

PROJECT AUTHORIZATION

COUNTRY: SUDAN

PROJECT TITLE: Sudan Petroleum
Training

PROJECT NO: 650-0039

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Sudan Petroleum Training Project for Sudan involving planned obligations of not to exceed \$200,000 in grant funds over a two year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project.
2. The project consists of a program of training for senior officials of the Sudanese Petroleum General Administration ("PGA"), designed to assist the Cooperating Country in improving the managerial and planning capability of the PGA. The program of training will include the following subjects:
 - Management development and organizational structure including general procurement problems.
 - Operations management including management of production, inventory, distribution, construction, maintenance and quality control.
 - Financial management, human resources development and management sciences.
 - Personnel management.
 - Energy rationalization, inter-fuels competition, identification of alternative energy sources and conservation techniques.
3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.
4. a. Source and Origin of Goods and Services.

Goods and services, except for ocean shipping, financed by A.I.D. under the project shall have their source and origin in countries included in A.I.D. Geographic Code 941 or in the Cooperating Country, except as A.I.D. may

otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed on flag vessels of the United States or the Cooperating Country.

Date: 12/21/79


Goler T. Butcher
Assistant Administrator
for Africa

DEC 18 1979

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR AFRICA

FROM : AFR/DR, ^{Dr. Koehring} John W. Koehring

SUBJECT: Project Authorization

Problem: Your approval is required for a grant of \$200,000 from the FAA Section 106, Selected Development Activities, appropriation to Sudan for the Sudan Petroleum Training Project, No. 650-0039.

Discussion: In September/October 1978, the Sudanese government approached the Department of Energy for technical assistance to the Petroleum General Administration (PGA), and DOE (which lacks funds for overseas work in the AID-assisted LDCs) requested financing from AFR. While at first we were cool to the idea, it later gained greater merit when (a) USAID/Khartoum came out in support of it, and (b) the hoped-for IBRD financing did not materialize. Accordingly, on July 5, 1979, you wrote to DOE indicating that we would be prepared to finance "Phase I" of the Sudanese proposal -- i.e., a short term management training program for the upper echelons of the PGA -- provided costs would be in the \$150,000 - \$200,000 range. You also proposed that AFR finance, under the existing RSSA with DOE, a DOE/AID reconnaissance mission to Khartoum to work with the PGA in planning the program.

The team (George Corinaldi being the AID member) went to Khartoum and conducted discussions with the PGA and USAID during the latter part of August. The meetings were extremely productive and cordial, resulting in a program substantially modified from the one originally requested, but corresponding to PGA needs and the realities of working in Khartoum. The major change was to substitute a part time training program extending over a period of a year for the "crash" full time six-week program earlier recommended. The reason was that the PGA simply could not afford to close shop for six weeks program earlier recommended. The reason was that the PGA simply could not afford to close shop for six weeks while its senior management received training.

3

The team's reports on its mission were reviewed within AFR at meetings held on October 3 and 29. In the course of these meetings the content and method of the training course, as proposed by DOE, was substantially agreed to. It was also felt that the project should include an independent evaluation by AID, and this has been added. In regard to the matter of funding, several options were discussed. Finally, at a meeting with Mr. North on November 5th, it was decided to present the activity as a separate project, unrelated to either the AMDP project or the proposed Energy Initiatives for Africa project, but drawing on the \$1.1 million of SDA funding that has been allocated for that project in FY 1980. Accordingly, a short project paper has been prepared which spells out the organization and content of the training program as well as the plans for the AID evaluation. In the meantime, we have prepared a Congressional Notification, the waiting period for which expires December 21.

Recommendation: I recommend (1) that you authorize the project by signing the attached Project Authorization; (2) that you sign the attached letter so notifying DOE, and (3) sign the Initial Environmental Examination approving a negative determination.

cc:

DOE, W. Carter
DOE, L. Stewart
DS/EY, A. Jacobs
AA/PPC, S. Klein
IDCA, C. Blitzer
CM/SOD, E. Wills

Clearance:

AFR/DR:NCohen (Draft)
AFR/DP:RStacy (Draft)
AFR/DR:GCorinaldi (Draft)
AFR/DR:MMcDaniel (Draft)
AFR/EA:JWooten (Draft)
GC/C&P:BJanigian (Draft)
DA/AFR:WHNorth

AFR/DR/SDP:JBlumgart:rpb:12-18-1979

INITIAL ENVIRONMENTAL EXAMINATION

Project Country: Sudan

Project Title: Sudan Petroleum Training

Funding: FY(s) 80-81 \$ 200,000

IEE Prepared by: G.F.Taylor II AFR/DR/SDP Date: November 8, 1979

Environmental Action Recommended: Negative Determination

Concurrence: *John D. Fitzgerald* Date: 12/21/79

Assistant Administrator Decision:

APPROVED *MTB*

DISAPPROVED _____

DATE 12/21/79

I. Description of Project:

The project is designed to provide training for senior officials in Sudan's Petroleum General Administration (PGA). This training will be given to 30-45 of the 60 members of the PGA's professional staff in six sessions, five of which will be financed by AID. The training will be conducted by specialists in petroleum management and will cover a variety of topics including:

- Management development and organizational structure including general procurement problems.
- Operations management including management of production, inventory, distribution, construction, maintenance and quality
- Financial management, human resources development and management sciences.
- Personnel management.
- Energy rationalization, inter-fuels competition, identification of alternative energy sources and conservation techniques.

The training sessions will be supplemented by the services of a former petroleum executive furnished by the International Executive Service Corps who will assist the trainees in applying concepts of planning and market analysis derived from the training sessions in their day-to-day work.

The project will be implemented under a PASA between AID and the Department of Energy.

II. Examination of Nature, Scope, and Magnitude of Environmental Impacts:

The project is designed as an education and training project. It comprises no other interventions and will thus have no impact on the human or natural environment other than the upgrading of management skills described above. It is expected that the upgrading of these skills will have a positive impact on the rational organization and management of Sudan's petroleum resources and that this will, in turn, enhance the country's capacity to assess, plan for, and meet its energy needs.

III. Recommended Environmental Action:

It is determined that the project will not have a significant effect on the environment. It will, however, strengthen the skills and capabilities of senior Sudanese officials in the major tasks of petroleum management.

A Negative Determination, in accordance with AID Regulation 16 (particularly Part 216.2(a) on Education and Training Programs), is recommended.

IMPACT IDENTIFICATION AND EVALUATION FORM.

Impact
Identification
and
Evaluation 2/

Impact Areas and Sub-areas 1/

A. LAND USE

1. Changing the character of the land through:

a. Increasing the population ----- N

b. Extracting natural resources ----- N

c. Land clearing ----- N

d. Changing soil character ----- N

2. Altering natural defenses ----- N

3. Foreclosing important uses ----- N

4. Jeopardizing man or his works ----- N

5. Other factors

B. WATER QUALITY

1. Physical state of water ----- N

2. Chemical and biological states ----- N

3. Ecological balance ----- N

4. Other factors

1/ See Explanatory Notes for this form.

2/ Use the following symbols: N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

C. ATMOSPHERIC

- 1. Air additives ----- N
- 2. Air pollution ----- N
- 3. Noise pollution ----- N
- 4. Other factors
- _____
- _____

D. NATURAL RESOURCES

- 1. Diversion, altered use of water ----- N
- 2. Irreversible, inefficient commitments ----- N
- 3. Other factors
- _____
- _____

E. CULTURAL

- 1. Altering physical symbols ----- N
- 2. Dilution of cultural traditions ----- N
- 3. Other factors
- _____
- _____

F. SOCIOECONOMIC

- 1. Changes in economic/employment patterns ----- N
- 2. Changes in population ----- N
- 3. Changes in cultural patterns ----- N
- 4. Other factors
- _____
- _____

IMPACT IDENTIFICATION AND EVALUATION FORM

G. HEALTH

- 1. Changing a natural environment _____ N
- 2. Eliminating an ecosystem element _____ N
- 3. Other factors
- _____
- _____

H. GENERAL

- 1. International impacts _____ N
- 2. Controversial impacts _____ N
- 3. Larger program impacts _____ M(+)
- 4. Other factors
- _____
- _____

I. OTHER POSSIBLE IMPACTS (not listed above)

- _____
- _____
- _____

Summary Project Paper
(650-0039)

I. Project Description

A. Background and Description of Problem

The Sudan, like many other African countries, faces a dual energy crisis. First, there is the problem faced primarily by the country's modern/urban sector of the escalating costs of petroleum products, all of which at the present time must be imported from abroad. Already faced with serious balance of payments difficulties, the growth in the cost of oil imports and domestic petroleum prices constitute a major drain on the country's foreign exchange position and on the domestic resources available to finance the country's development investments.

The second facet of Sudan's energy problem is the growing scarcity and increasing cost of fuelwood and charcoal which are the primary sources of energy used by the rural population and the urban poor for cooking and heating. As in other African countries with large semi-arid areas such as Ethiopia and those in the Sahel, the loss of forest cover is resulting in long-term problems of environmental degradation, deterioration of arable lands and even the growth of desertification.

The AID program in the Sudan is basically seeking to address the country's problems of increasing agricultural productivity and rationalizing land use planning through projects in rural development and natural resource assessments. Recognizing the energy dimension of Sudan's rural development problem, as noted above, the US AID is seeking to build reforestation and renewable energy components onto its on-going projects, with the project at Wadi Halfa and the proposed Northern Darfur-Kordofan Agricultural Production (DECARP) project as near-term possibilities. In developing such renewable energy elements, consideration will also be given to linkages with the Institute of Energy Research of the Sudanese National Research Council which is affiliated with the University of Khartoum.

This project, on the other hand, addresses an extremely important aspect of Sudan's petroleum energy problem, namely the rational organization and management of the country's petroleum resources, and the country's capacity to undertake short and long term petroleum planning.

These functions are the responsibility of the Petroleum General Administration (PGA), a para-statal organization established in 1970 under the aegis of the Ministry of Energy and Mines. The PGA is responsible for all aspects of petroleum operations, management and planning in the Sudan with the exception of refining, pipeline

operations, exploration and final distribution (which is carried out by four private oil companies). In other words, PGA is responsible for imports, re-exports (heavy crudes not useable by Sudanese industry or generating plants), supervision of rail and waterway distribution, storage, pricing, wholesale distribution and petroleum planning. As a result of severe internal energy disruptions in the Sudan in 1974 which followed the 1973-4 round of OPEC oil price escalations, the PGA's authority for coordinating and supervising the petroleum sector was substantially increased.

The growth in the scope and complexity of the PGA's tasks has been accompanied, as one might expect, with a growth in the size and diversification of the PGA organization itself. Starting initially with a staff of three, the PGA now numbers 60 professionals of whom half are engineers and the remainder administrators, economists, procurement and marketing experts, financial analysts, etc. The organization is headed by a Director General who, in turn, reports to the Minister of Energy and Mines.

Yet there is continuing evidence that the growth of PGA's responsibilities continues to outstrip its capacity to handle them effectively. A 1978 report by an Egyptian consultant refers to "obstacles which impede competent functioning of the PGA's role" including "shortage in expertise and technical cadres" as well as organizational problems within the PGA itself. In April of the same year, the Director General of PGA attended the International Executive Management Program at the University of Houston where he became acquainted with the Program's Director, Dr. William Kretlow. Since then, PGA has sent a number of PGA staff members to Houston for training and has had Professor Kretlow to Khartoum at Sudanese expense, to consult on PGA management and organizational questions.

PGA's interest in increasing its organizational effectiveness is also a reflection of its awareness that additional responsibilities will be thrust upon it if current oil explorations in southern Sudan result in a major oil find. Although accurate information is hard to come by, at least two promising strikes have been made and the quality of the oil found is extremely high. If commercial exploitation becomes technically feasible, it could make a major contribution to reducing Sudanese dependence on imports and might even provide quantities for export. Either way, it will further increase the importance and complexity of PGA's role in the Sudanese economy.

Thus, in September 1978, when Sudanese President Numeiri made an official visit to the United States, he was accompanied by the Minister of Energy and Mines, Mr. El Touhemi. In the course of the visit, the latter called upon senior officials in the Department of Energy and presented a request for U.S. technical assistance to the PGA. The PGA proposal comprised three distinct but related

"phases", all aimed at enhancing the managerial and planning competence of the organization:

(1) A concentrated six-week executive development seminar for the top management of PGA to be conducted by U.S. experts in Khartoum;

(2) A long-term training program for selected PGA professional staff in various management disciplines;

(3) A long-term technical assistance effort in which a qualified U.S. institution would provide resident advisory and on-the-job training skills to the PGA staff.

The Sudanese request was followed up in subsequent weeks by demarches presented to DOE by the Sudanese Embassy in Washington and by the PGA to the U.S. Embassy in Khartoum, which passed it along with its endorsement. (It should be noted parenthetically that State/AF has strongly supported the Sudanese proposal from the beginning as a means of strengthening U.S.-Sudanese ties and encouraging collaboration between the two countries in petroleum matters). DOE indicated interest and support for the proposal but noted that funding for its implementation would require assistance by AID since DOE did not have funds for technical assistance in LDCs receiving assistance from AID. Thus, in December 1978, DOE officially requested AFR support.

AFR was initially cool to the DOE request on the ground that (a) it was outside of the scope of the Bureau's energy priorities which emphasized renewable energy applications for rural Africa, (b) there appeared to be a good possibility of IBRD financing, and (c) no recommendation for such assistance had been made by USAID/Khartoum. However, failure of IBRD support to materialize and endorsement of the proposal by USAID caused AFR to reconsider and, in July 1979 AA/AFR advised DOE that while "it will not be possible for the Bureau for Africa to assist on Phase II and III of the Sudanese request... it would be prepared to consider financing to enable DOE to execute Phase I assuming the cost is in the magnitude of \$150,000 - \$200,000". AA/AFR also proposed that AFR finance, under the existing AID/DOE RSSA, a DOE/AID reconnaissance mission to go to Khartoum to work with the PGA in planning the program. In late July, PGA informed USAID of its strong desire that Professor Kretlow be included in the mission as a consultant, and this was arranged. The planning mission, which included two DOE officers, George Corinaldi of AFR/DR and Professor Kretlow, spent most of the latter half of August working with the PGA in Khartoum and subsequently presented reports on its findings and recommendations.

B. The Project

As a result of discussions between the planning mission and the PGA, the methodology of the training program was substantially changed. Instead of a "crash" six-week intensive training seminar originally proposed, the program will consist of part time training in six discrete segments, beginning in January, 1980 and extending through the end of December, with a two month hiatus in May and June, the height of the "hot" season. The reason for this change was that the PGA simply could not afford to close shop for six weeks while its senior management took time off for training. Under the new format, training will be provided after office hours in the afternoons and evenings. A schedule of the training program is shown in Appendix 1.

The objective of the program is to strengthen the competence of the PGA's staff in the major tasks of petroleum management. Some of these tasks require skills that are common to most major enterprises, such as personnel management, procurement problems, financial controls, and the preparation and analysis of statistics. Others are peculiar to the oil industry, particularly such tasks as energy forecasting and planning, quality and inventory controls, transportation and distribution of products, energy rationalization, inter-fuels competition, alternative energy sources and conservation techniques. Attention will also be given to the shape of PGA's current organizational structure and ways in which changes might increase its effectiveness.

The first segment of the course, an introduction to the course and six weeks of training in forecasting, statistics and other problems of energy planning, will be given by Professor Kretlow and two associates from the University of Houston. This segment had already been requested and agreed to between PGA and Kretlow and will be financed entirely by the Sudanese government at an estimated cost of \$25,000. The dollar costs of the remaining five segments will be financed by AID (\$160,000) with the Sudanese financing the local costs including lodging and per diem of five specialists who will teach those segments, at an estimated cost of \$40,000. Topics to be covered in the remaining five sessions are as follows:

Session 2: Management development and organizational structure including general procurement problems.

Session 3: Operations management including management of production, inventory, distribution, construction, maintenance and quality control.

Session 4: Financial management, human resources development and management sciences.

Session 5: Personnel management.

Session 6: Energy rationalization, inter-fuels competition, identification of alternative energy sources and conservation techniques.

As a supplement to the instructional program for the first two segments, a former petroleum executive specializing in planning and marketing, will be furnished by the International Executive Service Corps to assist the trainees in applying concepts derived from the course into procedures and actions in their day-to-day work.

The course will be given to between 30-45 of the 60 members of the PGA's professional staff, with attendance fluctuating depending on the topics being offered. Presentation will be through a combination of lectures, open discussions and analysis of case studies, drawn to the maximum extent possible from the Sudan or countries with comparable problems. Similarly, use of case studies will supplement the use of textbooks to be provided to the trainees.

Although the course will be a "one shot" effort, it will seek to exercise a continuing effect on the PGA in two ways. Lectures will be transcribed and combined with texts and case studies to produce a "training manual" which can be used by PGA officials for reference purposes and as a text for future courses. Plans call for the translation of the manual into Arabic. In addition, a selected number of PGA trainees will be called upon to take the course with the idea of themselves teaching course segments in following years to future trainees.

C. Evaluation Plans

On the basis of discussions with DOE, two types of evaluation will be carried out. DOE, as a part of its monitoring responsibilities will conduct an end of project evaluation which will include interviews with all of the trainees. AID will also finance separately an independent evaluation. An independent consultant, knowledgeable about petroleum management, will undertake a first hand review of PGA's present management and organization situation and prepare an analysis of the major problems. This analysis will serve as a "baseline" document for measuring the impact of the training program. The consultant will use, as a briefing document, a paper on the PGA to be prepared by Professor Kretlow. Within six months following the completion of the course, the consultant will return to evaluate its effectiveness, using the "baseline" document as a point of reference. His report will be made available to AID and DOE.

D. Beneficiaries

The immediate beneficiaries of this project will, of course, be the 30-45 professionals whose skills are upgraded by the training,

and through them, the PGA organization as a whole. But given the vital role that PGA plays in the Sudanese petroleum situation, and the pervasive impact that petroleum has on the entire modern sector of the Sudanese economy, this project could benefit the thousands of people who would be affected by the improved management of the country's petroleum resources. For example, improved techniques for evaluating the economic impact of alternative allocations of refined petroleum products could increase the amount of kerosene (per barrel of crude) for use in the rural areas and thereby cut back on dependency for wood or dung to meet rural cooking and heating needs. As another example, more effective use of price policy could serve as a powerful incentive to promote petroleum conservation, or to induce consumers to switch to heavier, cheaper oils, thereby saving substantial amounts of foreign exchange for investment in development. A third example would be the ability of PGA to prevent periodic shortages at distribution centers, and their consequent disruption of regional economic conditions, through more effective inventory policies. In other words, an increase in PGA's capability to carry out its responsibilities more effectively is likely to have a strong "ripple effect" throughout the modern/urban sector of the Sudanese economy and thus enhance the country's capacity to manage its other economic problems more effectively.

II. Implementation Plan

This project will begin in January 1980 and will be completed (except for the final evaluation) in December 1980. It will be implemented under a PASA between AID and the Department of Energy. Professional supervision and monitoring of the project will be carried out by the Office of Education, Business and Labor Affairs of the DOE. That office, in turn, plans to utilize one of its existing contractors, Kramer Associates, Inc. to actually recruit the instructors and provide the day-to-day backstopping. In so doing, the contractor will draw upon the insights and experience of Professor Kretlow who, in fact, will be conducting with two associates the first of the six course segments as previously agreed upon with the PGA and at its expense.

In order to assure adequate monitoring of the program and to maintain contact with the PGA and ascertain its reactions, DOE plans to send officials to Khartoum at the beginning of the course in January, at mid-term (April) and in December 1980 or January 1981. In addition, the Director General of PGA plans to consult with DOE in June 1980 when he visits the U.S.

The AID evaluation will be undertaken outside of the PASA through a personal services contract between the consultant and AID.

As indicated earlier, the training program will be supplemented by the work of a former petroleum expert in planning and marketing, to be furnished by the International Executive Service Corps, who will assist the PGA in utilizing in its daily operations the materials to be provided during the first two segments of the program.

III. Relationship of Project to AID and Sudanese Government

Priorities

A. Relationship to AID Priorities

The project clearly is outside the main thrust of the AID program in Sudan which focuses on the problems in the traditional agricultural sector where the largest and poorest population groups are located, particularly in the southern and western provinces of Kordofan and Darfur. Nevertheless, through increasing the effectiveness of Sudanese management of its petroleum resources, which account for 12% of Sudanese imports, the project will address one of the most critical development constraints identified in the USAID/Sudan CDSS, namely, the country's present balance of payments and financial crisis which has seriously restricted the availability of foreign exchange and budgetary resources for development.

In this sense, the project will complement the proposed \$40-50 million Commodity Import Program which is scheduled for obligation in FY 1980 to alleviate the country's balance of payments crisis by financing urgently needed imports. In other words, to the extent that this project will enable Sudan to conserve and utilize more efficiently its imported petroleum resources, it will thereby also alleviate pressures on the country's exchange reserves and make resources available for agricultural development.

B. Relationship to Sudan Government Priorities

As discussed in the Commodity Import Grant paper, the Sudanese government has recently adopted a revised three year Public Investment Program (PIP), a key element of which is the expansion and improvement of the country power and transport facilities. In contrast to the earlier Six Year Plan, the PIP provides for a heavier concentration of resources on energy, transport and telecommunications.

This project therefore stands high in Sudanese priorities in that it will strengthen one of the key agencies in the country's petroleum sector. Its importance will be further enhanced if current petroleum exploration lead to significant discoveries. The

fact that the project was proposed in the course of an official visit by the President of the country, further reflects the priority which the government attaches to it.

IV. AID Policy Issues

Initially, AID/AFR was cool to the project because it appeared to be outside the main thrust of the Agency's development program in the Sudan and IBRD financing appeared to be in prospect. Subsequently, the Bureau resolved these issues in favor of the project when the IBRD dropped out of the picture and USAID/Khartoum strongly endorsed the initiative.

Moreover, Congressional action on AID's FY 1980 authorization legislation indicates that Congress would like to see AID to do more of these kinds of projects. Revising substantially Section 106 of the Foreign Assistance Act, Congress has enjoined AID to again become active in hydrocarbon exploration and development in the non-OPEC LDCs and to undertake new activities in the conventional energy field, including training, research and pilot projects, in those countries.

V. Project Costs

Total project cost is approximately \$265,000 of which AID will fund up to \$200,000 and the Government of the Sudan the balance of \$65,000. The budget for the project is as follows:

Sudan Petroleum Training Budget

U.S. Contribution

Training Program	\$160,000
DOE Supervision/Evaluation	13,000
Contingency	17,000
Total, AID/DOE PASA	<u>190,000</u>
AID Evaluation	10,000
TOTAL	<u>200,000</u>

Sudan Contribution

Segment 1 (all costs)	\$ 25,000
Segments 2-6 (local costs)	40,000
TOTAL	<u>65,000</u>