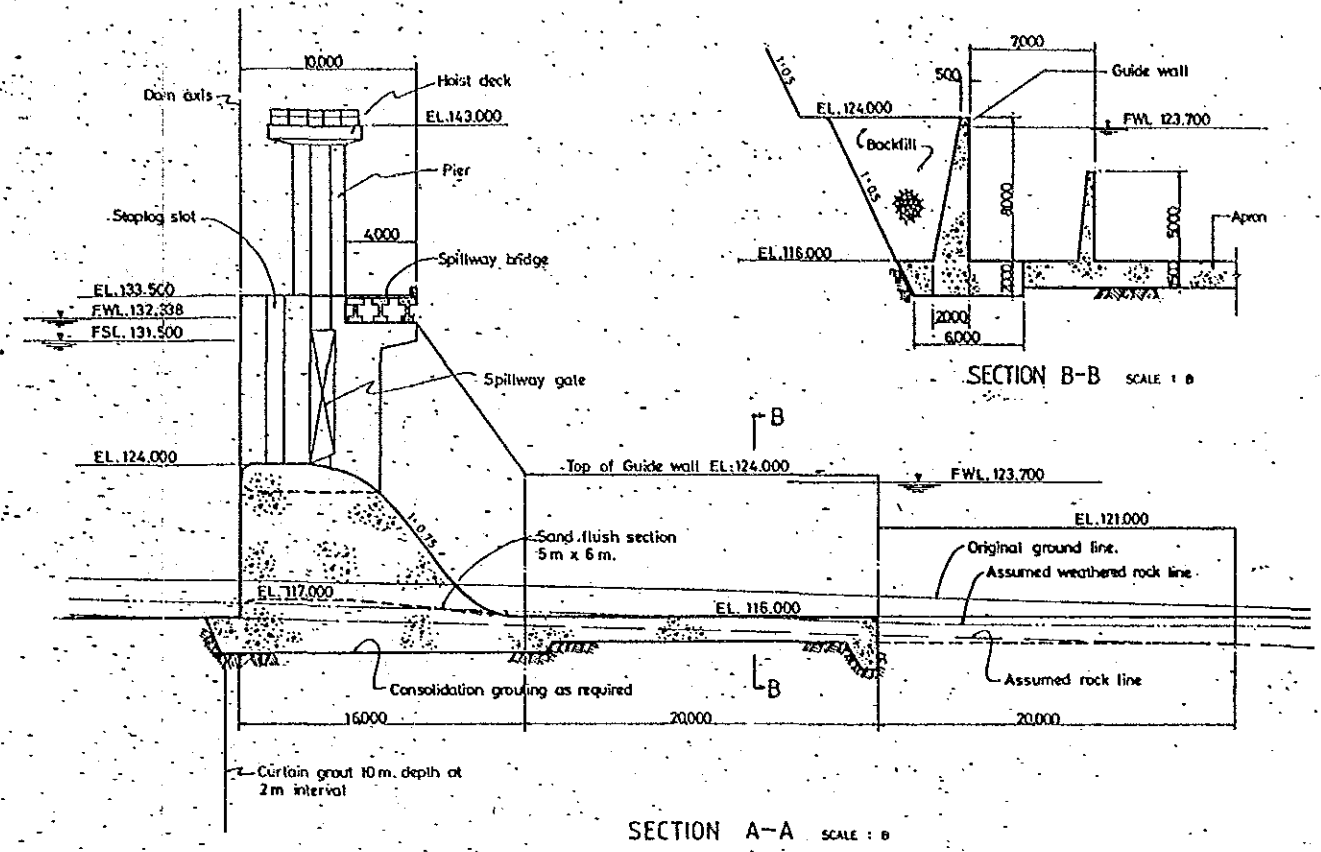
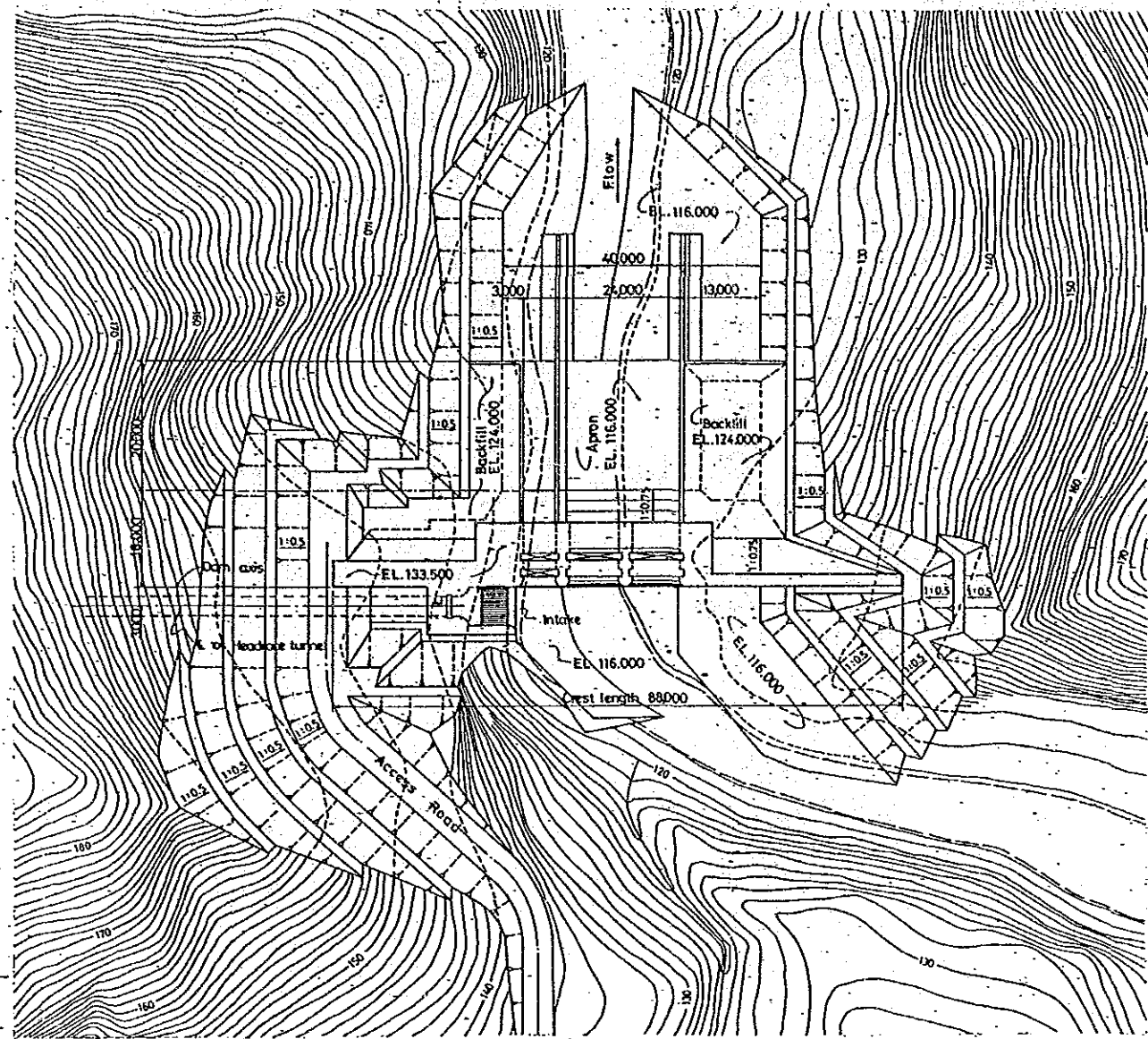
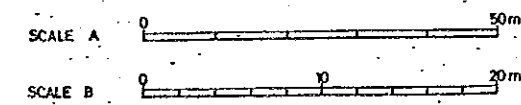
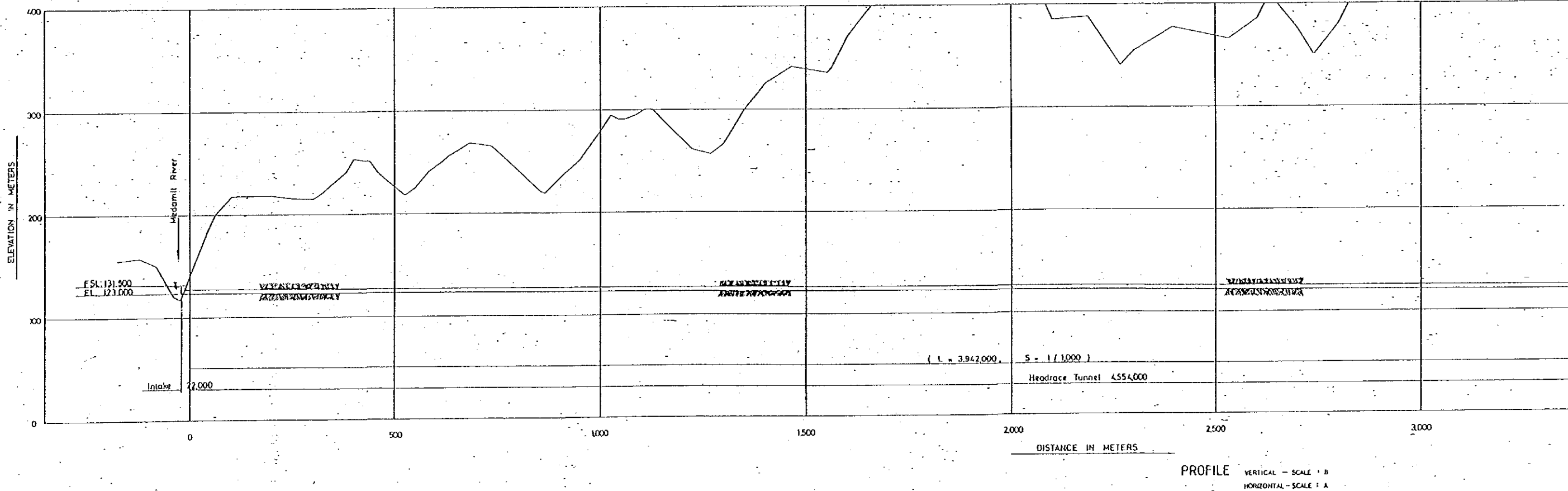
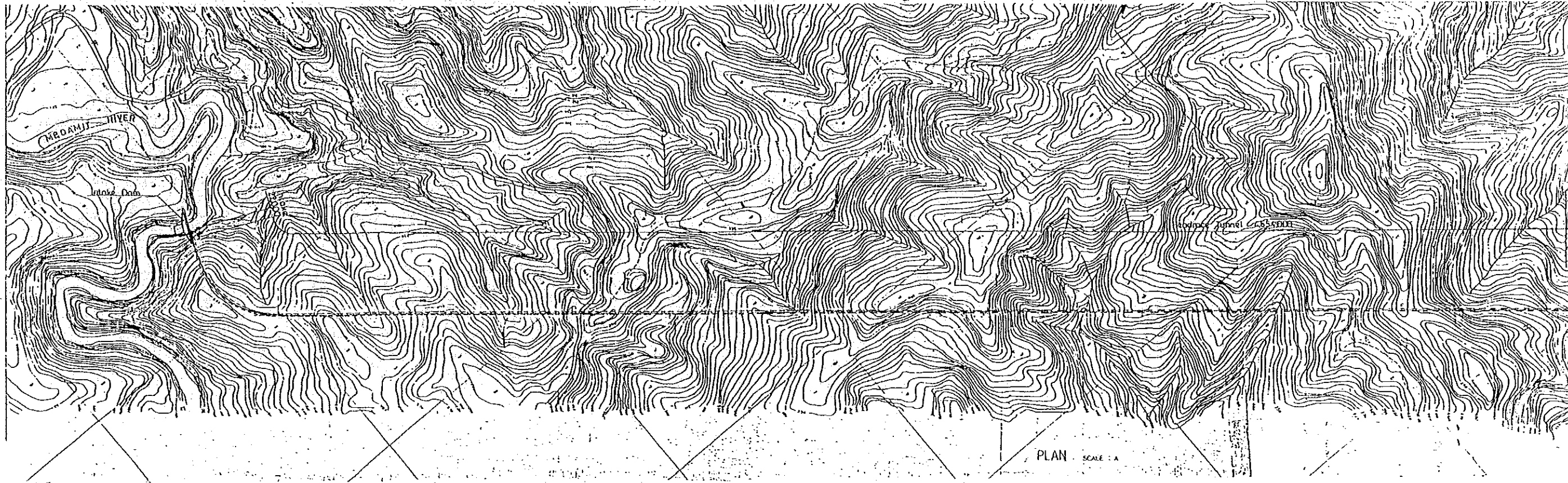
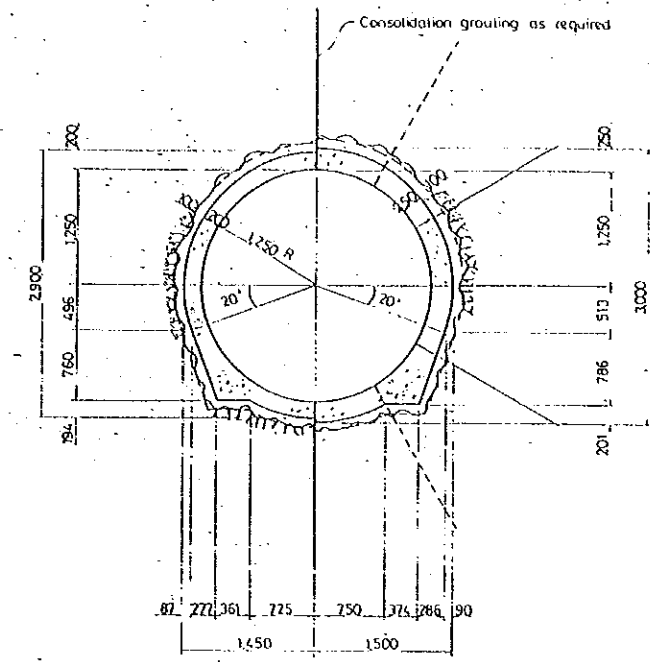
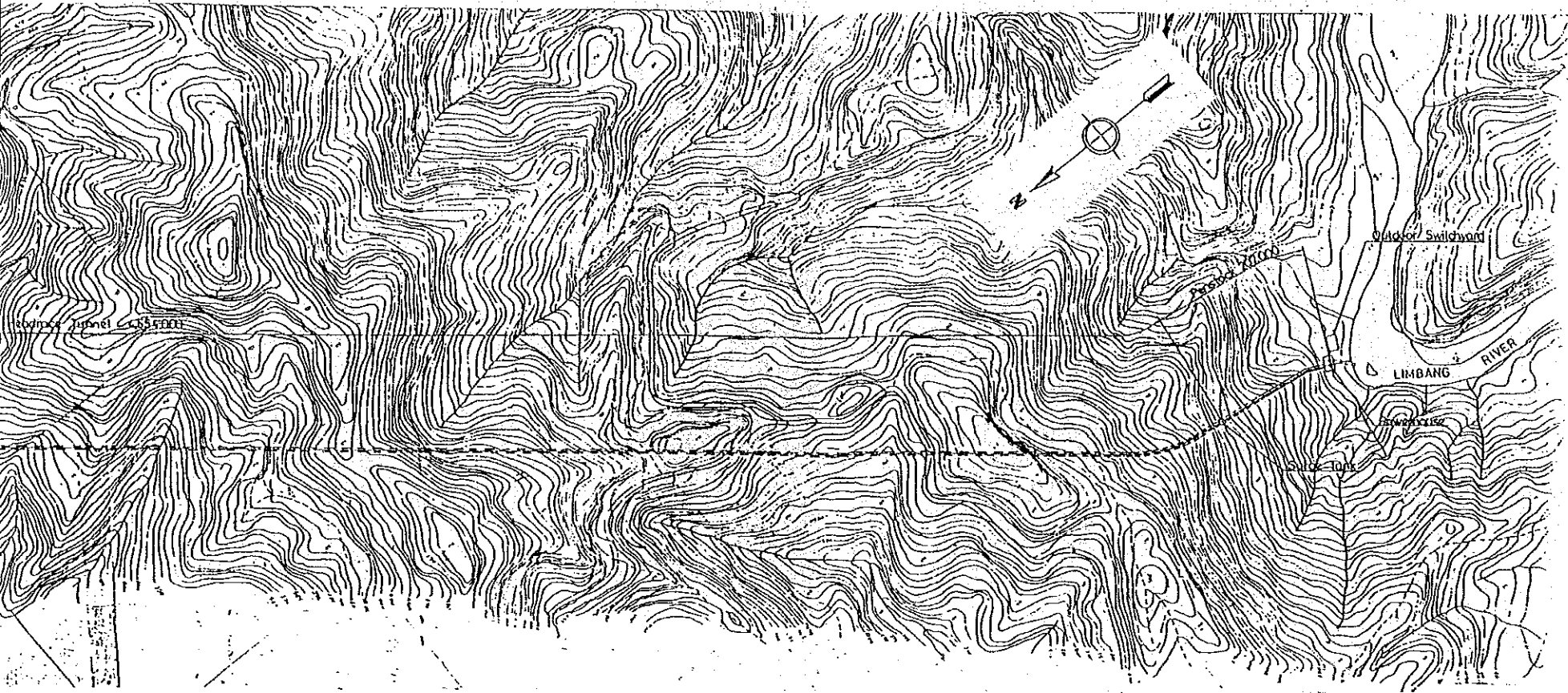


図 6.1 取水ダム (ムダミット 2 計画)



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TYPE I - TYPE II
TYPICAL SECTION OF HEADRACE TUNNEL
SCALE : C

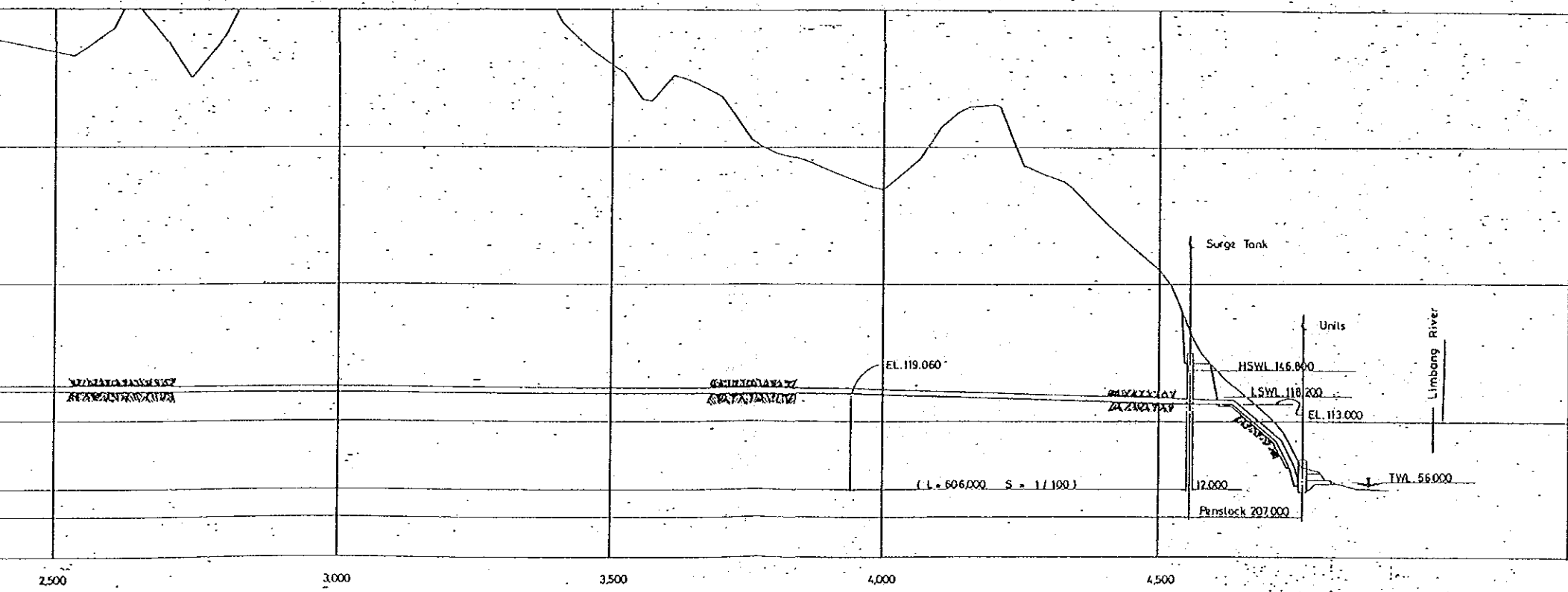
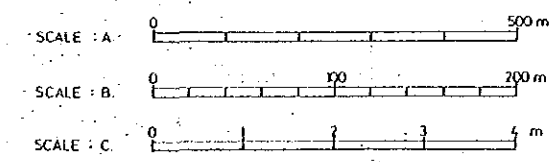


图 6.2 導水路および水圧鉄管 (ムグミット 2 計画)

PROFILE
VERTICAL - SCALE : B
HORIZONTAL - SCALE : A



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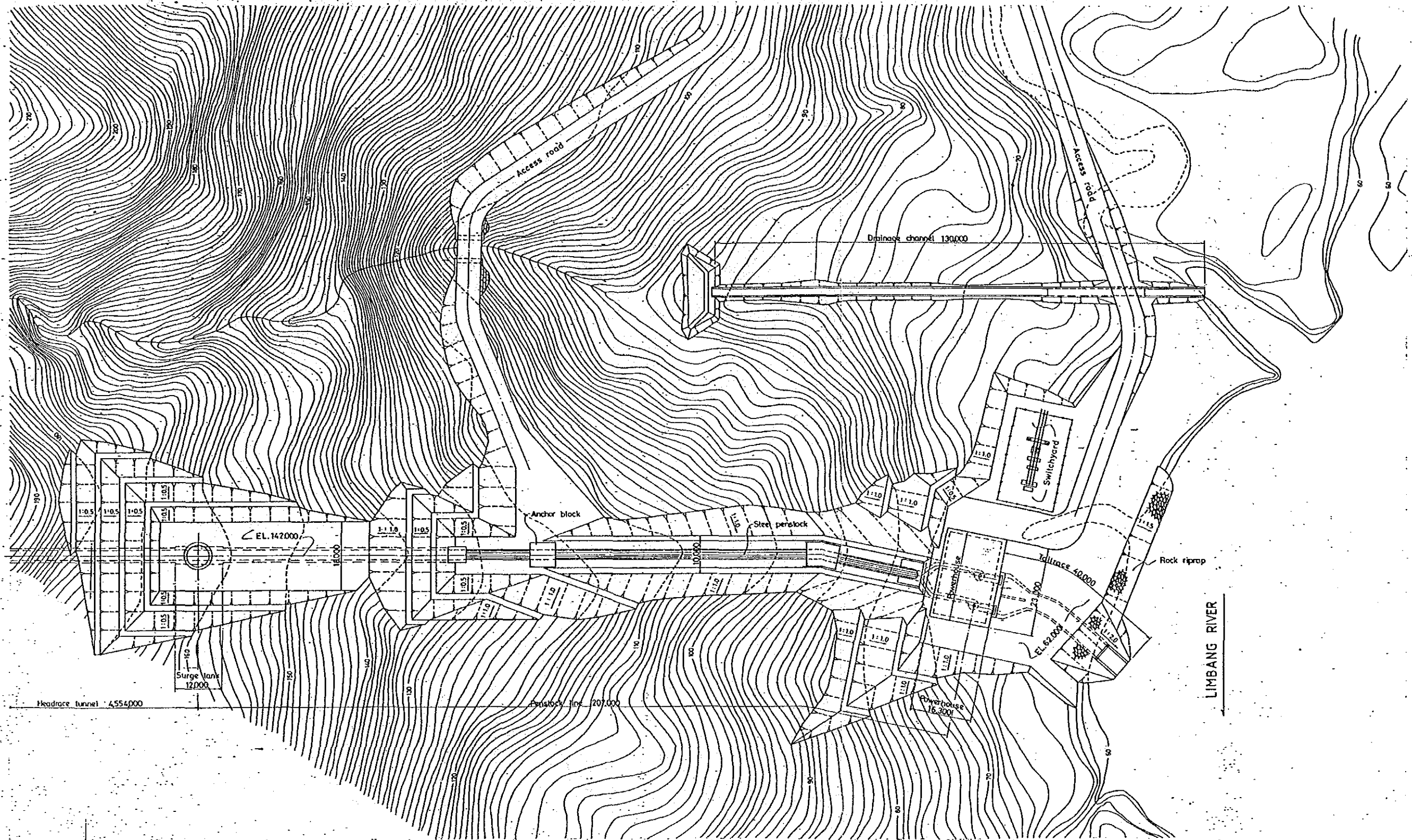
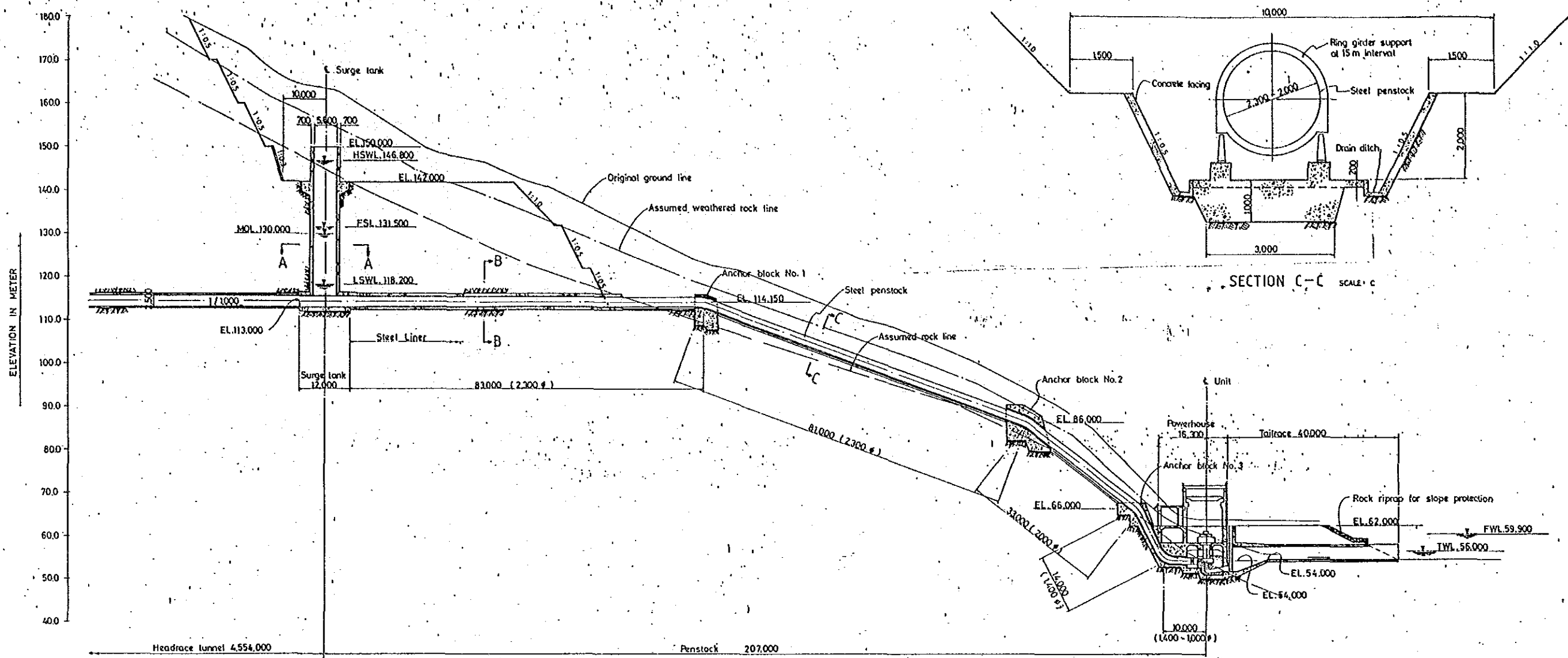


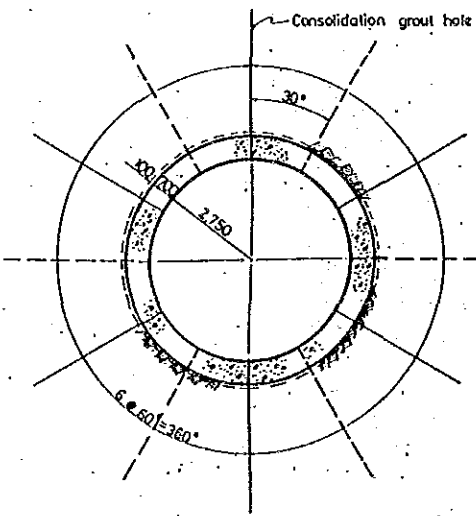
図 6.3 水圧鉄管平面図 (ムダミット 2 計画)

SCALE : A 0 50m

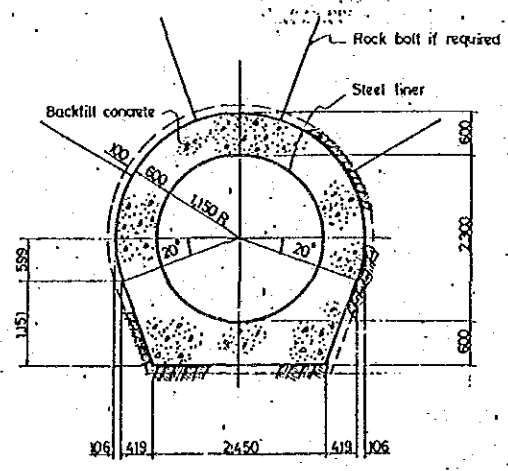
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 SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
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PROFILE SCALE: A

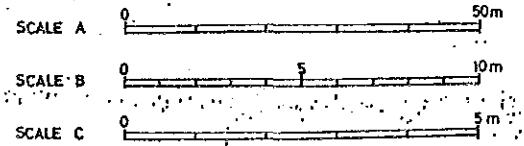


SECTION A-A SCALE: B

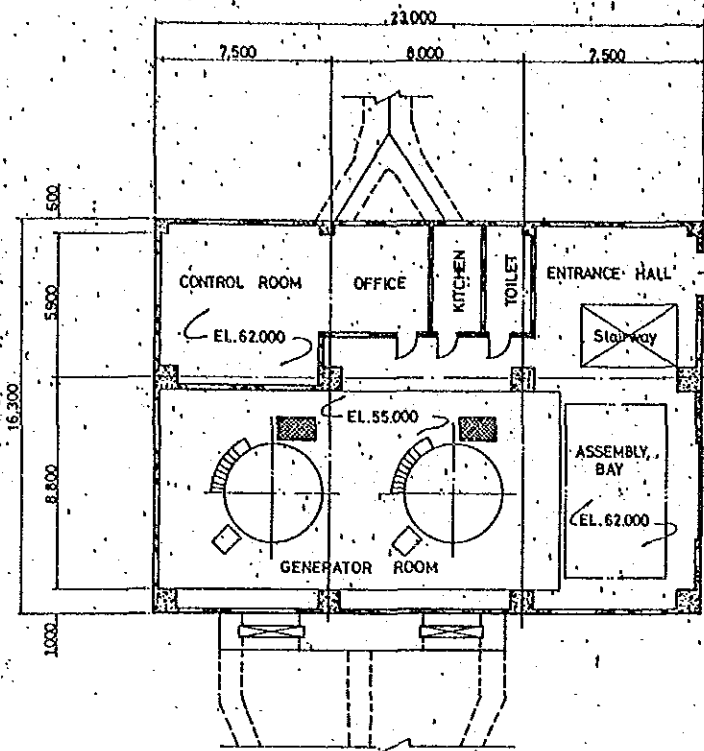


SECTION B-B SCALE: C

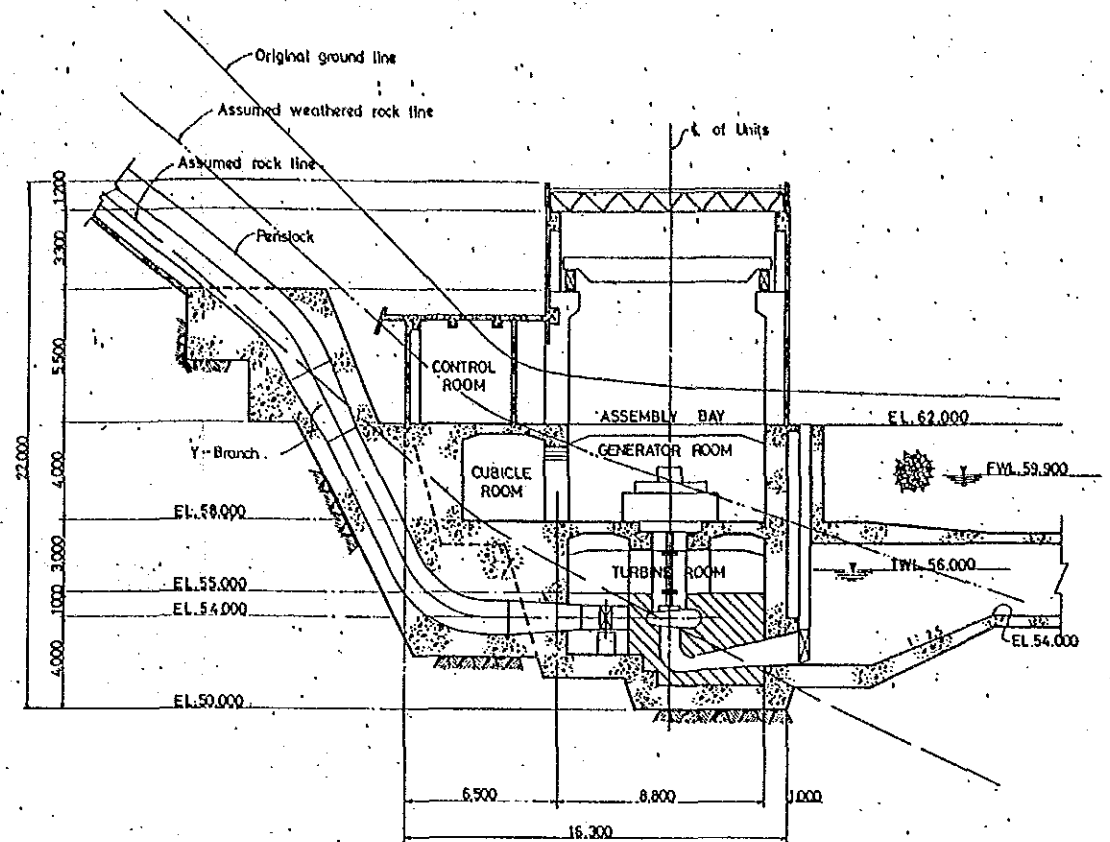
図 6.4 水圧鉄管縦横断面図 (ムグミット 2 計画)



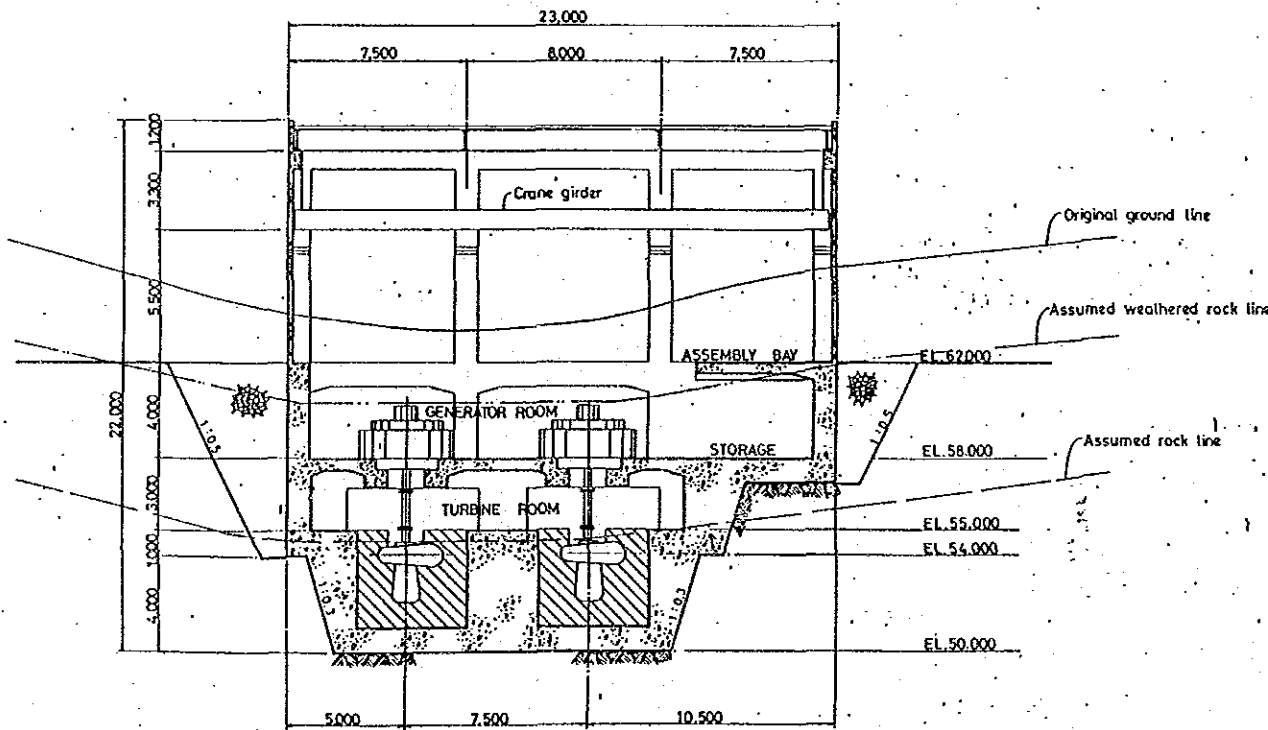
GOVERNMENT OF MALAYSIA
FEASIBILITY STUDY
SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK
JAPAN INTERNATIONAL COOPERATION AGENCY



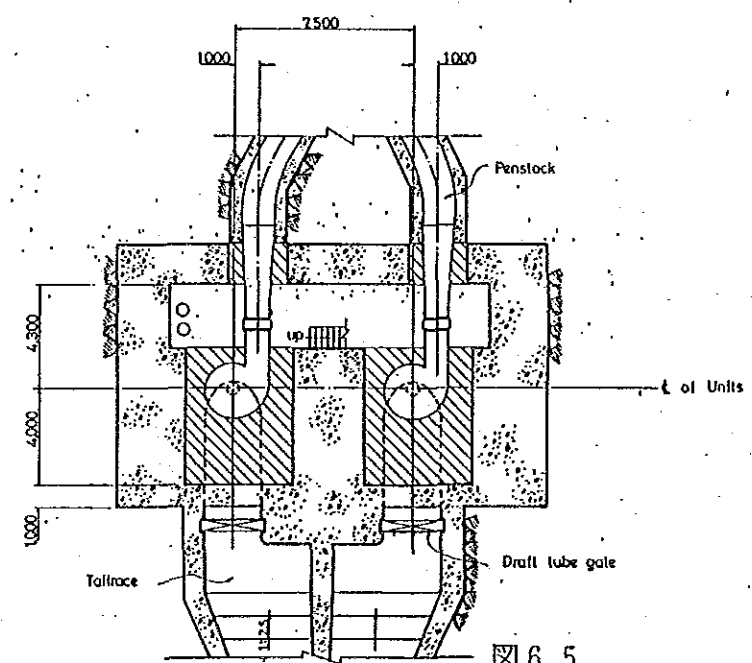
PLAN (EL. 62,000)



TRANSVERSE SECTION



LONGITUDINAL SECTION



PLAN (EL. 54,000)

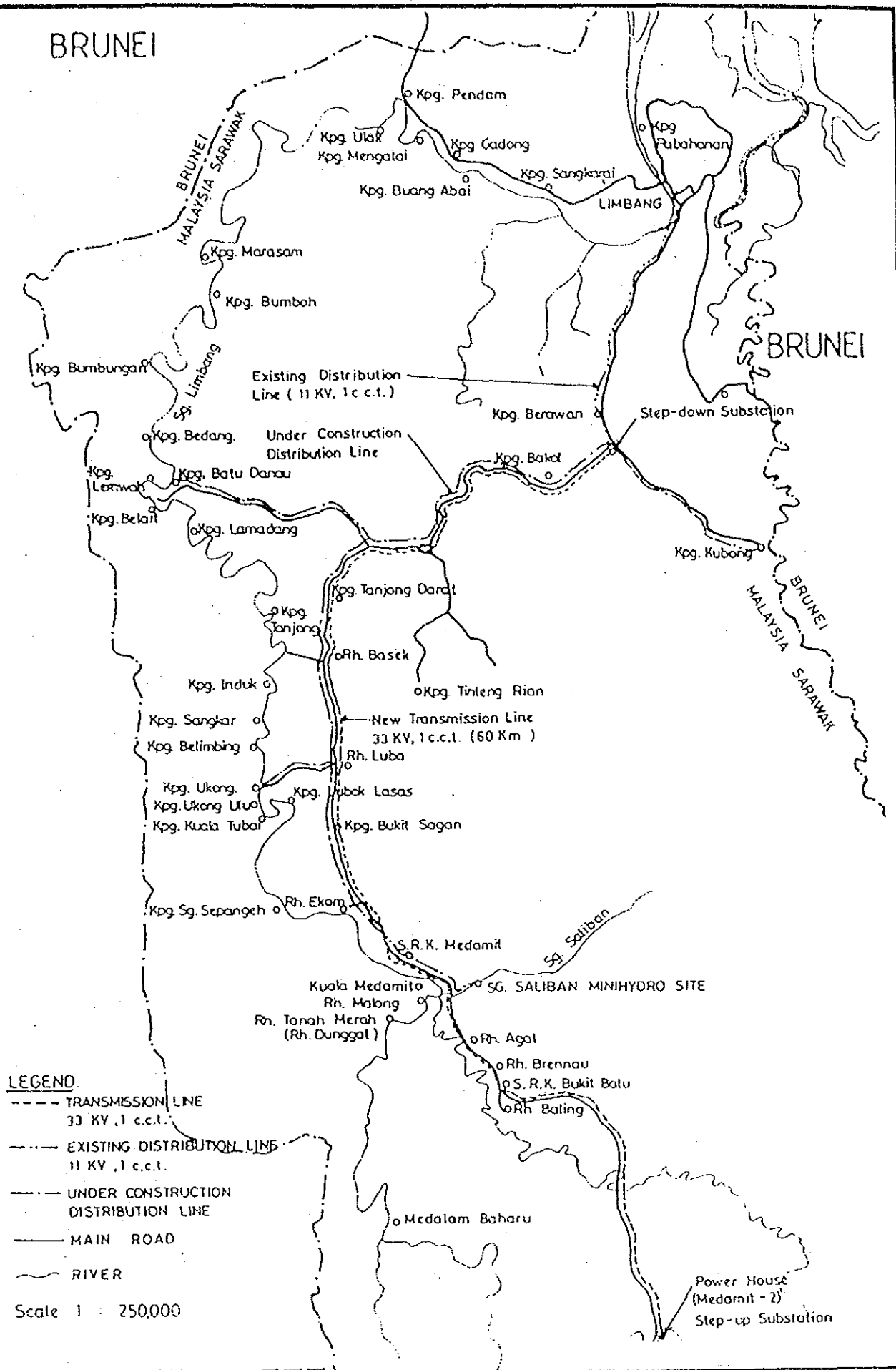
図 6.5 発電所概要図 (ムダミット 2 計画)



GOVERNMENT OF MALAYSIA
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 JAPAN INTERNATIONAL COOPERATION AGENCY

BRUNEI

BRUNEI



LEGEND

- TRANSMISSION LINE
33 KV, 1 c.c.t.
- · - · - EXISTING DISTRIBUTION LINE
11 KV, 1 c.c.t.
- UNDER CONSTRUCTION
DISTRIBUTION LINE
- MAIN ROAD
- RIVER

Scale 1 : 250,000

図 6.6 送電線ルート平面図
(ムダミット 2 計画)

GOVERNMENT OF MALAYSIA
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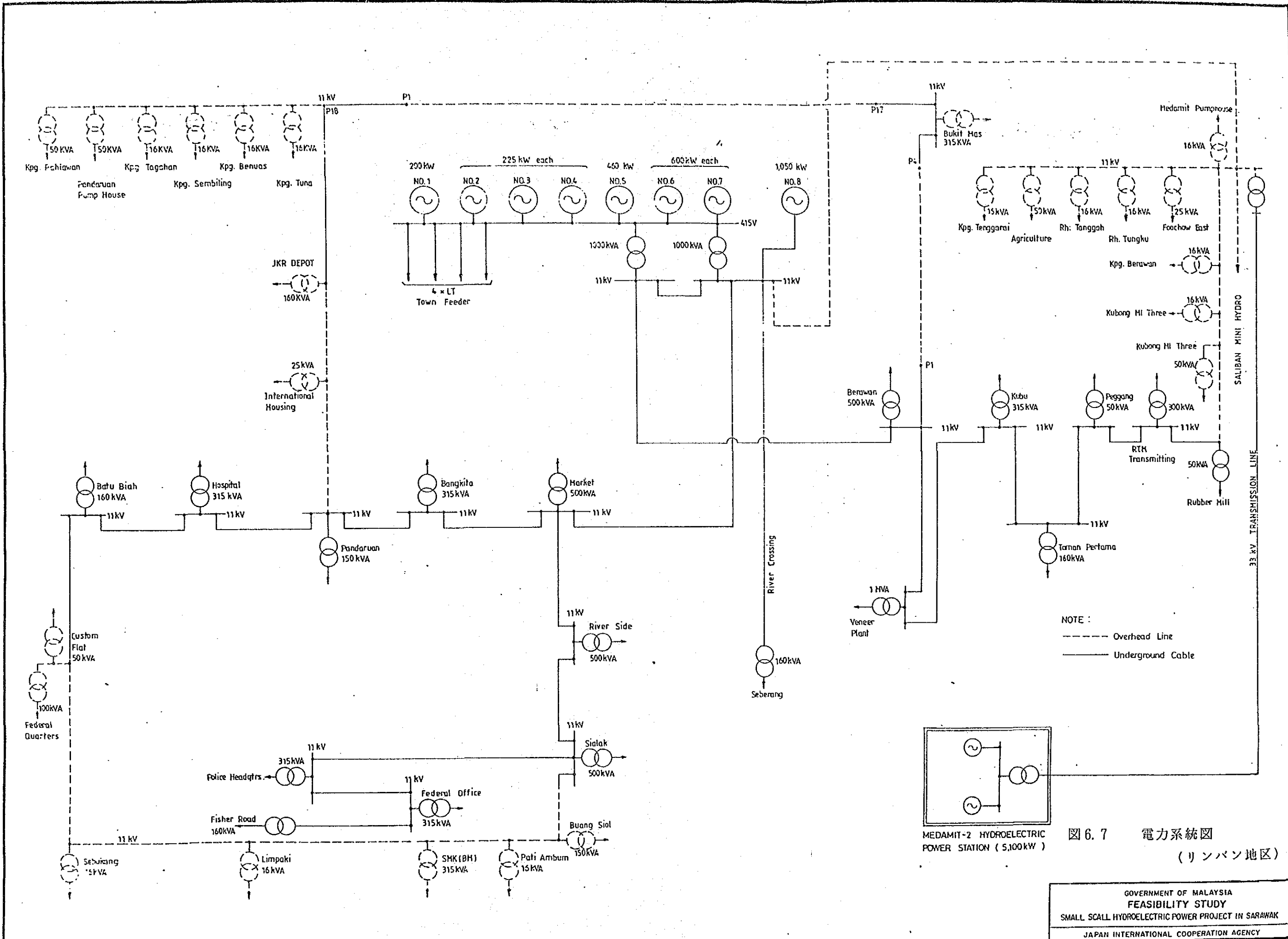


图 6.7 電力系統圖
(リンパン地区)

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FEASIBILITY STUDY
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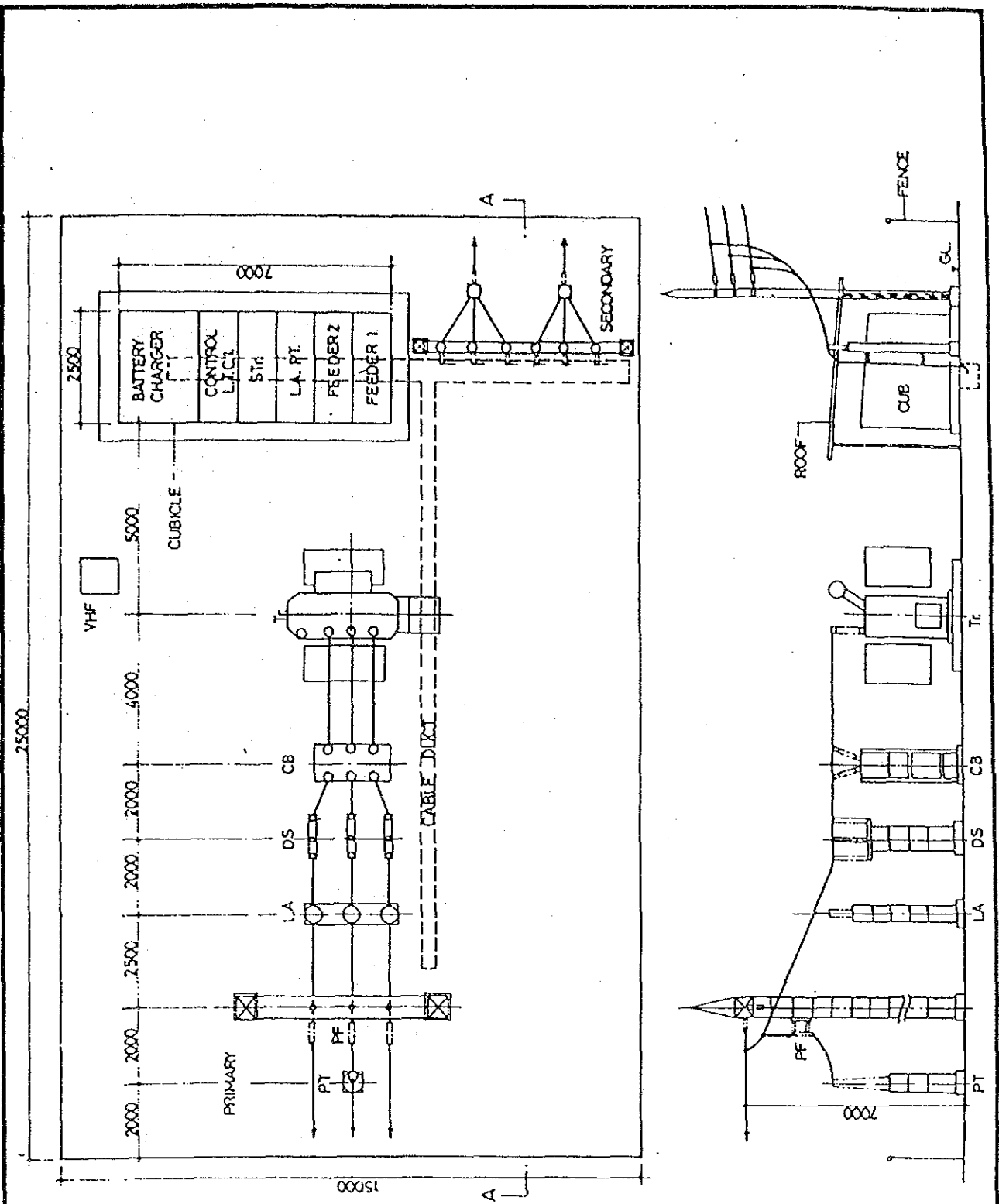
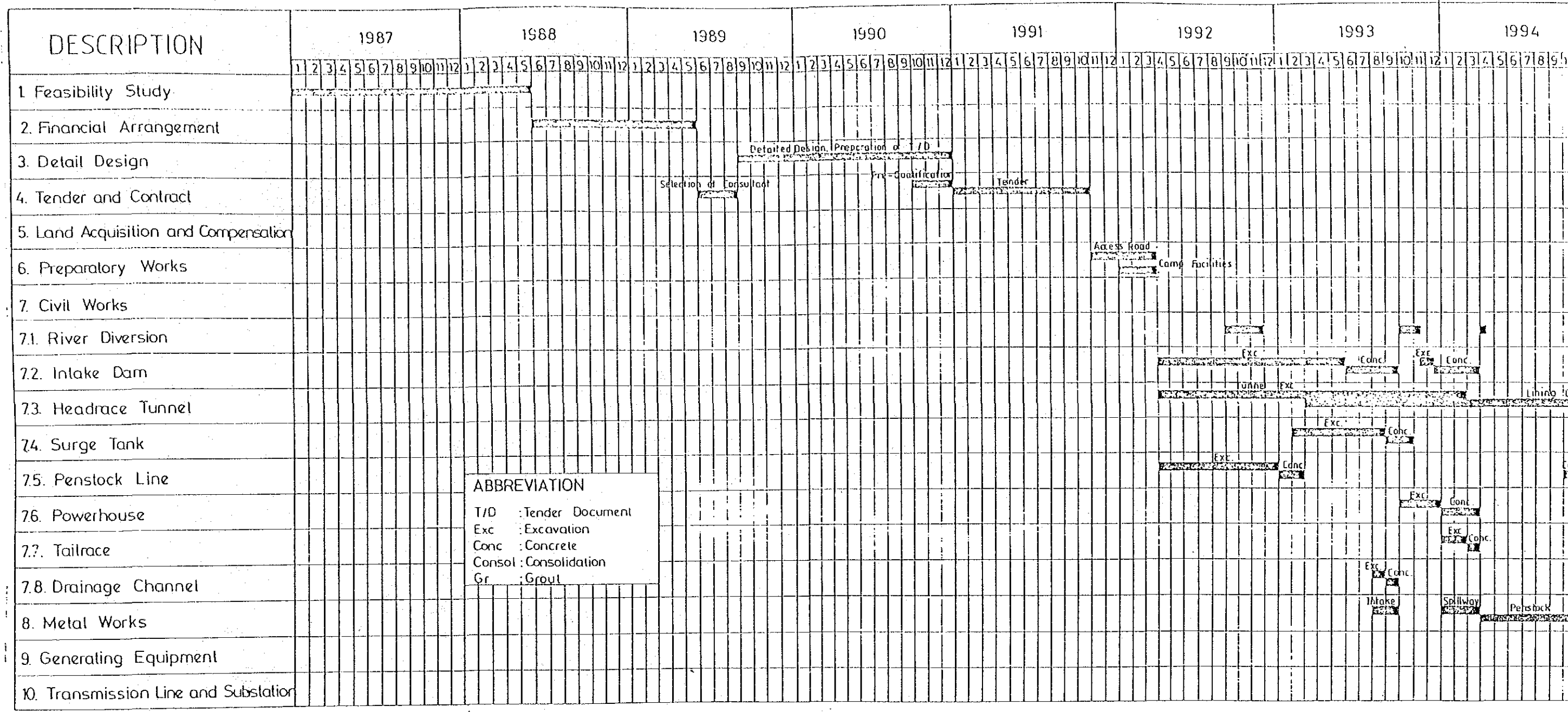


図 6. 8 変電所の配置図

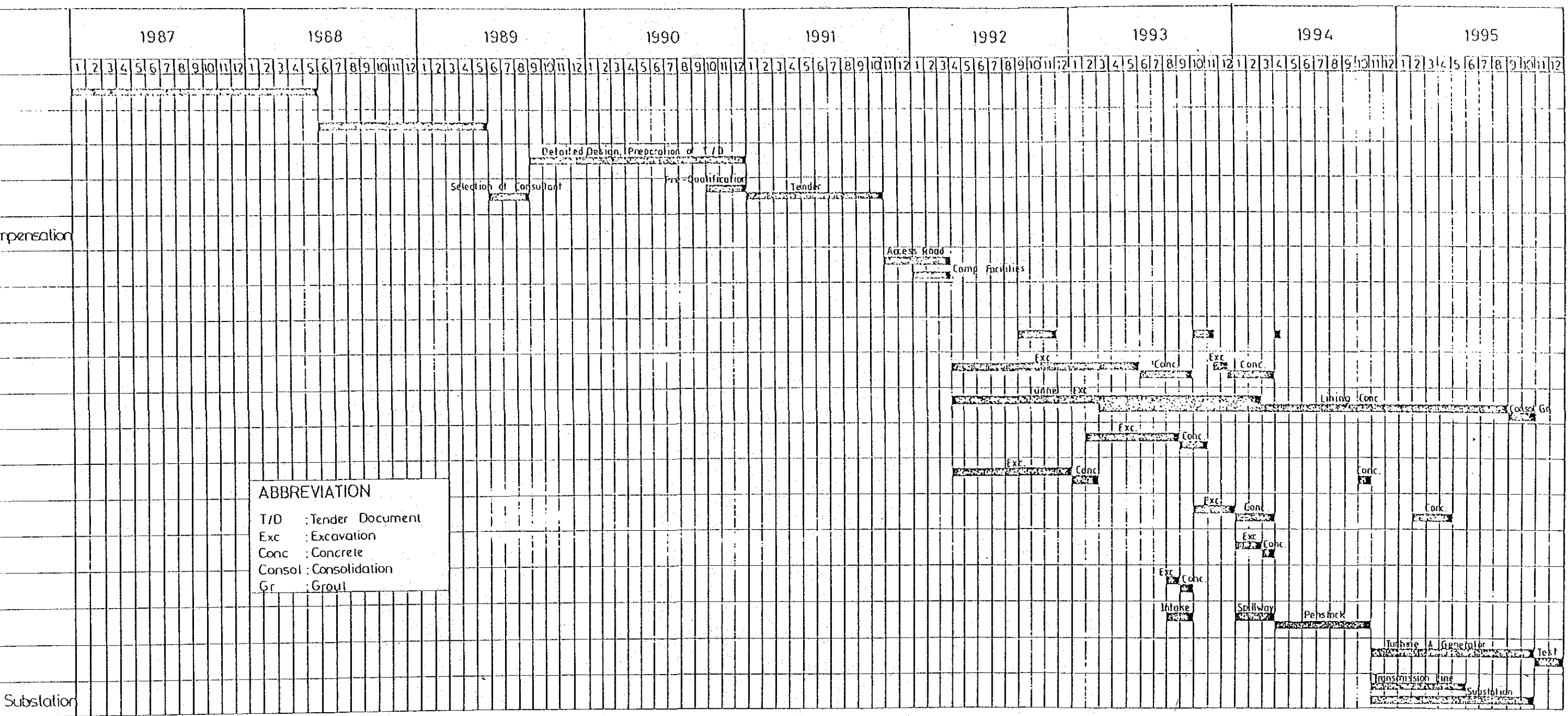
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ABBREVIATION
T/D : Tender Document
Exc : Excavation
Conc : Concrete
Consol : Consolidation
Gr : Grout

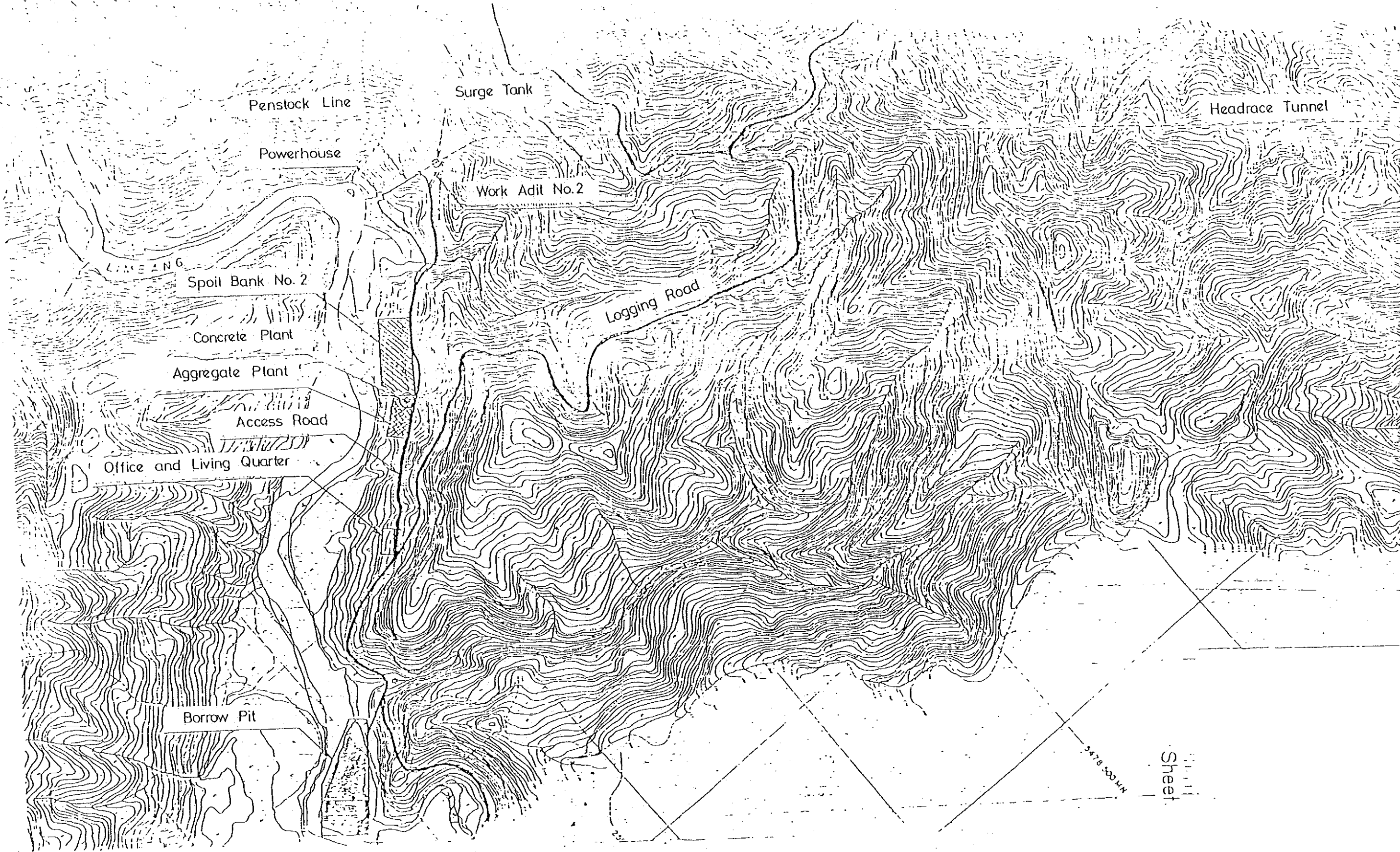
図 7.1 施工計画スケジュール

SMALL



ABBREVIATION
 T/D : Tender Document
 Exc : Excavation
 Conc : Concrete
 Consol : Consolidation
 Gr : Grout

図 7.1 施工計画スケジュール



Sheet

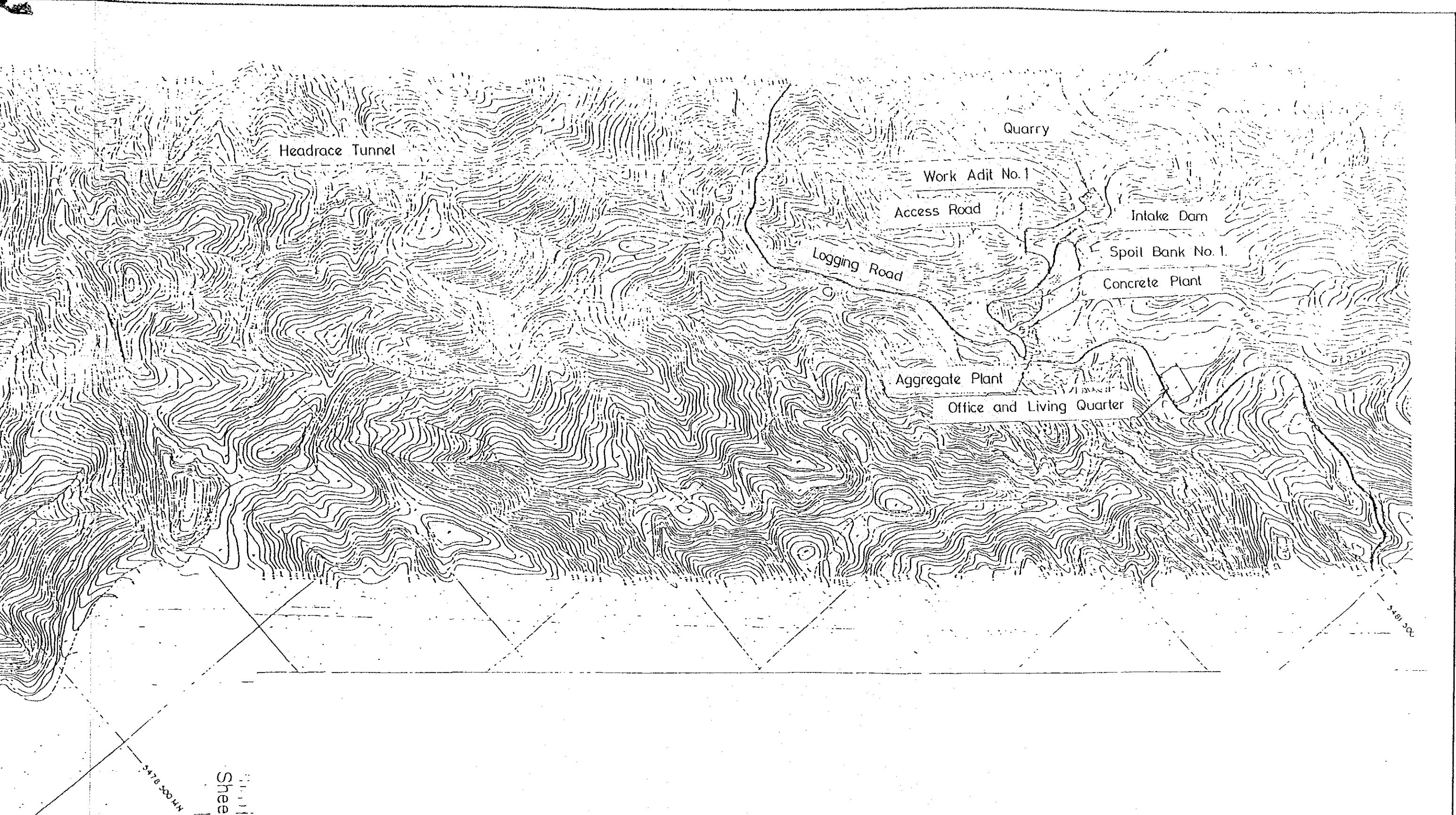
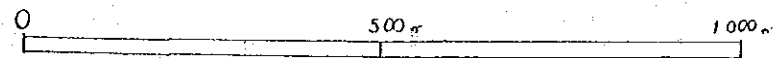
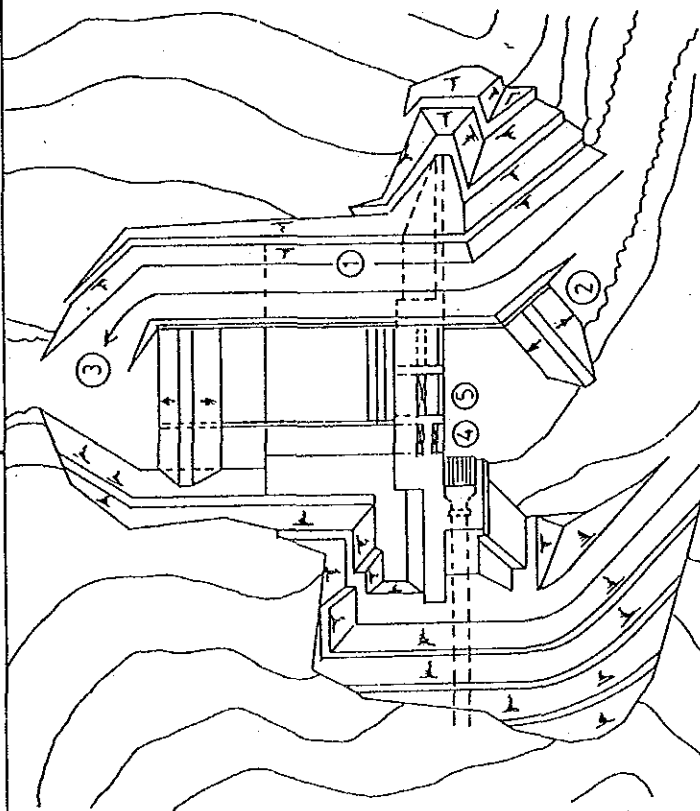


図 7.2 施工プラント配置図



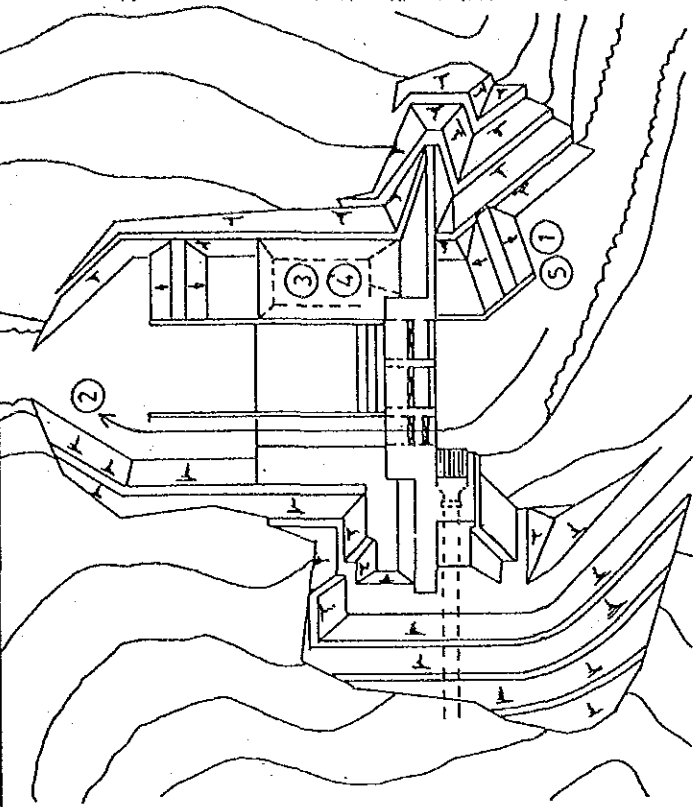
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Step 1



Plan

Step 2



- (1) Excavating right bank to use as a river diversion.
- (2) Closing the left bank by coffer dams and concrete walls.
- (3) Diverting river flow to the right side.
- (4) Excavating left bank of dam foundation and base of other structures.
- (5) Placing concrete of dam, a guide wall and most of other structures in the left side.

- (1) Closing the right bank by coffer dams and concrete walls.
- (2) Diverting the river flow through the orifice of sand flush gate.
- (3) Excavating right bank of dam foundation.
- (4) Placing concrete of dam in the right side.
- (5) Removing coffer dams.

Work Sequence

图 7.3 施工時轉流計畫案

GOVERNMENT OF MALAYSIA
FEASIBILITY STUDY
SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK

JAPAN INTERNATIONAL COOPERATION AGENCY

JICA

