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FROM - DJAKARTA

SUBJECT - Nonrapital Project Paper ("PROP")

REFERENCE -

COUNTRY: Indonesia PROJECT No.: 497-11-210-193
SUBMISSION DATE: ORIGINAL X
PROJECT TITLE: Geological Survey Assistance
U.S. OBLIGATION SPAN: FY 1970 through FY 1974
PHYSICAL IMPLEMENTATION SPAN: FY 1970 through FY 1974
GROSS LIFE - OF - PROJECT FINANCIAL REQUIREMENTS:

U.S. DOLLARS: $ 1,315,000
U.S. OWNED LOCAL CURRENCY Nono
COOPERATING COUNTRY

CASH CONTRIBUTION
(in U.S. $ Equiv. at
Rp ..... = 1 U.S. $) In-kind support (continuing budgetary requirements will be determined following the arrival of project personnel).

A. SUMMARY DESCRIPTION:

1. Necessity and Justification:

a. Under the more favorable investment climate which has existed in Indonesia since 1966, there has been considerable new investment in potentially promising oil and mineral developmental areas which had been

PAGE 1 OF PAGES 15

DRAFTED BY	OFFICE	PHONE NO.	DATE	APPROVED BY
DRKent:jts	ENGR		8/18/69	A/DIR:VMagnuson

AID AND OTHER CLEARANCES
CONTR:CHMartin (DRAFT)
PRO:JWMcCarthy

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AID-5-39 (11-65)

identified mainly as a result of the geologic mapping previously completed in relatively limited areas of the country. The greater part of the previously identified areas which appear most promising for petroleum and mineral resources development have now been leased or assigned. To maintain continuing economic growth through new investments which will lead to increased production and export of petroleum and mineral raw materials and/or to increased activity in the extractive and processing industries for domestic and export purposes, new or expanded targets for development must be identified. Such continuing identification will be dependent, in large part, on: geological surveys covering the large areas not previously mapped; the identification and appraisal of promising developmental opportunities in these areas; and the publication of maps and reports for the information of potential investors.

b. Geological mapping, appraisal and publication activities are the primary responsibility of the Geological Survey of Indonesia (GSI), operating within the Department of Mining of the Government of Indonesia. Professionally qualified and trained personnel capable of carrying on this work are in critically short supply.

2. Project Goals and Targets:

a. The "Geological Survey Assistance Project" is a 5-year program designed to increase the capacity of the GSI to survey, map and appraise the geology and natural resources of Indonesia; to intensify and accelerate the training of geologists, geophysicists and mapping specialists within the GSI and other related agencies of the Department of Mining; and to accelerate the compilation and publication of maps and interpretive reports which serve to identify promising natural resources targets for investment.

b. Specific targets are described in some detail in Section D of this PAAD. The overall targets can be summarized as: substantial completion of the basic geologic mapping of Indonesia and the establishment of an in-house capability within the GSI to continue with required detailed mapping, investigations and interpretive technical publications with minimal "outside" assistance, both by June of CY 1974.

3. Minimum Levels of Output or Achievement:

The maintenance of a satisfactory level of GSI participation and support (budgetary and personnel) will be determined on the basis of annual reviews. The first such review will confirm the expected life-of-project GOI budgetary requirements. The effectiveness of the USGS team, individually and collectively, will be analyzed on a continuing basis, but will be formalized as part of the annual review.

4. General Approach and Plan of Action:

a. Personnel.

It is proposed to provide a professional staff of qualified specialists under an AID grant-funded PASA to be entered into with the United States Geological Survey (USGS). This resident consultative, advisory and training staff will be supplemented by the addition of short term specialists as required. It is anticipated that overall personnel requirements will approximate those shown in tabular form as ATTACHMENT "B" hereto.

b. U.S. Financing Required (AID Grant).

Financial requirements are summarized in tabular form as ATTACHMENT "A" hereto. A breakdown of estimated AID grant funding requirements for U.S. personnel (PASA), participant training, and commodities is detailed in ATTACHMENT "C" hereto.

c. Cooperating Country Inputs:

(1) To provide housing in Bandung for assigned USGS resident staff members and their families, with the understanding that such housing shall be complete with basic furnishings and shall be comparable to accommodations normally provided foreign specialists of equivalent professional grade in Indonesia;

(2) To provide administrative and logistical support for the USGS resident staff and short term specialists assigned to this project, with the understanding that such support will include: local transportation required for the efficient conduct of project-related duties, office facilities, clerical assistance, housing maintenance, and utilities;

(3) To provide a counterpart staff, sufficient to carry out the purposes of this project and to use effectively the services of the USGS specialists for which provision is made herein;

(4) To screen, select, make available, and support, personnel qualified for in-house training courses and for such participant training in the United States of America as may be approved under this project;

(5) To budget funds for administrative, personnel, logistical and material support in an amount adequate to enable the GOI to carry out an accelerated and intensified geological program, as contemplated under this project;

(6) To provide laboratory and field equipment and materials, as required for the efficient conduct of an accelerated geological program,

to the extent that such equipment and materials are not specifically agreed to be provided by the United States of America; and

(7) To make available for use under this project on an "as needed" basis, such aerial photographs, geologic maps and reports, geophysical maps and data, stratigraphic information, subsurface data, and other reference materials as have previously been compiled by or for the Department of Mining or other agencies of the Republic of Indonesia.

B. SPECIAL ENVIRONMENT:

1. This project will be implemented within the existing organizational framework of the Ministry of Mines and the Geological Survey of Indonesia. These are generally viable institutions with an extensive record of past achievement and a nucleus of professionally qualified geologists. The number of well qualified and trained technicians presently available, however, is inadequate to carry out effectively a large scale program of geologic mapping, interpretation and publication at an accelerated pace. A concentrated training program is a basic necessity. New techniques are needed, and an emphasis on photogeology and geophysical interpretations is believed to offer the greatest promise of enhancing the existing organizational capability. Likewise, intensive work on map compilation and on the publication of basic and interpretive data is essential to promoting greater investment interest. Assistance in program planning and coordination will be necessary to assure maximum efficiency in the utilization of limited trained manpower and technical support facilities.

2. General social and economic environmental factors affecting work within the Governmental structure are discussed in the FY 1971 CFS and need not be repeated here. A very positive factor which will favorably influence the progress of this project is the marked receptivity of the staffs of the Governmental institutions involved. Many of the professional staff members of the Ministry of Mines in general and the GSI in particular have previously had some association with the United States Geological Survey.

3. In May 1968, the Minister of Mines submitted a request to the United States Ambassador for geological and mining assistance to help promote the productive development of Indonesian resources. The project, in its present form, reflects joint USGS/GSI findings and recommendations resulting from consultations and reviews conducted in Indonesia early in 1969.

C. STRATEGY.

1. Institution building is a secondary benefit rather than a primary

objective of this project. A judicious admixture of advisory services, intensified in-house and participant training, provision of essential technical equipment, and direct participatory assistance is designed, primarily, to improve and accelerate the identification of promising target areas for development by the private and/or public sectors. The target date for completion of this project has been forecast on the basis of a careful evaluation of all known factors affecting capabilities versus needs. The arrival of project personnel and their evolvement of project details with their Indonesian counterparts will either confirm the validity of the target date or establish the basis for a more realistic alternate date.

2. An alternative approach to the project, as proposed, would be a directly and fully operational geologic mapping, interpretation and publication effort staffed largely by U.S. experts. The possible advantages of such an approach (in terms of timeliness, for example) are clearly outweighed by the obvious disadvantages of greatly increased cost, an inordinately obtrusive "presence", lack of the rapport and receptivity resulting from a closely knit joint effort, and the failure to achieve a lasting institutional improvement.

3. This project should make a significant (and relatively short-term) contribution to Indonesia's economic development by accelerating the identification and subsequent exploitation of mineral reserves with major foreign exchange earning potential.

4. The assistance proposed under this project will not duplicate or infringe upon multilateral or bilateral assistance programs known to be underway or planned. No non-AID resources are known to be available to finance the assistance effort proposed under this project. A project for the upgrading of mining, metallurgical and marketing capabilities is understood to be under consideration by the IBRD. If implemented, it will provide a logical and valuable supplement to the geological assistance project discussed herein, but will not duplicate or interfere with this project.

D. PLANNED TASKS, RESULTS, AND TIMING:

1. The anticipated "end point" of this project is that point in time (now estimated as mid CY 1974) when the basic geologic mapping of Indonesia is substantially complete and there exists, within the Ministry of Mines, an adequate in-house capability to continue with requisite detailed mapping, investigations and interpretive data to be published for the guidance of the public and private investment and developmental sectors.

2. On the basis of preliminary joint USGS/GSI planning, specific

targets have been developed as indicated in the subparagraphs immediately following. In some instances, these targets must be more exactly defined after the arrival of the resident USGS staff, but within the first year of the project.

a. Formal (Scheduled) In-House Training.

It is planned to train and/or up-grade GSI staff to the point of self-sufficiency in the following fields and in the following numbers:

(1) Geologic mapping techniques and photogeology (one 6-month course each year): 10 each year for 4 years.

(2) Geophysical techniques and interpretations (two 3-month courses each year; each course dealing with only one or two aspects of geophysics): 10 each year for 4½ years

b. Participant Training (U.S.):

To supplement the training provided in Indonesia by USGS specialists, participant training in the U.S. is required for from two to five selected Indonesian personnel each year for five years in subjects that cannot be fully or adequately studied in Indonesia. In FY 70, two participants will be funded and scheduled for study with the USGS in Washington; one for nine months to study map compilation and publication methods, and one for six months to study cataloguing and processing of geologic reference tables. This project will assist in screening, selecting and counseling participants, with the planning of study courses, and with the guidance of returned participants.

Specifics with respect to participant training will be developed during the first year of the project. The estimated cost of participant training is shown as a part of the overall U.S. (AID grant) funding requirement for this project (ATTACHMENT C-2)

c. Mapping:

Preparation and publication of the following material is planned as a vital target area:

(1) New geologic and tectonic maps of Indonesia at scale of 1:1,000,000;

(2) Quadrangle geologic maps at a scale of 1:100,000 for mapped areas;

(3) Geologic reports and resources bulletins; and

(4) A new base map of Indonesia at a scale of 1:1,000,000 for plotting geologic and resources data, using material to be assembled and forwarded by the USGS in Washington at the start of the program.

d. Equipment:

As estimated in ATTACHMENT C-3 hereto, it is planned to supplement the technical equipment now available to the GSI by providing essential special-purpose equipment in the following general categories as recommended by the USGS advisors:

(1) Photogeological equipment and supplies;

(2) Geophysical equipment and parts;

(3) Geological mapping and field equipment;

(4) Map compilation and cartographic equipment and supplies; and

(5) Analytical (laboratory) equipment and supplies.

E. COURSE OF ACTION - FIRST PROJECT YEAR:

1. Resident USGS Staff:

It is anticipated that the Senior Geologic Consultant (Party Chief) will arrive for duty in the early Fall of 1969, and that he will be followed shortly thereafter by the Geologic Mapping Specialist.

2. TDY USGS Staff:

It is anticipated that arrivals and tenures will closely approximate the tentative schedule shown in ATTACHMENT "B" hereto.

3. In-House Training:

Assuming the timely arrival of TDY USGS specialists, the first 6-month course in geologic mapping techniques and photogeology will start on or about 1 October 1969, and will be offered each year at approximately the same period. The first 3-month course in geophysical techniques will be started in January 1970; subsequent courses will be scheduled to coincide with the availability of USGS TDY specialists. The phasing-out of the

USGS staff will be correlated with the success of the overall in-house and participant training efforts.

4. Participant Training:

PIO/P's for the first two participants (ATTACHMENT C-2) will be prepared prior to the end of the second quarter of FY 1970. A detailed participant training program for the years FY 1971 - FY 1974 will be prepared prior to the end of the third quarter of FY 1970 by the USGS team in close coordination with the GSI.

5. Commodity Procurement:

PIO/C's for FY 1970 procurement will be prepared prior to the end of the second quarter of FY 1970. A refined and detailed list of equipment, materials and supplies to be procured in subsequent years will be prepared with USGS guidance prior to the end of FY 1970.

6. "Other" TDY Specialists:

In this category are such selected short-term specialists as may be needed to support the project (ie: cartographic, geochronologic, analytic, etc.). A refined determination of probable needs in this respect will be made during the first year of the program, based partly on the progress of the work and partly on the availability of specialists from other sources.

7. Mapping and Publications:

A reasonable target schedule of mapping progress and technical data publication dates will be worked out by the USGS/GSI prior to the end of the third quarter of FY 1970.

ATTACHMENT "A"

NONCAPITAL PROJECT FUNDING (OBLIGATIONS IN $000)

PROP DATE Mo/Day/Yr
Original 8/ 19/69
Rev. No. -
Project No. 497-11-210-193

COUNTRY: INDONESIA

Project Title: Geological Survey Assistance

Fiscal Years	Ap	L/G	Total	Personnel Serv.			Participants		Commodities	
				AID	PASA	CONT	U. S. Agencies	CONT	Dir U. S. Ag	CONT
Prior through Act. FY____			-	-	-	-	-	-	-	-
Oper. FY 1970	TA	G	265	-	140	-	15	-	100	-
Budg. FY 1971	TA	G	300	-	193	-	27	-	80	-
B + 1 FY 1972	TA	G	300	-	230	-	35	-	35	-
B + 2 FY 1973	TA	G	267	-	225	-	32	-	10	-
B + 3 FY 1974	TA	G	193	-	167	-	26	-	-	-
All Subs. None	-	-	-	-	-	-	-	-	-	-
Total Life			1,315	-	955	-	135	-	225	-

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ATTACHMENT "B"

ESTIMATED PERSONNEL REQUIREMENTS

CATEGORY OR MAJOR FUNCTION	POSITION	MAN MONTHS FY 1970 Q1	FY 1970 Q2	FY 1970 Q3	FY 1970 Q4	FY 1971 Q1	FY 1971 Q2	FY 1971 Q3	FY 1971 Q4	FY 1972 Q1	FY 1972 Q2	FY 1972 Q3	FY 1972 Q4	FY 1973 Q1	FY 1973 Q2	FY 1973 Q3	FY 1973 Q4	FY 1974 Q1	FY 1974 Q2	FY 1974 Q3	FY 1974 Q4	TOTAL MAN-MO'S
Program Planning & Coordination	Sr. Geol. Consultant	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	60
Geol. Mapping Techniques	Geol. Mapping Specialist	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	-	-	54
Photogeological Mapping	Photogeologic Specialist	-	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	-	-	-	12
Geophysical Techniques and Interpretations	Geophysical Specialist	-	-	3	3	3	-	-	3	3	-	-	3	3	-	-	3	3	-	-	-	27
Map Compilation & Publication	Geol. Compilation Specialist	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	48
Map Compilation & Publication	Tectonic Map Specialist	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Various *	Other Specialists *	-	-	-	-	-	-	3	-	-	3	3	3	-	3	3	3	3	-	-	-	24
	TOTAL MAN-MONTHS:	36				51				54				54				36				231
	AVERAGE STRENGTH	3.00				4.25				4.50				4.50				3.00				3.85

* Selected short-term specialists as may be needed to support this program in such fields as cartographic, geochronologic, analytic, or resources.

ATTACHMENT "B"
ESTIMATED PERSONNEL REQUIREMENTS

ATTACHMENT "C - 1"

ESTIMATED PERSONNEL COSTS

	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974	TOTAL
Transportation:						
Family, 1-way, air	$ 5,280	$ 2,640	-	-	$ 7,920	$ 15,840
Individual, R.T, air	3,840	5,120	$ 6,400	$ 6,400	1,280	23,040
P.D. and excess baggage	2,800	2,400	2,000	2,000	2,800	12,000
Shipping and Storage	4,000	2,000	-	-	5,000	11,000
Car shipment	1,800	900			2,700	5,400
	17,720	13,060	8,400	8,400	19,700	67,280
Allowances:						
Transfer allowance	350	175	-	-	-	525
Education allowance	1,400	2,100	2,100	2,100	2,100	9,800
R & R Travel	-	2,400	1,200	2,400	1,200	7,200
Home Leave & Return	-	-	19,840	9,920	-	29,760
	1,750	4,675	23,140	14,420	3,300	47,285
Salaries, Differential, Etc.						
Base Salary *	66,000	97,240	107,078	111,362	77,211	458,891
25 % Differential	10,800	17,160	17,846	18,560	16,096	80,452
Per Diem for TDY Employees	4,330	5,475	6,570	6,570	2,190	25,185
	81,130	119,875	131,494	136,492	95,497	564,528
SUB - TOTAL	100,550	137,610	163,034	159,312	118,497	679,093
USGS Adm. & Tech. Support	45,212	61,814	73,235	71,563	53,224	305,048
	145,362	199,424	236,269	230,875	171,711	984,141
Less Slippage factor	3,118	5,994	6,575	6,825	4,774	32,286
TOTAL	137,744	193,430	229,694	224,050	166,937	951,855
ROUNDED TO:	140,000	193,000	230,000	225,000	167,000	955,000

* Assumed average is $ 22,000/year for each employee in the first year, and 4 percent per year higher for each year thereafter. This item includes both resident and TDY personnel.

ATTACHMENT "C - 1"

ESTIMATED PERSONNEL COSTS

ATTACHMENT "C - 2"

ESTIMATED PARTICIPANT TRAINING COSTS

	NO.	MO'S	FY 1970	FY 1971	FY 1972	FY 1973	FY 1974
Map Compilation, Publ. Meth.	1	9	$ 8,000	-	-	-	-
Proc. Geol. Ref. Materials	1	6	7,000	-	-	-	-
(To be determined) *	4	7.5	-	$ 27,000	-	-	-
" " "	5	7.5	-	-	$ 35,000	-	-
" " "	5	7.5	-	-	-	$ 32,000	-
" " "	4	7.5	-	-	-	-	$ 26,000
TOTALS:			15,000	27,000	35,000	32,000	26,000

* Fields of training will be determined on the basis of a detailed training program to be worked out by USGS technicians in close coordination with the GSI during the first year of this project. Pending such program, the foregoing represents a very preliminary guess as to numbers of participants and length of training.

AID 1020-24 (10-69)

AGENCY FOR INTERNATIONAL DEVELOPMENT (A.I

Proj. 4970193
OD.

PROJECT AUTHORIZATION

1. PROJECT NUMBER: 497-11-210-192

3. COUNTRY: Indonesia

0013

2. PROJECT TITLE: Geological Survey Assistance

5. AUTHORIZATION DATE: 10/24/69

6. PROP DATED: August 18, 1969

7. LIFE OF PROJECT

a. Number of Years of Funding: 5
Starting FY 19 70 Terminal FY 19 74

b. Estimated Duration of Physical Work After Last Year of Funding (in Months): 0

8.

FUNDING BY FISCAL YEAR (In U.S. $ or $ equivalent)	DOLLARS		P.L. 480	LOCAL CURRENCY Exchange Rate: $1 =			
				U.S. OWNED		HOST COUNTRY	
	GRANT	LOAN	CCC + FREIGHT	GRANT	LOAN	JOINTLY PROGRAMMED	OTHER *
Prior through Actual FY							N.A.
Operational FY	255						N.A.
Budget FY	300						N.A.
B + 1 FY	300						N.A.
B + 2 FY	267						N.A.
B + 3 FY	193						N.A.
All Subsequent FY's	-						N.A.
TOTAL	1,315						N.A.

9. DESCRIBE SPECIAL FUNDING CONDITIONS OR RECOMMENDATIONS FOR IMPLEMENTATION, AND LIST KINDS AND QUANTITIES OF ANY P.L. 480 COMMODITIES

* In-kind support (continuing budgetary requirements will be determining following the arrival of project personnel).

10. CONDITIONS OF APPROVAL OR PROJECT

None.

(Use continuation sheet if necessary)

11. Approved in substance for the life of the project as described in the PROP, subject to the conditions cited in Block 10 above, and the availability of funds. Detailed planning with cooperating country and drafting of implementation documents is authorized.

This authorization is contingent upon timely completion of the self-help and other conditions listed in the PROP or attached thereto.

This authorization will be reviewed at such time as the objectives, scope and nature of the project and/or the magnitudes and scheduling of any inputs or outputs deviate so significantly from the project as originally authorized as to warrant submission of a new or revised PROP.

A.I.D. APPROVAL	CLEARANCES	DATE
copy RHN	EA/ENGR:MMVogel	
	EA/I:AShakow	
Acting AA/EA — Robert H. Nooter (SIGNATURE / TITLE) — 10/24/69 (DATE)	EA/DP:CHBreecher CHB	10/23/69
	A/CONT	