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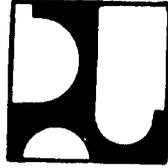
REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL CIPTA KARYA
DIRECTORATE OF SANITARY ENGINEERING

CONTRACT FOR CONSULTANT SERVICES
FOR
SURAKARTA WATER SYSTEM
NO. 01/WS-S/I/AID/78
AID LOAN 497-U-044

MONTHLY PROGRESS

REPORT NO. 36
SEPTEMBER 1981

BURNS & McDONNELL ENGINEERING COMPANY
AND
TRANS - ASIA ENGINEERING ASSOCIATES, INC.
A JOINT VENTURE



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AND
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A JOINT VENTURE**

BURNS & McDONNELL Engineering Co.

Architect - Engineers

A JOINT VENTURE

Consultants - Planners

TRANS - ASIA Engineering Associates, Inc.

Please Reply to : Kotak Pos 105
Surakarta

189/BM/TAE/SKA/81
01 October 1981

Mr. Soesanto Mertodiningrat, Director
Directorate of Sanitary Engineering
Directorate General Cipta Karya
Jl. Pattimura No. 20
Kebayoran Baru
Jakarta Selatan.

Subject : Contract for the Consultant Services for
Surakarta Water System No. 01/WS-S/I/AID/78
dated 28 October 1978 as Amended 23 July 1981.

Dear Sir,

In accordance with Section 4.12 and Appendix I of the
subject Contract, we are pleased to submit fifteen
copies of the Monthly Report No. 36 for the month of
September 1981.

We trust that this report will meet with your approval.

Very truly yours,

BURNS & MC DONNELL ENGINEERING CO.
TRANS-ASIA ENGINEERING ASSOC., INC.


J.F. BAUCOM
ACTING CHIEF



cc	:	CJWSP	Semarang	(10 copies)
		USAID	Jakarta	(5 copies)
		BM/TAE	Jakarta	(2 copies)
		Burns & McDonnell	Kansas City	(1 copy)
		CJWSP I	Surakarta	(1 copy)
		SWE	Surakarta	(1 copy)
		Mayor of Surakarta	Surakarta	(1 copy)
		File		

Encl.

JFB/yp

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SECTION I
G E N E R A L

I-A NARRATIVE SUMMARY

During the month of September, several meetings were held concerning the work involved constructing the bath houses and the restoration program for the public latrines. The net result being a combined tender of all bath houses and sixty of the latrines which were packaged into three phases. Three local contractors were invited to bid on each phase by the end of September and a review and evaluation is presently in progress. The balance of the latrines have had to be looked at concerning the legal ownership - private or, in fact, government. The City DPU has had to go back through the real estate documentation in order to make a determination. Those that are found to be on government property will be packaged into a fourth phase and tendered same as the first three phases.

The order of gate valves in the Port of Semarang since 23 May arrived in Surakarta September 8th. There were some four barrels of AWWA operating nuts not found and a tracer has been placed to try and locate them. The transportation contractor was not too careful in handling the valves. As a result, three were damaged by him. A local machine shop has been contacted to make the repairs. regarding the locally purchased piping, all of the asbestos cement pipe is now in storage and the PVC pipe began arriving in Surakarta 19 September 1981. Having the materials on hand has allowed the successful construction contractors to begin thier work. A list of the required priorities has been provided to each.

At the request of the Project Manager, the Consultant investigated an area in Jebres wherein the residents had made strong complaints for the lack of water. It was found the complainants were new, not old customers and the mains which were authorized to be installed by the Project were not completed by the contractor. The findings were presented to the Project Manager who, in turn advised the Surakarta Water Enterprise to proceed to make the required connections to the existing distribution system. Also at the request of the Project Manager, the Consultant determined the means by which the existing services serving the military complex adjacent to the Kartasura reservoir could be disconnected to enhance the hydraulic gradient to that reservoir from the Cokrotulung Spring, after which new and larger services could be provided to serve the military. It is anticipated the materials will be available from the previous procurement and the replacement of the existing services is authorized under the existing Phase IV plan.

Due to lack of activity by the contractor as he had promised, the Surakarta Water Enterprise excavated (2) valves on Line "L" so that water could be routed west to Pasar Nusukan to serve the fire hydrants in that location. Activity by the Surakarta Water Enterprise on the leak survey has been sparse and erratic at best. In Manahan alone, of those customers surveyed it was found that almost 98% of them had not had their meter read in 1981. They are instead paying rates which are not related to the use of the premises, unfair in proportion and causing the Surakarta Water Enterprise to lose much needed revenue.

Other conditions of extreme waste and possible contamination have been uncovered during the leak survey. In each case, the Consultant has advised the Surakarta Water Enterprise to provide check valves to lessen the possibilities of such conditions affecting the water system. As of this writing, none of the recommended check valves have been purchased or installed.

I-B PROBLEMS AND PROPOSED SOLUTIONS

House services are still being supplied to new customers with the service lines running up to one hundred meters in length. This practice is not only requiring additional time but is both costly to the new customer and Surakarta Water Enterprise. The Project has recommended where such conditions exist, a minimum of ϕ 50 (mm) PVC pipe be installed so that in the event there are additional new customers along the route, they could be served by the same service main. The situation of improper installation techniques has been previously discussed.

SECTION II
ADMINISTRATION

II-A SUBMISSIONS/APPROVALS.

Consultant's Invoice No. 36 for August 1981 U.S. Dollar reimbursible expenses was submitted to Cipta Karya on 01 September 1981 and was approved by Cipta Karya on 05 September 1981.

Consultant's Rupiah Invoice No. 19,20 and 21 submitted to Cipta Karya on 14 September 1981 was approved on the same date. Full payment of Rupiah Invoice 18 was received on 22 September 1981.

These submittals are in accordance with the Contract Appendix II, page II-15.

II-B CONTRACT STATUS.

Appendix I shows the continuation of Consultant's effort in man-months from the beginning of the Contract.

Appendix II shows the billings of approved expenditures to date.

II-C PERSONNEL.

The Surakarta Office personnel in September were as follows :

Expatriates

- James F. Baucom, Acting Chief Engineer
arrived 26 September 1979
- Albert G. Kingler, O & M Specialist
arrived 09 May 1980

Indonesian Professional and Technical :

- Mohamad Khalil, Material Coordinator
arrived 09 October 1978
- Mohamad Syarif Lembah, Construction Supervisor
arrived 01 May 1979
- Gatot Bramono, Inspector
arrived 19 November 1979
- Soewanto, Inspector
arrived 11 March 1980
- Abdul Rasyid, Inspector
arrived 11 June 1981
- Susena, Draftsman
arrived 20 October 1980

Administrative :

- Dradjat Atmardjo, Office Manager
arrived 02 October 1978

- Haryani Pudyastuti, Secretary
hired 17 November 1980

- Rubiyo, Clerk
hired 01 November 1978

- Pamudji Rahardjo, Driver
hired 02 October 1978

- Sutrisno, Driver
hired 02 April 1979

- Puranto, Driver
hired 17 October 1980

- Tukino, Office Boy/Labor
hired 10 November 1980

SECTION III

ENGINEERING AND MANAGEMENT

III-A OFF-SHORE PURCHASED MATERIALS	US.\$ COMMITTED	% PAID (ASSUMED)	US. \$ BAL. DUE
III-A-1 Direct Cipta Karya Procurement Contract			
III-A-1-1 American Cast Iron Pipe Co. Ductile Iron Pipe & Fittings Contract certified complete 01/02/80	2,595,511.60	100	- o -
III-A-1-2 Colcorindo Raya Flow Metering Equipment Contract certified complete 07/04/80	3,462.00	100	- o -
III-A-1-3 Rohan Corporation Water Meters, Repairs Parts- Tools & Equipment Contract certified complete 06/07/81	668,712.83	100	- o -
III-A-1-4 Clow Corporation Casting, Auto Air Vents & Valves. Contract certified complete 15/05/81	125,912.00	100	- o -
III-A-1-5 Ford Meter Box Company Brass Valves Parts & Access- ories. Contract certified complete 12/02/81	390,775.15	100	- o -
Sub Total	<u>3,784,373.58</u>	<u>100</u>	<u>- o -</u>

III-A-2 Special Equipment Procurement/Consultant Contract

III-A-2-1 Western International Leak Detectors & Pipe Locators	2,496.14	100	- 0 -
III-A-2-2 Kennedy/MacLane Distribution Network Valves In Port of Semarang 23 May 1981	53,224.00	90	5,322.40
III-A-2-3 Laboratory Equipment-Variou Sources Majority Received Balance In Transit	11,303.54	100	- 0 -
III-A-2-4 Publication & Reference Data Various Sources - Balance In Transit	1,460.50	1.3	19.18
III-A-2-5 Repair Parts For Clow Various Sources - Complete	228.53	100	- 0 -
III-A-2-6 O & M Facility Outfitting Various Sources	207.18	100	- 0 -
Total US \$	<u>3,853,293.45</u>	<u>0.14</u>	<u>5,341.58</u>

III-B. CONSTRUCTION SUPERVISION

Still no work has been done by contractor P.T. Lepen Kencana on the valve problem. In order to provide fire protection as previously reported, the Surakarta Water Enterprise excavated and worked on two Line "L" valves. There still remains one valve on Line "M" to be over-hauled, also leaks on Lines "L" and "M" to be repaired.

No further work was done on any section of the new transmission main. The Section C contractor is still awaiting authority to proceed with the two railroad crossings. The Project has written the Railway Enterprise requesting permission to go ahead with the work in order to complete the Contract.

With the delivery of distribution main materials, the construction of Phases I and II can proceed. Those contractors have been given a list of priorities to follow in order to (1) provide the requested fire protection coverage with the new fire hydrants and; (2) replace the old leaking sections of the transmission and distribution mains in order to eliminate the leakage now being experienced.

It is anticipated the construction contracts will be awarded on the first sixty public latrines and the balance of public bath houses by 14 October 1981. As those contracts will include the furnishing of materials by the contractor(s) the work could proceed immediately after notice of award is made.

III-C GROUNDWATER EXPLORATION AND WELL DEVELOPMENT PROGRAM

Completed.

III-D MANAGEMENT ASSISTANCE PROGRAM

Completed.

III-E O & M TRAINING AND ASSISTANCE PROGRAM

The revised list of tools and equipment has been forwarded for approval by Cipta Karya according to Implementation Letter No. 8 signed by the Director General and U.S.A.I.D. It is anticipated that the Consultant will receive early approval to proceed with obtaining firm quotations for the listed tools

and equipment.

Based upon advice for the construction contractor to begin work, the modifications in the O & M facilities should be able to be started. It is planned for the contractor to construct the storage bins, shelves and tables first to enhance materials storage as it arrives. Foundations and equipment pedestals can be done after selection of the equipment for procurement.

The leak survey has been hampered by lack of re-rail crews to correct deficiencies recorded. It has been noted that part of the problem has been persons other than the Technical Section Heads at the Surakarta Water Enterprise are making work assignments. The Consultant has requested such practice be stopped, or at least modified so that the planned effort can be accomplished.

III-F METER REPAIR TRAINING PROGRAM

Completed.

III-G NEW WATER DISTRIBUTION NETWORK DESIGN

Completed.

III-H CONFERENCES

A coordination meeting was called 02 September to discuss the upcoming construction of public facilities with the various Departments of the City. Through such meetings, an identification system has been established that will be recognized by all for each public latrine. The identification system includes the Kecamatan, Kelurahan and the

sequence number within each Kelurahan. The results of this meeting were necessary to resolve in order to complete the Tender Documents required for bid.

Then on 08 September, the Consultant met with the Project Manager and Head of CJWSP-I to finalize plans for the tendering of the combined packages of Public Bath Houses and Public Latrines. From this meeting, Invitations were issued 18 September under number KU.03.04.

The pre-bid conference was conducted on 23 September followed by the receiving of bids on the 30th of September 1981.

III-J ACTIVITIES PLANNED FOR NEXT MONTH

Commence construction of Phases I, II and III of the Bath Houses and Public Latrine Restoration. Continue to expedite delivery of the remaining fittings for the distribution system construction. Continue with off-shore procurement activities in relation to the approved list of O & M tools and equipment as well as the deep well equipment. Continue with the leak survey and OJT of personnel. Prepare Tender Documents for Phase IV restoration of the remaining Public Latrines.

F-A

SURAKARTA WATER PROJECT
REPORT OF MAN-MONTHS EXPENDED BY CONSULTANT
BURNS & McDONNELL / TRANS-ASIA ENGINEERING ASSOCIATES

CONTRACT NUMBER OI/WS-S/AID/78 AID LOAN 497-U-044	MAN - MONTHS				
	FOR SEPTEMBER 1981	CUMULATIVE THROUGH SEPTEMBER 1981	TOTAL IN CONTRACT SCHEDULE	% OF TOTAL USED PER SCHEDULE	BALANCE
EXPATRIATES					
PROCUREMENT ENG. CHIEF ENGINEER	0 0	6.5 26.2	14.5 30	44.8 87.3	8 3.8
CONSTRUCTION SPECIALIST LIAISON OFFICER	1 0.16	24.1 4.19	36 7.5	66.9 53.7	11.9 3.47
PRINCIPAL	0	0.71	2	35.8	1.3
HYDROGEOLOGIST DRILLING SPECIALIST	0 0	8.1 10.5	12 12	67.5 87.5	3.9 1.5
O & M SPECIALIST METER SPECIALIST	1 0	31.4 8	41.5 8	75.6 100	10.1 0
MANAGEMENT SPECIALIST SPECIALIST	0 0	20.2 0	21 3	96.1 0	0.8 3
DESIGN SPECIALIST	0	12	12	100	0
EXPATRIATE TOTAL	2.16	153.81	199.5	77.1	45.7

INDONESIAN PROFESSIONAL & TECHNICAL

COUNTERPART CHIEF ENG.	0	28.6	33	86	4.4
CONSTRUCTION SUPERVISOR	1	14.9	36	41.3	21.1
HYDROGEOLOGIST	0	20.7	26	79.6	5.3
MATERIALS COORDINATOR	1	36	48	75	12
INSPECTORS	3	107	146	73.2	39
DRAFTSMAN	1	47	66	71.2	19
ACCOUNTANT	0	34	32	106.2	(2)
TECHNICAL TRANSLATOR	0	17.8	18	98.8	0.2
DESIGN ENGINEER	0	6	8	75	2
SPEC. / COST ESTIMATOR	0	4.6	3	153.3	(1.6)
SR. SURVEYOR / PLOTTER	0	5.4	5	108	(0.4)
SURVEYOR	0	5	5	100	0
INSTRUMENTMAN	0	6.3	5	126	(1.3)
INDON. PROF. & TECH.	6	333.3	431	77.3	97.7

INDONESIAN ADMINISTRATIVE

OFFICE MANAGER	1	36	48	75	12
SECRETARY (BI - LINGUAL)	1	34.6	54	64	19.4
TYPIST	0	27.2	5	53.5	23.8
CLERKS	1	97.6	88	110.9	(9.6)
DRIVERS	3	148.3	223	66.5	74.7
LABORERS	1	163.2	258	63.2	94.8
RODMEN / CHAINMEN	0	13.8	10	138.0	(3.8)
ADMINISTRATIVE TOTAL	7	526.7	732	71.9	211.3

II-A

SURAKA
REPORT OF
BURNS & McDONNELL

CONTRACT NO. OI/WS-S/AID/78 SIGNED 26 OCT. 1978 START 1 JAN. 1978 END 30 SEP. 1982 REIMBURSABLE EXPENDITURES	COSTS FOR	CUMULATIVE COSTS THROUGH	
	SEPTEMBER 1981	AMOUNT	% OF TOTAL BUDGET ESTIMATE
Salaries and Related Costs	14,552.46	938,746.14	82.9
Transportation	-	67,967.77	81.5
Equipment	-	12,456.36	77.8
Miscellaneous	-	63,563.48	109.4
Contingencies	-	53,470.70	85.5
TOTAL DOLLARS	14,552.46	1,124,182.74	83.1
INDONESIA			
Salaries	7,881,748	159,868,217	71.4
Transportation	1,941,400	68,248,008	81.3
Housing	14,000,000	64,775,000	102.8
Vehicle Costs	2,322,500	47,431,972	88.3
Equipment Costs	-	24,610,860	101.4
Miscellaneous	5,364,695	68,087,955	74.1
Contingencies	12,542,590	33,144,580	99.7
TOTAL RUPIAH	44,052,933+	*484,149,067	84.9

Mobilization

19,620,000

* As per Rp. Invoice

** Payment on Rp. Invoice

II-B

RTA WATER PROJECT
 ENGINEERING COSTS
 TRANS-ASIA ENGINEERING ASSOC.

I AL E	CUMULATIVE PAYMENTS THROUGH			TOTAL BUDGET ESTIMATE FOR CONTRACT
	AMOUNT RECEIVED IN SEPTEMBER 1981	TOTAL AMOUNT RECEIVED THROUGH SEPTEMBER 1981	% OF TOTAL BUDGET EST MATE	
S DOLLARS				
	25,616.32	924,193.68	81.6	1,132,179
	-	67,967.72	79.0	83,343
	-	12,456.36	77.6	16,000
	13,932.00	63,563.48	109.4	58,063
	-	53,470.70	84.5	63,271
	27,527.66	1,109,630.28	82.0	1,352,856
INDONESIAN RUPIAH				
	11,188,000	151,986,469	67.9	223,759,250
	3,842,181	66,306,608	78.9	83,952,600
	-	50,775,000	80.6	62,975,000
	7,903,000	45,109,472	84.0	53,675,000
	-	24,610,860	101.4	24,253,000
	6,806,775	62,723,260	68.3	91,810,000
	1,185,030	20,601,990	61.9	33,236,460
	30,924,986**	420,476,134	73.3	573,661,310

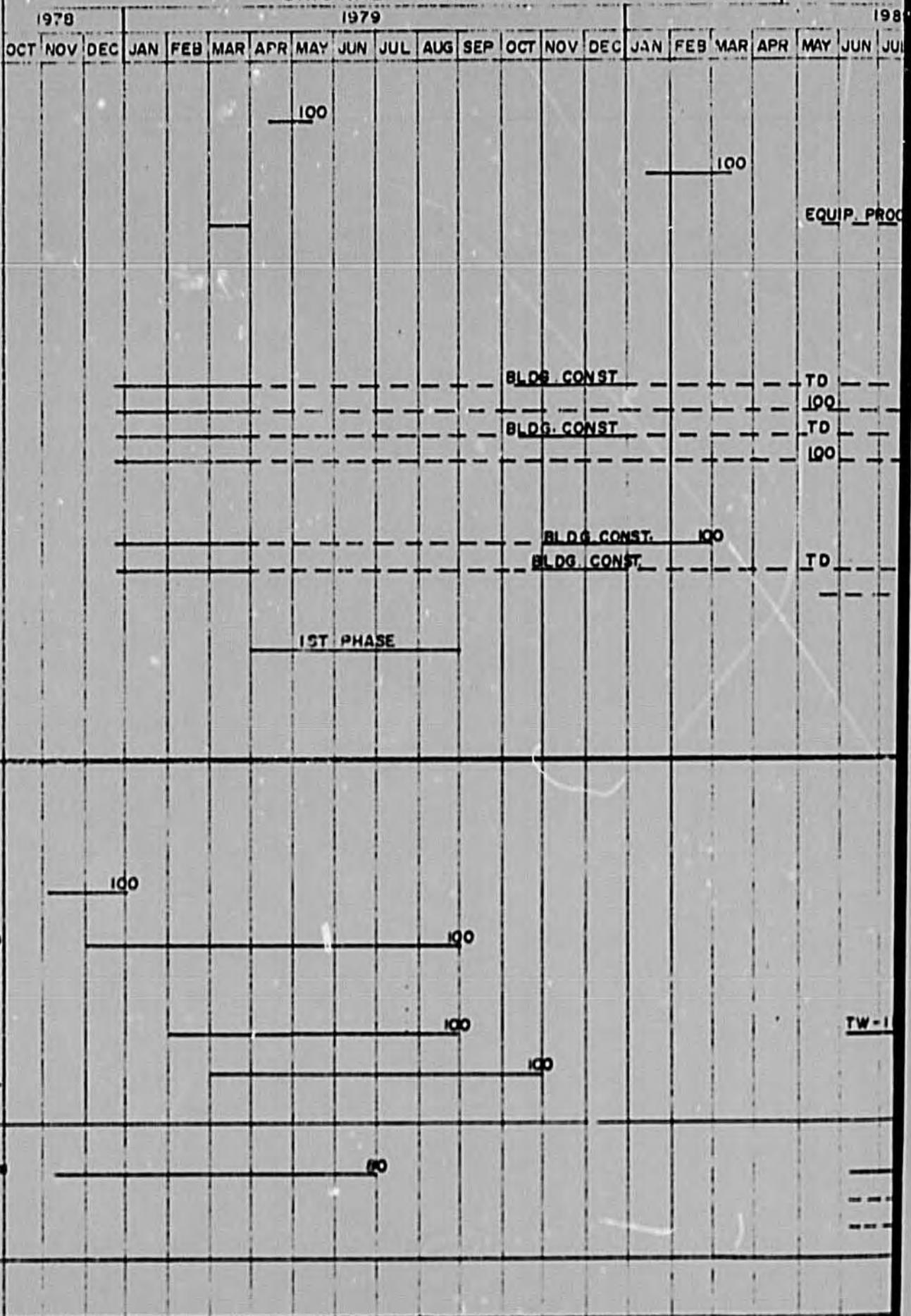
* No. 19,20 (Mobilization) and 21.

** Voice No. 18 (Complete).

AMENDMENT NO. 1												AMENDMENT NO. 2														
1980						1981						1982														
JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

ORIGINAL CONTRACT

OPERATIONAL AREAS



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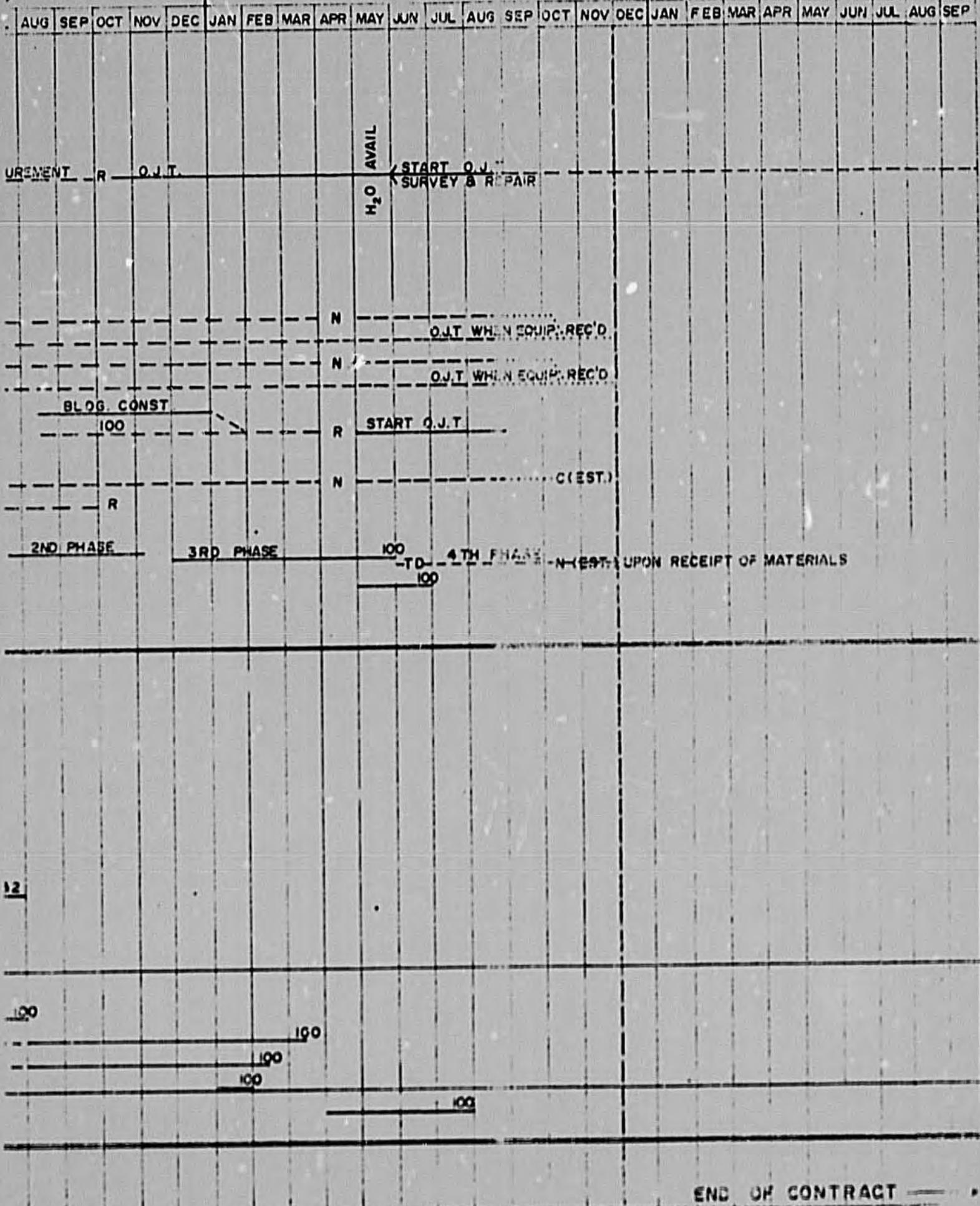
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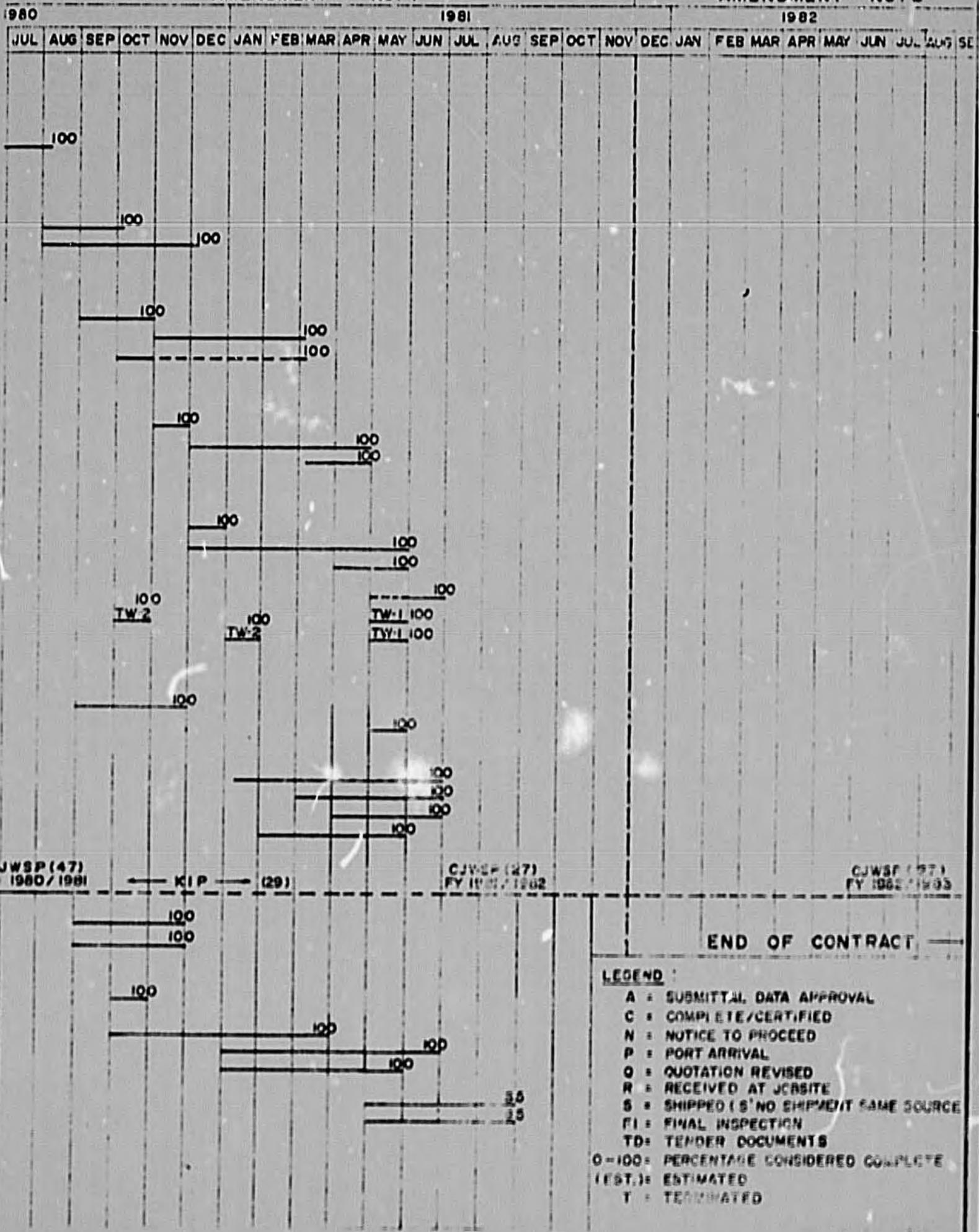
1982



END OF CONTRACT

AMENDMENT NO. 1

AMENDMENT NO. 2



- LEGEND :**
- A = SUBMITTAL DATA APPROVAL
 - C = COMPLETE/CERTIFIED
 - N = NOTICE TO PROCEED
 - P = PORT ARRIVAL
 - Q = QUOTATION REVISED
 - R = RECEIVED AT JCRSITE
 - S = SHIPPED (S'NO SHIPMENT SAME SOURCE)
 - FI = FINAL INSPECTION
 - TD= TENDER DOCUMENTS
 - 0-100= PERCENTAGE CONSIDERED COMPLETE
 - (EST.)= ESTIMATED
 - T = TERMINATED