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AGENCY FOR INTERNATIONAL DEVELOPMENT

UNITED STATES A. I. D. MISSION TO BRAZIL

REPORT ON EXAMINATION

OF

GRANT PROJECT AGREEMENT No. 512-15-120-252.7

WELL TESTING REHABILITATION AND DRILLING - NORTHEAST

FOR THE PERIOD

MAY 30, 1964 THROUGH AUGUST 31, 1967



OFFICE OF THE CONTROLLER



REPORT No. 13/68

COPY No. 5

DATE: DECEMBER 11, 1967

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AGENCY FOR INTERNATIONAL DEVELOPMENT
UNITED STATES A.I.D. MISSION TO BRAZIL
Office of the Controller

December 11, 1967

TO THE Director of Mission
Minister Stuart H. Van Dyke

The Office of the Controller, Audit Division, has completed an examination of the Grant Project Agreement, "Well Testing Rehabilitation and Drilling - Northeast". This was the initial audit performed of this activity and covered the period from May 30, 1964 through August 31, 1967.

The principal objective of the project was to provide potable water through the rehabilitation of 864 wells throughout the "Drought Polygon" of Northeast Brazil. A second objective was to improve and increase the drilling efficiency and upgrade the statistical data of the two most important drilling agencies in the Northeast, the National Department for Work Against Drought (DNOCS) and the Northeast Company for Exploration and Drilling (CONESP) (pp. 5-6).

AID granted an amount not to exceed US\$291,500 and NCr\$330,100 to DNOCS and CONESP for contracting and/or procurement of (a) eight specialized repair units, (b) equipment for adequate pumping tests of completed wells, (c) spare parts to repair 80 DNOCS drilling rigs, (d) two U.S. well drilling technicians, and (e) translation of well drilling technical papers into the Portuguese language. STUDENT was to coordinate the execution of this agreement with DNOCS and CONESP

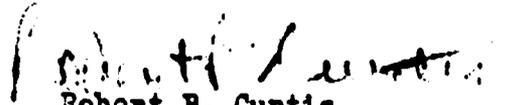
which were to provide support assistance. On June 1, 1966, the Council of the Alliance for Progress (CONTAP) granted an additional NCr\$500,000 to CONESP to procure basic equipment and parts needed to continue its program of testing, well repair, and training. Total funding thus amounted to US\$291,500 and NCr\$830,100 (p. 6).

Our report on examination indicates that progress achieved to date has not met projected goals. Out of the 864 inoperative wells scheduled to be rehabilitated, only 349 had actually been restored. According to reports on file, 65 drilling rigs were repaired, and 3,663 wells were inventoried in the area of the Drought Polygon (pp. 6-7). Some of the reasons for the slow progress in rehabilitation can be attributed to (a) delay in submission of an overall technical and financial plan, (b) Brazilian inflation, (c) delay in recruitment of two U.S. technicians, (d) equipment design and manufacturing problems, (e) shipping difficulties, and (f) DNOCS's organizational structure plus attendant budgetary limitations (p. 7).

On the positive side, two books pertaining to well drilling were translated into the Portuguese language and have been printed and distributed. Two other books were translated and are being printed (p.10). Twenty-three key officials of DNOCS and CONESP went on observation and/or training trips to the United States and Mexico; their international travel costs were paid from the USAID/B Technical Assistance Cruzeiro Support Fund (p. 10).

A loan application for US\$6,500,000 to continue work on the project was submitted by DNOCS but was not approved by AID/W (pp. 10-11).

Our report contains 3 recommendations. The first deals with obtaining a settlement of \$7,652.48 from the General Services Administration/Washington for supplies lost during ocean freight (p.8); the second concerns the improvement of property records by DNOCS and CONESP (p. 12), while the third makes note of inadequate marking and AID-financed scientific equipment (p. 13).



Robert B. Curtis

Controller

AGENCY FOR INTERNATIONAL DEVELOPMENT
UNITED STATES A.I.D. MISSION TO BRAZIL

REPORT ON EXAMINATION
OF
GRANT PROJECT AGREEMENT No. 512-15-120-252.7
WELL TESTING REHABILITATION AND DRILLING - NORTHEAST

SECTION I - GENERAL

A. PURPOSE AND SCOPE

This was the initial examination of the Well Testing Rehabilitation and Drilling Project, and covered the period from its inception on May 30, 1964 through August 31, 1967.

Our examination covered the review and evaluation of accomplishments attained under this project by the Work Against Drought (DNOCS) and CONESP and the examination of the U.S. Technicians' assistance rendered to these two Agencies under this Project Agreement (ProAg). Our examination was made in accordance with applicable regulations, generally accepted auditing standards and included such additional audit procedures as we felt necessary under the circumstances. Prior to the publication of this report, it was reviewed by appropriate USAID/B/NEAO officials, USAID/B Office of Technical Cooperation (ADTC), Office of Capital Development and Industry (ADCD), and their comments were given due consideration in the final version.

B. BACKGROUND

One of the GOB's primary concerns has been to construct dams and water wells to minimize the effects of drought on the people of Northeast Brazil where the availability of well water is a vital element to human, livestock and crop survival and a critical factor to the economic prosperity of the region.

In order to increase the availability of water in the Northeast, DNOCS and CONESP, the two most important drilling Agencies in the Northeast, entered into a grant project agreement with the USAID/B on May 30, 1964, as amended, for a period of three years. DNOCS is the Brazilian Federal Agency constituted in 1904 to deal with the drought problems of the Northeast and possesses a fleet of approximately 170 cable-tool drilling rigs. CONESP, a subsidiary of SUDENE, founded in 1963 to develop and execute a program of well drilling and maintenance in the Northeast, possesses 10 drilling rigs. However, most of its functions are performed under contract by private drilling companies.

C. PROGRAM OBJECTIVES

The main ProAg objective was to provide potable water through the rehabilitation of 864 idle wells throughout the "Drought Polygon" of Northeast Brazil where more than 2,500 wells were reported as unused due to various mechanical or geological failures. It also aimed to improve and increase the drilling efficiency and statistical data of DNOCS and CONESP.

AID granted US\$291,500 and NCr\$330,100 to DNOCS and CONESP for contracting and/or procurement of (a) eight specialized repair units, (b) equipment for adequate pumping tests of completed wells, (c) spare parts to repair 30 DNOCS drilling rigs, (d) two U.S. Well Drilling Technicians, and (e) translation of well drilling technical papers into Portuguese. SUDENE was to coordinate the execution of this agreement with DNOCS and CONESP who in turn were to provide support assistance.

On June 1, 1966, SUDENE, CONESP, USAID/B, and the Technical Cooperation Council of the Alliance for Progress (CONTAP) granted an additional NCr\$500,000 to CONESP to enable it to continue its program of testing, well repairing, and training. CONTAP funds would be used to procure basic equipment and parts needed for the repair of idle wells. Total contributions to the project thus became NCr\$830,100 and US\$291,500.

SECTION II - FINDINGS AND RECOMMENDATIONS

A. PROGRAM ACCOMPLISHMENTS

Our examination indicated that project progress to date did not meet projected goals. This is evidenced by the fact that out of 864 inoperative wells scheduled to be rehabilitated under this project, only 349 wells had been restored, as related in reports by DNOCS and CONESP. DNOCS had the more difficult task under its program to clean and make major repairs and fit the wells with hand pumps. DNOCS rehabilitated 154 wells, but only 32 had been fitted with hand pumps for obtaining water. CONESP restored 195 wells through minor or major

repairs and such number of wells restored can mainly be attributed to the substantial additional financial grant of NCr\$500,000 received by CONESP through CONTAP. According to reports on file, DNOCS had also repaired 65 drilling rigs and inventoried 3,663 wells in the area of the Drought Polygon.

The slow progress in rehabilitation can be attributed to (1) delay in submission of an "Overall Technical and Financial Plan", (2) inflation in Brazil, (3) slowness in recruitment of U.S. technicians, (4) equipment design and manufacturing problems, (5) shipping difficulties, and (6) the organizational structure of DNOCS plus attendant budgetary limitations.

1. Project Planning

The project agreement was entered into without an adequate "Overall Technical and Financial Plan" which, according to Section IV A.2 of the agreement, was to be prepared prior to the first release of local currency. By the time a realistic plan was prepared and submitted to USAID/B in February 1965, approximately 9 months after signing of the agreement, the rapidly rising inflation in Brazil had drastically curtailed the purchasing power of the funds obligated in May 1964.

Eight repair units to be manufactured in Brazil were originally contemplated for this project. Two units, one each to DNOCS and CONESP, were received fifteen months after the start of the project, and three units were received by DNOCS some twenty-nine months after the start of the project. Because of the time delay in Brazilian manufacture, inflation in Brazil reduced the funding available for the three remaining repair units.

2. Commodity Financing and Delivery

In April, 1966 \$146,700 was paid for the procurement in the U.S. of spare parts to repair 80 DNOCS drilling rigs under PIO/C No. 40162. Our examination disclosed that \$7,652.48 worth of spare parts were shipped on S.S. DEL AIRES in October 1965 under this PIO/C, items on Purchase Order DAIG.14/EX 00972 dated December 21, 1964, although paid for, were never received. During our examination and upon our suggestion, USAID/B's Northeast Engineering, Industry and Natural Resources Division (NEEIN) reported this shortage of commodities to the General Services Administration (GSA/W) and a follow up was sent on August 2, 1967. No reply had been received at the time of writing this report.

RECOMMENDATION No. 1

That NEAO/NEEIN, in collaboration with the NEAO Executive Office, aggressively follow up and obtain a settlement from GSA/Washington for missing supplies, valued at \$7,652.48, procured under PIO/C No. 40162.

3. PIO Technicians

The project agreement provided for the services of two drilling technicians, one each for DNOCS and CONESP. No evaluation of these technicians' performance or progress (Reports U-307 and U-510) had been prepared by the NEAO Contract Representatives since their nomination to USAID/B on September 16, 1965. Both technicians were employed under personal service contracts, and governing manual orders relative to the preparation of reports under personal service

contracts are vague. Inasmuch as the 2 technicians have departed the Mission and since we felt that liaison between them and the Contract Representatives was adequate during the past year, we are not recommending that Reports U-307 and U-510 be filed at this time.

On July 3, 1965, AID/W entered into a two year contract with Mr. Richard B. Erdman to provide technical assistance to DNOCS in the areas of (1) conducting on-the-job training courses, (2) evaluating equipment and making recommendations thereon, and (3) improving logistics and administrative methods. Before completing his contract and leaving Brazil, the Contractor had assisted DNOCS in (1) the design and testing of the repair units, water test unit and water hand pumps, (2) repair of 65 drilling rigs, (3) development of a Manual of Operations for Drilling and Maintenance, subsequently translated into Portuguese, and (4) in the conduct of 2 on-the-job training courses. The training courses proved not to be the best approach in training drillers due to the size of the area, the lack of transportation within the drilling sections, and the status of each DNOCS district which were independent one from the other and used their own methods of operation. In November 1966, a DNOCS technician was nominated to take over the Contractor's duties at the termination of his contract.

On March 15, 1965 AID/W entered into a one year contract, subsequently extended for another year to March 31, 1967, with Mr. Ralph do Dominicis. The Contractor had the same responsibilities to CONESP as the DNOCS Technician.

The Contractor has collaborated with CONESP through his extensive travels to field operations, training drillers in the efficient operation

of their machines and has given constructive suggestions on improving administration and supervision of field operations.

4. Translation of Technical Papers

The ProAg, as amended, provided NCr\$12,383.51 for the purpose of translating important technical papers not available in the Portuguese language pertaining to well drilling. As of August 31, 1967 two books had been translated, printed and distributed, and two other books were already translated and in the process of being printed. Due to the difficulties of translation and finding personnel, this can be considered good progress for this item.

5. Participant Training

The project agreement provided that USAID/B would defray all costs, except salary and international travel expenses, for personnel selected for training in the U.S. or other countries. Our review indicated that 23 key officials of DNOCS and CONESP had been selected and sent on observation and/or training trips to the U.S. and Mexico. However, since DNOCS and CONESP could not defray the international travel costs, USAID/B, with GOB concurrence, defrayed them from the Technical Assistance Cruise Support Fund. All returned participants are working with CONESP and DNOCS. Thus, the training received is being applied to the continuation of this project and will provide a broader base for further training within the 2 agencies.

B. PROGRAM NEEDS

DNOCS US\$6,500,000 Loan Application to AID

A loan application for US\$6,500,000 was submitted in late 1965 to USAID/B. Loan funds requested were for the purpose of providing machinery

and equipment as well as technical assistance in an effort to support DNOCS Three Year Plan (1966-1968) and to strengthen the management and administrative capabilities of the organization.

On January 27, 1966, USAID/B requested AID/W for permission to conduct an intensive review of the DNOCS application. Subsequently, AID/W refused the intensive review request and thus effectively refused the loan. DNOCS was orally informed of this action in May 1967.

C. REPORTING

The ProAg provided for progress and financial reports to be submitted to SUDENE and USAID/B by CONESP and DNOCS. CONESP submitted such reports on a timely basis and the reports were quite explicit. DNOCS was not consistent in submitting periodic reports, however, this situation improved during the latter part of 1966 when they submitted activity and forecast reports which have been consistent since October/November 1966.

D. FUNDING SOURCES

The USAID/B, to implement the project, committed and disbursed the following grant amounts as of August 31, 1967:

<u>OBJECT</u>	<u>OBLIGATED</u>	<u>DISBURSED</u>	<u>OBLIGATED</u>	<u>DISBURSED</u>
Equipment from U.S.	\$215,000	\$170,727.52		
Tech. Assistance	76,500	62,031.20		
Equip. in Brazil for DNOCS			NC234,352.73	NC\$233,675.23
Equip. in Brazil for CONESP			95,747.27	86,263.73
From CONTAP fund to CONESP			500,000.00	460,000.00
TOTAL	\$291,500	\$232,758.72	NC\$30,100.00	NC\$779,938.96

E. ACCOUNTING PROCEDURES

We reviewed the CONESP and DNOCS accounting procedures and records insofar as they related to the project and, in our opinion, the books and records maintained were in accordance with sound accounting principles and practices. Separate accounts were kept in both entities for the Well Testing Rehabilitation and Drilling project.

F. PROPERTY RECORDS

Our examination of the property records of USAID/B grant equipment locally purchased or imported from the U.S. at CONESP and DNOCS disclosed that although both Agencies have a good inventory record system, the data on the grant funded equipment was incomplete with respect to costs.

RECOMMENDATION No. 2

That the NEEIN supply both CONESP and DNOCS with copies of the Receiving Reports of the USAID/B grant funded equipment and request these organizations to keep accurate and complete property records especially on the non-expendable equipment.

G. ACCRUED INTEREST ON USAID/B FUNDS

The ProAg stipulated that interest earned on USAID/B funds deposited in a special account may, at the discretion of USAID/B, be considered as part of the funds for the project. Interest earned on USAID/B funds amounted to NCr\$687.81 for DNOCS and

to Miscellaneous Receipts. This amount represented a part of the NCr\$687.81 interest earned on USAID/B funds.

Interest earned by CONESP on USAID/B funds were deposited by CONESP in a "Special Account" in the name of the Agency for International Development with Banco do Nordeste, Recife, and the NEAO is taking the necessary steps to withdraw this amount from the bank.

H. PUBLICITY AND MARKING

Some newspaper and radio publicity had been given this project. However, this took place primarily at time of release of funds by USAID/B.

During our field observations, we made a physical check of equipment procured with USAID/B grant funds and found that most of the scientific equipment was not adequately marked with AID and AFP emblems, as required.

RECOMMENDATION No. 3

That NEAO/NEBIN obtain from NEAC/General Services Office decals and deliver them to CONESP and DNOCS to mark all AID grant funded scientific equipment and follow up to ensure that such emblems have been affixed.

- -

1.	Mr. Morton M. Vogel	Chief, FWRO	From 11/20/64 to Present
2.	Mr. Harold H. Woiland	Chief, NEEIN	" 9/25/64 to Present
3.	Mr. Chris H. Christenson	Water Resources Branch, NEEIN and Contract Represon- tative	" 9/16/66 to Present
4.	Mr. Carroll F. Wilcomb	Water Resources Branch, NEEIN	" 2/ 9/66 to 9/15/66
5.	Mr. Jack L. Sparks	Water Resources Branch, NEEIN	" 6/15/65 to 2/ 8/66
6.	Mr. George H. Hargreaves	Water Resources Branch, NEEIN	" 3/30/65 to 6/14/65
7.	Mr. John Logan	Water Resources Branch, NEEIN	" 5/30/64 to 3/29/65

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- 1 That NEAO/NETIN, in collaboration with the NEAO Executive Office, aggressively follow up and obtain a settlement from GSA/Washington for missing supplies, valued at \$7,652.48, procured under PIO/C No. 40162. 8

- 2 That NEAO/NETIN supply both CONESP and DNOCS with copies of the Receiving Reports of the USAID/B grant funded equipment and request these organizations to keep accurate and complete property records especially on the non-expendable equipment. 12

- 3 That NEAO/NETIN obtain from NEAO/General Services Office decals and deliver them to CONESP and DNOCS to mark all AID grant funded scientific equipment and follow up to ensure that such emblems have been affixed. 13

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Mr. Herman Kloino, Deputy Director (DDOM) - USAID/B	2
Mr. S.J. Hollandor, Associate Director (NEAD) - USAID/B/NEAO	3
State Department - The Honorable J.K. Mansfield, Inspector General of Foreign Assistance (IGA)	4
State Department - Mr. Jack B. Kubish, Country Director - Office of Brazil Affairs (ARA/BR)	5
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American Embassy, Rio de Janeiro, Mr. Frank C. Carlucci, Executive Officer (EXEC)	10
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NOTE: All audit work papers are attached to Copy No. 24 which is on file in the Office of the Controller, Audit Division (COAD), USAID/B.