

PD-002-283  
10/1/85

NORTH CAMEROON

LIVESTOCK AND AGRICULTURAL DEVELOPMENT

PROJECT 631-0004

END OF TOUR REPORT

By:

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Prepared for:

USAID/Cameroon and the  
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Contract AID/afr-C-1566

April 1985



**EXPERIENCE, INCORPORATED**

MINNEAPOLIS, MINNESOTA 55402

THE NORTH CAMEROON LIVESTOCK AND AGRICULTURE DEVELOPMENT PROJECT  
(USAID PROJECT 631-0004)

END OF TOUR REPORT:

HEAVY EQUIPMENT SPECIALIST: RALPH A BAGROWSKI

NORTH CAMEROON LIVESTOCK AND AGRICULTURE DEVELOPMENT PROJECT  
USAID Project No. 631-0004

PERIOD: MARCH 11, 1983 THROUGH APRIL 30, 1985

SUBJECTS REVIEWED:

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Experience, Incorporated  
Contract AID/AFR-C-1566

## I. SCOPE OF WORK

### A. Heavy Equipment Operation:

The equipment was put into operation shortly after its arrival at Mindouli on April 26th, 1983. The project was not yet prepared for this type of operation and a lot of confusion caused a lot of time to be lost at the beginning. Most of the confusion was the result of too many instructions from too many people as to what was to be done. Also, at the time, there was no clear plan of action. Priorities changed continuously and caused some work to be done inefficiently. Another factor was the time already lost on the project's commitments due to the late arrival of the heavy equipment. There was also the problem of finding operators who could understand directions well, which was not their fault.

With the project's reorganization, the plan of work was better organized, eliminating much of the prior confusion. The work and its logistical support were better coordinated. People involved were better acquainted with the limitation of trying to run a new heavy equipment operation in Cameroon.

Many of the problems would have been erased with the presence of a counterpart in my field. Many of the project's operations involving the heavy equipment required the presence of a responsible person in several places at one time, which was not possible. Most of the heavy equipment personnel for the project are skilled in their trade, but need supervision to complete scheduled work. Most of the personnel are progressing and many of the project's activities involving heavy equipment have been successfully accomplished.

The problem of lack of supervision still remains a major point. Without a counterpart to replace me (already too late), operations could slow down to a standstill. At present, the responsibility for equipment operation is in the hands of three people. This may continue to work. Only time will tell.

### B. Maintenance and Repair Program:

This program didn't start until the arrival of the heavy equipment. In the first stages, only minor repair work was performed, the equipment being new. The essential priority at that time was to set up a reliable daily maintenance schedule. Such a schedule was very important, considering the amount of abuse undergone by the heavy equipment while working 24-hour shifts in order to complete the first Water Point before the rainy season of 1983.

For the first year, daily maintenance operations were carried out by the operators, together with the heavy equipment mechanic and an aide under my supervision. Most all of the repair work was done either by the mechanic or myself with the aid of operators who were available and not working.

In the second year, and still without a counterpart, most of the responsibility for the maintenance and repairs was gradually given to first, the operators; second, the heavy equipment mechanic and trainee; third, the center maintenance chief and the project's engineer. This is the system still in operation at present and it seems to be working out well. Unless someone else is recruited to take over, it will continue to run according to this plan.

All repair work on any of the project's equipment can be accomplished with some degree of competence by the project's present support staff. With the introduction of new equipment and specialized areas of repair, further training would be advisable.

### C. Equipment and Parts Procurement:

Whoever ordered the heavy equipment failed to ensure that spare parts would accompany it. While in Douala doing the receiving and inspecting of the project's heavy equipment, we were able to order a minimum of spare parts with the GRC Funds available at the time. We were fortunate to receive these parts several weeks after the arrival of the heavy equipment at the project. Otherwise, the equipment operation would have had to stop after several weeks. Since then, expendable items such as filters, strainers, belts, etc., have been sufficiently stocked. After receiving several such shipments of parts, the existing storeroom in the garage (heavy equipment garage was not yet under construction), was found to be too small. We converted two small hangars of an existing building into a storeroom for parts, tools and lubricants.

Parts purchasing for the heavy equipment is done through the representative of SHO Tractafrique in Garoua. They stock very few parts and order the parts needed from SHO Douala. Occasionally, SHO Douala doesn't have the required parts and must order them from Europe.

The project has stocked most of the essential parts needed for minor repairs, and a supply of expendable items till the end of the year. When a breakdown occurred and the part could not be repaired, or wasn't in stock, then it was necessary to go to Garoua to make the order (telephone didn't work). I averaged one trip every three weeks in order to pick up parts. Orders take from one week to three months to arrive at the supplier's in Garoua. The hydraulic hoses for the project scraper took 9 months.

Parts for the project's farm tractors come from Hammel Afrique, also located in Garoua. They provide very poor services, and spare parts and repair services often require long periods of time.

Maroua has very little to offer in the way of parts, tools and small furnishing. The majority of all items purchased came from Garoua which is just a little better than Maroua.

We have recently been ordering such things as tools, mechanical and electrical equipment through a few dealers in Maroua. This, too, takes a long time and what is ordered is not always received.

D. Training:

All the training for the personnel working with the heavy equipment has been on the job (OTJ) training. This was mainly due to the lack of time and facilities.

With the beginning of operations in the field, considerable time was spent trying to coordinate the equipment operators' tasks to a somewhat organized plan, and work an efficient schedule. After a long trial period and rigorous efforts to train our operators, we found that more work could be performed by fewer, more attentive operators with less confusion.

The heavy equipment staff was then reduced to the present number of four bulldozer operators, one grader and his aide, and one mechanic. These are all the personnel necessary to carry on the project's activities and to keep the equipment operating.

The project's heavy-equipment team has worked closely on all aspects of the operation and maintenance of the equipment with little internal difficulty. The operators need only to be supervised in difficult areas of waterpoint construction, having had previous experience in other heavy equipment operation activities.

Further training on maintenance and repair of the equipment would certainly do no harm to anyone. The project should try to send some personnel for further in-country training.

II. PROJECT ACTIVITIES IN RELATION TO HEAVY EQUIPMENT OPERATION:

A. Grazing land management and conservation.

The heavy equipment cleared all the firebreaks which encircle and divide the project's 3 demonstration grazing blocks. Approximately 213 K of firebreaks and access roads have been cleared by project bulldozers with clean-up work and drains accomplished by the grader.

Approximately 70-80 hectares of land were plowed with heavy equipment and Rome plough in the project's zone, Blocks I and III.

B. Livestock water development.

The project heavy equipment has completed excavation of four water points with one in the planning stage. Two water points were constructed in Block I in 1983. One was constructed but was not fully completed in early 1984; it will be completed in May of 1985.

One water point excavation was completed in March of 1985 in Block II. A second water point is in the planning for Block III and should be completed before the coming rainy season.

C. Fenced "Demonstration grazing block."

Heavy equipment cleared approximately 12 km of firebreaks for the "demonstration grazing block" (mini-block) in 1984. The areas were cleared to permit fencing to be placed as an outer perimeter.

D. Water and soil conservation:

The types of work done by the heavy equipment in this area were:

- |                               |                                   |
|-------------------------------|-----------------------------------|
| -Cross ripping                | -to prevent run-off/aid seepage   |
| -Contour ripping              | -to aid water seepage             |
| -Dam construction             | -to prevent erosion               |
| -Small sedimentation basins   | -to retain water                  |
| -Drainage & diversion ditches | -to prevent road damage           |
| -Water spreading diversion    | -to arrest gulley erosion         |
| -Scoop depressions            | -to retain runoff/promote seepage |

E. Animal health.

Four areas were cleared for vaccination parks in the project's blocks. Four trenches were excavated for the construction of tick baths in the project's blocks. (Further details can be found in the 1985 heavy equipment annual report.)

F. Access Roads

Approximately 51 kilometers of access roads were cleared to connect grazing block operations and to make abandoned state roads usable in order to provide access to project areas of activity.

III. CONCLUSIONS AND RECOMMENDATIONS:

All project heavy equipment and farm equipment is running and in operation at the writing of this report. The personnel now engaged in the operation and maintenance of the equipment are capable of continuing operations. The two major factors necessary for the continuation of these operations on project activities are continued funding and the proper interest by the people who are directly involved with the operation of the project's equipment.