

PERUSAHAAN UMUM LISTRIK NEGARA
JAKARTA INDONESIA

WEST JAVA
ELECTRIC TRANSMISSION PROJECT

MONTHLY REPORT

APRIL 1982

WEST JAVA I AND II PROJECTS
CONTRACTS

Pj. 013/PST/74 and Pj. 023/PST/75

USAID LOANS 497-H-028 & 497-W-032



CHAS. T. MAIN INTERNATIONAL, INC.

BOSTON MASSACHUSETTS U S A

BANDUNG, INDONESIA

MAIN

PERUSAHAAN UMUM LISTRIK NEGARA CONSULTANTS
CHAS. T. MAIN INTERNATIONAL, INC.
BANDUNG - TROMOLPOS 89, TEL. 56689, J.L. PROGO 32
JAKARTA - P.O. BOX 100, KBYT, KEBAYORAN TIMUR, TEL. 774041-2 EXT. 12, 776925 J.L. WIJAYA 1/04
SEMARANG - P.O. BOX 26, TEL. 312701-311702 J.L. SLAMET 8

6 May 1982

Letter No. J-5142

Ir. R. Semiawan
PERUSAHAAN UMUM LISTRIK NEGARA
Proyek Induk Jaringan Jawa Barat & Jakarta Raya
Jalan Cililitan Besar No. 1, Cawang
Jakarta

**Subject: West Java I and II Projects
Monthly Report**

Dear Ir. Semiawan:

In accordance with Article 7.2 of the West Java I Contract No. Pj. 013/PST/74 and Appendix V of the West Java II Contract No. Pj. 023/PST/75, enclosed are six (6) copies of our Report for the month of April 1982.

Very truly yours,

CHAS. T. MAIN INTERNATIONAL, INC.

C. J. Whitby
C.J. Whitby

Manager of Administration

cc. : DIRBANG - PLN Pusat (Encl. 1)
USAID - Jakarta (Encl. 4)
MAIN - Boston (Encl. 1)
MAIN - CHA. (Encl. 1)

/swt

WEST JAVA I AND II PROJECTS

MONTHLY REPORT

APRIL 1982

A. PERSONNEL

1. ENGINEER

- a. Mr. N. Hansen, Irby Construction Company (RTE/ASEA) Field Engineer, returned to Indonesia on 27 April to complete remaining transformer work in all Substations. This work should be completed in early May.
- b. End of the month strength was as follows :

<u>NAME</u>	<u>TITLE</u>	<u>ARRIVAL DATE</u>
J.C. Harkey	Substation Eng. / Constr. Mgr.	15 Oct. 1977
N. Hansen	Field Engineer (Irby/RTE/ASEA)	27 Apr. 1982

2. PLN

- a. As the Projects are nearing completion, a number of the PLN local Staff continue to be re-assigned to PLN. Remaining Staff is as follows :

<u>JOB TITLE</u>	<u>NUMBER</u>
Secretaries	1
Draftsmen	4
Reproduction Personnel	1
Drivers	2

- b. In addition to the above staff, approximately 5 PLN Counterpart and field personnel were assigned to the Projects as of 30 April.

B. ADMINISTRATIVE AND GENERAL

1. ADMINISTRATION

a. Terminal Dates

- (1) TDDA - Terminal Date Disbursement Authorization - (Last day that USAID Loan Funds can be committed) - 30 June 1981.

Final Commitment of USAID Loan Funds :

	<u>West Java I</u>	<u>West Java II</u>
USAID Loan	\$ 17,200,000.00	\$ 19,700,000.00
Committed	\$ 17,197,632.86	\$ 19,699,990.40

- (2) TDD - Terminal Disbursement Date - (Last day that payments can be made from USAID Loan Funds) - 31 March 1982. See Section B.2.a.
- (3) Scheduled Final Substation Energization - 31 December 1981.
- (4) Scheduled Completion of Engineering Services - 30 June 1982.

b. West Java I Contract Data

- | | | |
|--------------------------------|-------------|--------------------|
| (1) No. PJ. 013/PST/74 | 16 Feb. '74 | US \$ 3,824,009.00 |
| | | Rp. 555.096.119,- |
| C.T. Main-Engineering Services | | |

(2)	No. Pj. 153/PST/77 Irby Construction Company Tower Steel, Insulators and Accessories	5 Sep. '77	US \$	2,902,946.03
(3)	No. Pj. 202/PST/77 Copperweld Industries Shieldwire	28 Nov. '77	US \$	294,739.06
(4)	No. Pj. 203/PST/77 Southwire Company Conductor	28 Nov. '77	US \$	1,991,843.83
(5)	No. Pj. 050/PST/78 Tension Stringing Equipment Co. Wire Stringing Equipment	10 Mar. '78	US \$	400,636.37
(6)	No. Pj. 051/PST/78 Ohio Brass Company Lightning Arresters	10 Mar. '78	US \$	87,852.00
(7)	No. Pj. 052/PST/78 Irby Construction Company Substation Equipment Maintenance Tools and Equipment	11 Mar. '78	US \$	4,547,414.46
(8)	No. Pj. 053/PST/78 General Electric Company Substation Equipment	11 Mar. '78	US \$	2,532,800.59
(9)	No. Pj. 087/PST/78 Motorola Radio Equipment	11 May '78	US \$	395,819.20

- (10) No. Spj. 022/PLN/PI RING/77 24 Oct. '77 Rp. 199.278.000,-
P.T. Tikon Abadi
Foundations - Section I
- (11) No. Spj. 023/PLN/PI RING/77 27 Oct. '77 Rp. 153.445.000,-
P.T. Gunung Kencana
Foundations - Section - IIA
- (12) No. Spj. 024/PLN/PI RING/77 27 Oct. '77 Rp. 164.789.000,-
P.T. Dharma Niaga
Foundations - Section IIB
- (13) No. Spj. 010/PLN/PI RING/78-79 8 Dec. '78 Rp. 132.894.300,-
P.T. Perfect Circle
Tower Erection
- (14) No. Spj. 065A/SPP/PI RING JATENG/78-79 Rp. 50.278.000,-
P.T. Santraco Raya 21 Apr. '79
Tegal Substation Civil Work
- (15) No. Spj. 072/SPP/PI RING JATENG/78-79 Rp. 25.966.000,-
P.T. Sigma Tirta 17 Oct. '79
Tegal Substation Structure Erection
- (16) No. Spj. 017/PLN/PI RING/78-79 Rp. 127.790.850,-
P.T. Silkhar National 22 Jan. '80
Conductor Stringing - Section I
- (17) No. Spj. 019/PLN/PI RING/79-80 Rp. 164.364.000,-
P.T. Citac Ltd. 2 Feb. '80
Conductor Stringing - Section I

- | | | | |
|------|---|-------------|-------------------|
| (18) | No. Spj. 001/PLN/PI RING/80-81
P.T. Erses
Ujungberung Substation Civil Work | 3 Apr. '80 | Rp. 464.500.000,- |
| (19) | No. Spj. 002/PLN/PI RING/80-81
P.T. Erses
Ujungberung Substation Control House | 3 Apr. '80 | Rp. 199.989.000,- |
| (20) | No. Spj. 013/PLN/PI RING/80-81
P.T. Dharma Niaga
Ujungberung Substation Temporary 150 KV
Transmission Line By-Pass | 6 Jul. '80 | Rp. 18.860.000,- |
| (21) | No. Spj. 007/PLN/PI RING/80-81
P.T. Citacontrac
Caisson for Tower No. 278 | 3 Jun. '80 | Rp. 32.234.000,- |
| (22) | No. Spk. 003/PLN/PI RING/81
P.T. Citacontrac
Relocate Towers 317 and 319 | 26 Mar. '81 | Rp. 19.823.000,- |

West Java II Contract Data

- | | | | |
|-----|--|-------------|---|
| (1) | No. Pj. 023/PST/75
C.T. Main-Engineering Services | 25 Jan. '75 | US \$ 2,509,793.00
Rp. 718.743.035,- |
| (2) | No. Pj. 152/PST/77
Irby Construction Company
Transmission Line Supply and Construction | 5 Sep. '77 | US \$ 8,199,107.37
Rp. 774.481.343,- |
| (3) | No. Pj. 051/PST/78
Ohio Brass Company
Lightning Arresters | 10 Mar. '78 | US \$ 87,852.00 |

(4)	No. Pj. 052/PST/78 Irby Construction Company Substation Equipment	11 Mar. '78	US \$ 4,981,321.52 Rp. 135.227.727,-
(5)	No. Pj. 053/PST/78 General Electric Company Substation Equipment	11 Mar. '78	US \$ 3,974,100.16
(6)	No. Spj. 001/PLN/PI RING/77-78 P.T. Citac Ltd. Foundations - Section II and III	5 Jun. '78	Rp. 329.553.000,-
(7)	No. Spj. 002/PLN/PI RING/78-79 P.T. Citac Ltd. Foundations - Ujungberung - Cigereleng	9 Aug. '79	Rp. 175.128.000,-
(8)	No. Spj. 022/PLN/PI RING/79-80 P.T. Sahabat Agung Cibinong - Gandul Stub Angles	4 Dec. '79	Rp. 10.618.000,-
(9)	No. Spj. 009/PLN/PI RING/79-80 P.T. Citac Ltd. Foundations - Section IV A	30 Nov. '79	Rp. 62.441.000,-
(10)	No. Spj. 010/PLN/PI RING/79-80 P.T. Citac Ltd. Foundations - Section IV C	30 Nov. '79	Rp. 36.029.000,-
(11)	No. Spj. 018/PLN/PI RING/79-80 P.T. Amarta Karya Foundations - Section IV B	24 Jan. '80	Rp. 64.630.000,-

- | | | |
|------|--|-------------------|
| (12) | No. Spj. 008/PLN/PI RING/80-81
P.T. Pembangunan Perumahan 5 Jun. '80
Bandung Utara Substation Civil Work | Rp. 334.619.000,- |
| (13) | No. Spj. 006/PLN/PI RING/80-81
P.T. Perfect Circle 31 May '80
Bandung Utara Substation Control House | Rp. 230.501.000,- |
| (14) | No. Spj. 009/PLN/PI RING/80-81
P.T. Perfect Circle 31 May '80
Bogor Substation Civil Work | Rp. 475.428.000,- |
| (15) | No. Spj. 007/PLN/PI RING/80-81
P.T. Perfect Circle 31 May '80
Bogor Substation Control House | Rp. 212.915.000,- |
| (16) | No. Spj. 020/PLN/PI RING/79-80
P.T. Hutama Karya 16 Feb. '80
Bandung Utara Substation Access Road | Rp. 31.967.000,- |
| (17) | No. Spj. 009B/PLN/PI RING/81-82
P.T. Buana Power 29 May '81
Bogor Substation Access Road | Rp. 64.700.000,- |
| (18) | No. Spj. 013/PLN/PI RING/80-81
P.T. Dharma Niaga 6 Jul. '80
Bogor Substation Temporary 150 KV
Transmission Line By-Pass | Rp. 10.608.000,- |
| (19) | No. Spj. 001j/PLN/PI RING/80-81
P.T. Samapta Nusantara 6 May '81
Transportation of Power Transformers to Bogor | Rp. 89.843.000,- |

d. West Java I and II Contract Data

(1) No. Spj. 016/PLN/PI RING/77 P.T. Sumber Jaya Grounding Material	4 Jul. '77	Rp. 54.245.000,-
(2) No. Spj. 017/PLN/PI RING/77 P.T. Arcon Stub Angles	13 Aug. '77	Rp. 40.100.000,-
(3) No. Spj. 001j/OP LOG/79 P.T. Keluarga Pradeni Veem Transportation of Power Transformers to Bandung	7 Feb. '79	Rp. 128.999.492,-

2. GENERAL

- a. Extension of the Terminal Disbursement Date - (Last day that payments can be made from USAID Loan Funds) - and for two (2) Letters of Commitment has been requested. Because of a relatively recent Contract Amendment and unavoidable delay in supplying and shipping, the PLN/Irby Substation Contract could not be completed by the existing expiration date of 31 March 1982. MAIN is hopeful that the extensions will be granted.

C. CONFERENCES AND EVENTS

1. None to Report.

D. PROBLEM AREAS AND TENTATIVE SOLUTIONS

1. During erection of the electrical equipment, material shortages were discovered and replacement parts were immediately ordered for air shipment. All missing parts have not arrived but should be received shortly. The Bandung Utara Substation is the only one affected.

E. TRANSMISSION - WEST JAVA I

- a. Tower Site Procurement. All tower sites have been procured.
- b. Foundations. All foundations have been installed.
- c. Tower Erection. All towers are erected and accepted.
- d. ROW Procurement and Clearing. All ROW procurement and clearing are completed.
- e. Conductor and Shieldwire. Phase conductor and shieldwire have been installed.
- f. Tower Movement. Towers No. 317 and 319 were originally installed in areas which proved unstable. These towers were relocated. The new locations appear stable but it is recommended that the sites be monitored on a periodic basis.

F. TRANSMISSION - WEST JAVA II

1. Construction

- a. Tower Site Procurement. All tower sites have been procured.
- b. Foundations. All foundations have been installed.
- c. Tower Erection. All towers are erected and accepted.
- d. ROW Procurement and Clearing. All ROW procurement and clearing are completed.
- e. Conductor and Shieldwire. Phase conductor and shieldwire have been installed.

G. SUBSTATIONS

1. Construction

a. Tegal Substation

All work is completed and the addition has been energized.

b. Ujungberung Substation

(1) Switchyard Civil Work

The only work remaining is installation of the switchyard stone covering. It is not known when this will be done.

(2) Control House

The Control House is complete.

(3) Erection, Wiring and Testing

The Load Tap Changer (LTC) on the 60 MVA, 150/70 KV transformer failed on 12 February during manual operation. The unit was repaired in April. This work is now complete.

c. Bandung Utara Substation

(1) Switchyard

Minor work remains to be completed.

(2) Control House

The Control House is complete.

(3) Access Road

The road is complete.

(4) Erection, Wiring and Testing

Still remaining to be received are one complete trip coil, pulley and lift rod. One OCB on the future Padalarang Line will not be ready for operation until all parts are received. Several 20 KV circuit breakers cannot be energized until various parts are received. All these parts are on order.

d. Bogor Substation

(1) Switchyard Civil Work

The Switchyard Civil Work is complete.

(2) Control House

The Control House is complete.

(3) Access Road

The road is complete.

(4) Erection, Wiring and Testing

This work is complete.

Some small transformer leaks will be repaired in early May.

2. Material Supply

All material is presently in Indonesia except for some replacement parts which should be received shortly.

H. MOBILE RADIO

1. Installation of the mobile radio system is complete and the system is operating.

I. SCHEDULES

1. West Java I and II Projects Completion

The tables which are on pages 14 and 15 give the scheduled and actual completion of the various phases of the Projects. Engineering as well as physical completion are included in the percentage figures.

The page following is the Project Completion graph based on these tables and in addition shows the monthly scheduled percentage completion to the end of the Project. The scheduled completion is based on the estimated schedule at the time Amendment No. 4 of the Engineering Services Contract was signed and does not necessarily reflect the Schedules provided by the various Construction Contractors.

J. TRAINING

1. A training course in Substation operation was held in the Cigereleng Substation in April. Some 20 PLN employees were in attendance.

2. A training course in Substation maintenance was started in late April at the Cigereleng Substation. Eighteen (18) PLN employees are in attendance.

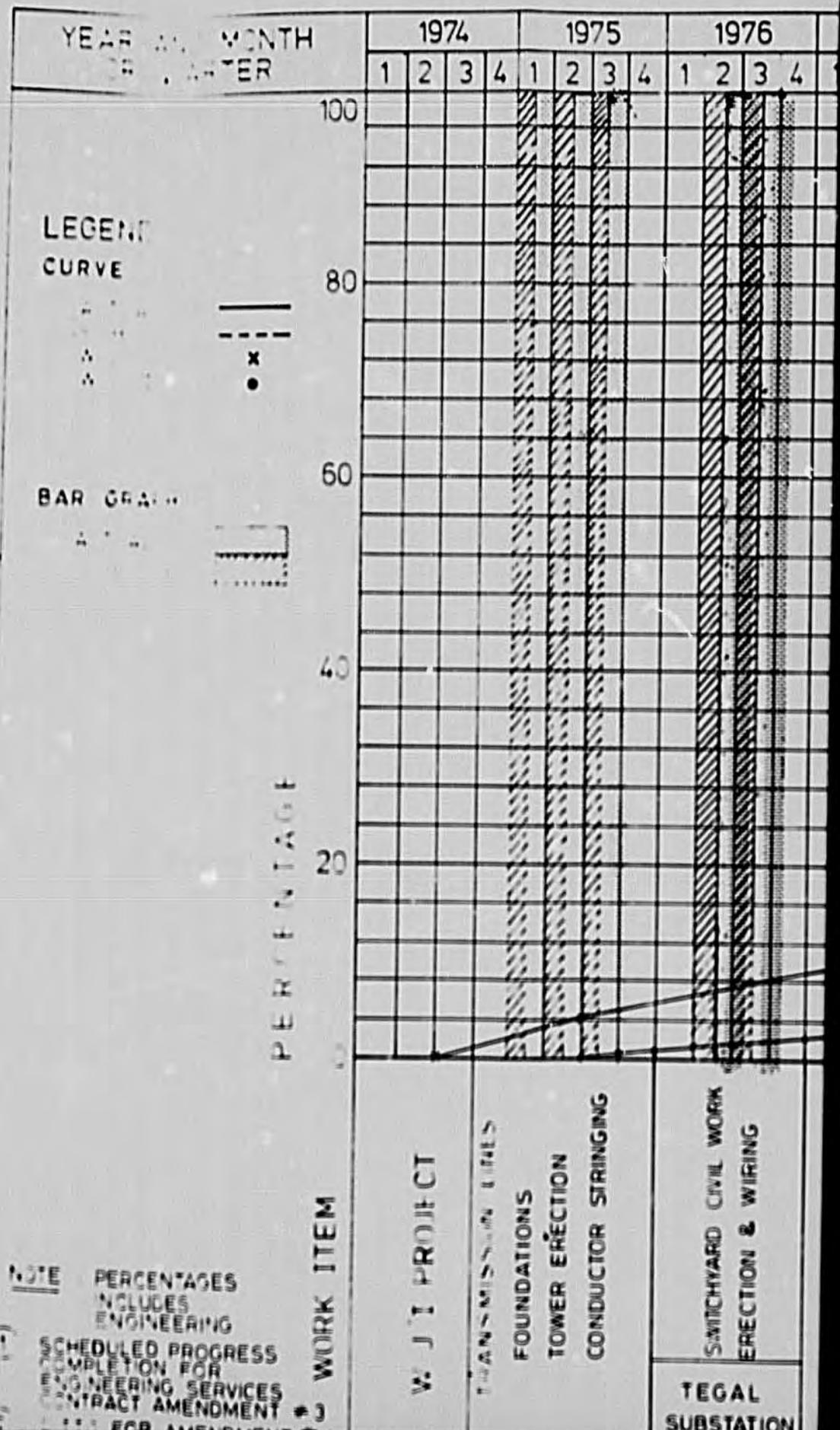
West Java I Project
 Project Completion
 (Includes Engineering and Design)
 as of 30 April 1982

<u>Work Item</u>	<u>Weighted Percent of Project</u>	<u>Percent of Item Completed to Date</u>		<u>Percent of Project Completed to Date</u>	
		<u>Scheduled</u>	<u>Actual</u>	<u>Scheduled</u>	<u>Actual</u>
Transmission Line					
Foundations	28.9	100.0	100.0	28.9	28.9
Tower Erection	13.5	100.0	100.0	13.5	13.5
Conductor Stringing	11.7	100.0	100.0	11.7	11.7
Tegal Substation					
Switchyard	2.0	100.0	100.0	2.0	2.0
Erection and Wiring	1.2	100.0	100.0	1.2	1.2
Ujungberung Substation					
Switchyard Civil Work	15.2	100.0	100.0	15.2	15.2
Control House	11.5	100.0	100.0	11.5	11.5
Equipment Erection, Wiring and Testing	10.3	100.0	100.0	10.3	10.3
Radio System	5.7	100.0	100.0	5.7	5.7
Total	100.0			100.0	100.0
	*****			*****	*****

West Java II Project
 Project Completion
 (Includes Engineering and Design)
 as of 30 April 1982

<u>Work Item</u>	<u>Weighted Percent of Project</u>	<u>Percent of Item Completed to Date</u>		<u>Percent of Project Completed to Date</u>	
		<u>Scheduled</u>	<u>Actual</u>	<u>Scheduled</u>	<u>Actual</u>
Transmission Line					
Foundations	28.1	100.0	100.0	28.1	28.1
Tower Erection	13.1	100.0	100.0	13.1	13.1
Conductor Stringing	11.1	100.0	100.0	11.1	11.1
Bandung Utara Substation					
Switchyard	7.3	100.0	100.0	7.3	7.3
Control House	6.1	100.0	100.0	6.1	6.1
Equipment Erection, Wiring and Testing	4.9	100.0	99.0	4.9	4.8
Bogor Substation					
Switchyard Civil Work	10.6	100.0	100.0	10.6	10.6
Control House	5.8	100.0	100.0	5.8	5.8
Equipment Erection, Wiring and Testing	7.0	100.0	100.0	7.0	7.0
Radio System	6.0	100.0	100.0	6.0	6.0
Total	100.0			100.0	99.9
	*****			*****	*****

WEST PROJECT CO

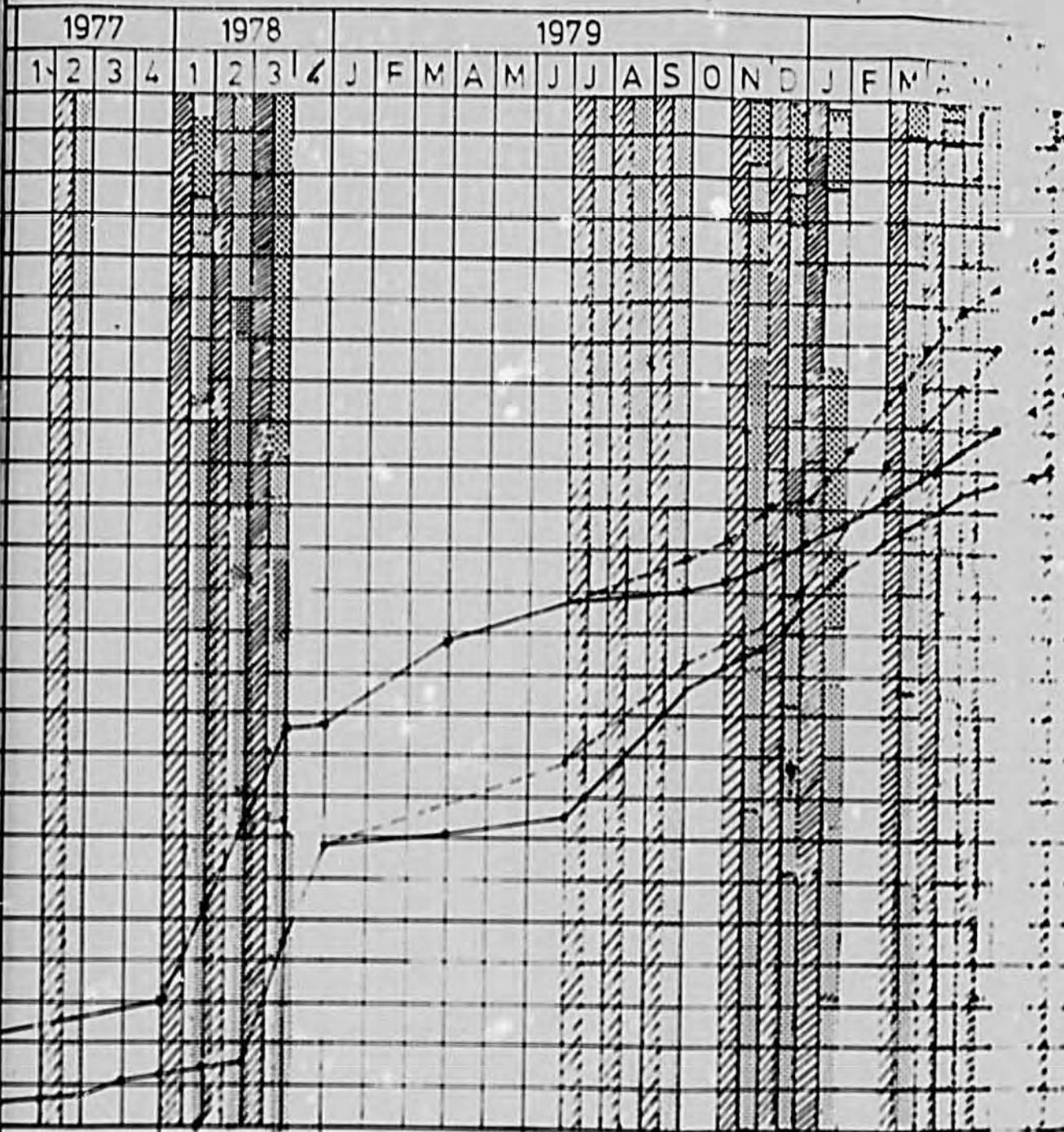


NOTE PERCENTAGES INCLUDES ENGINEERING

SCHEDULED PROGRESS COMPLETION FOR ENGINEERING SERVICES CONTRACT AMENDMENT

FOR AMENDMENT

COMPLETION AS OF APRIL 30, 1982



U BERUNG SUBSTATION

W I T I

FOUNDATIONS, TOWER ERECTION, CONDUCTOR STRINGING

BDO UTARA B SUBSTATION

FOUNDATIONS, TOWER ERECTION, CONDUCTOR STRINGING

SWITCHYARD CIVIL WORK, CONTROL HOUSE ERECTION, WIRING & TESTING

Vertical text on the right side of the chart, possibly a legend or scale.

