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January 26, 1976

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### The First Week of Digging Drains Using Hand Labor

In January 17, 1976, the Committee on Farm Drain Hand Excavation met for the first time, to discuss the procedures for hiring and paying the workers for their works. The reports on the first and second meetings should be read along with this memo. The committee consists of:

John A. Geter, USAID, SCS Team Leader  
Mohammad Asif, Planning & Development Division  
Mohammad Shafik, Engineering Division  
Ghulam Mohammad, Technical Administration, and myself.

Messrs. Shuja, Tyson, and Rayaq were also present at the first meeting and participated in the discussion.

We agreed on the rate of pay at 40 Afs. per day; 6 days a week; 7 hours per day - Saturday thru Wednesday; and 5 hours on Thursday for a full day's pay. The provision was added that no one will be hired after Monday to justify full payment on Thursday.

The men were hired and the work began the following morning with 35 men working, using the shovels, and picks provided by USAID. During the week, the numbers of workers increased to 51, maximum. Had we planned for each worker to provide his own tool, shovels, but perhaps not picks, a larger number of men could have been hired, they were available. This week, beginning January 24, this detail was varied and about 100 men were at work. Again, more men were available on the spot than we were willing to hire and enquiries have been made of work possibilities by workers in Lashkar Gah.

The work went very well although with a slow start the first two days while we get better organized. There were difficulties with the shovels bought in Kabul. A shovel for digging requires the blade to be nearly in line with the handle. These shovels had a considerable angle and were perhaps designed for shoveling loose surface material. Three of the committee, Geter, Asif, and myself, experimented with altering this angle in the O&M shops. By the end of the second work day, all laborers had one of the improved shovels. In the future, if more

tools are required; we are hoping to make the purchases in this area. If other shovels are required, but we are moving this week to a system where each worker provides his own, we are hoping to purchase the locally produced ones, from Kandahar smiths.

One man was injured the first day with a pick. He was taken to the hospital for treatment, where he was stitched up and his hand set in a cast. The bone between his index finger knuckle and the wrist of his left hand was fractured. We paid him for the week's work, and intend to carry him one more week at present.

The drain was dug to an approximate length of 150 meters, and 50 cm. in depth. They struck ground water at about 60 cm., but they can go deeper when an outlet is opened to the connecting drain. The water level at 60 cm is about that in the drain. When the extension of Drain 2 is completed by HACU, hopefully in a week to 10 days, the drain water level will again be lowered allowing the hand-dug drain work to go deeper. In the meantime, the 60 cm depth ditch will be lengthened. It has been estimated that approximately 450 cubic meters of earth have been moved during the first 5 work days. This includes the first 3 slow days and the short day on Thursday, until 1:00 p.m. There were 330 man work days which means an average of about 1.5 cubic meters of earth per man per day. Not a bad start.

At the end of the work week, Thursday afternoon, pay day, Mr. Sheja went out and gave a talk to the workers on the value of good work. The cash payment, in new notes, was well received by these men who are not always into the cash economy.

With the Letter of Understanding #4, signed on the socio-economic survey work planned, hopefully, we will begin this week to interview these workers to gather systematic data on their backgrounds and potential for continued works.

The first experimental steps have been taken in the change from a daily wage to a unit of earth moved pay scale. The HAVA field man, Beqi, grouped the work force into units of 5 men during the last two work days and assigned each group a 10 meter stretch of ditch. While it is not yet to have the pay incentive, there was apparently an element of group competition present. All groups did not work at the same rates of speed. The young men worked faster, and I suspected that the element of competition was a main force. One such group finished their assigned space by 2:30 or 3:00 p.m. Given incentive pay, I suspect they might have produced even more and some of the slower groups would have completed their work units too. If we assume roughly the same ditch dimensions, then these men, to complete their 10

meters unit, moved about 4 cubic meters of earth each. While this first level of earth may be the easiest to move in some respects, they do not have far to throw it and it is dry, this level is also about the hardest to cut through, much of it requires pick work first. In any case, they have moved a lot of earth quicker than some had guessed possible. At present, we are planning to await the HACU dragline to open the drainage ditch noted above before the change in basis of pay is made. Then the work will be on completed ditch dimensions not the first 80 cm.

Baqi, the HAVA field supervisor, has done an outstanding job during this first week in getting the labor organized. Unfortunately he has been replaced for at least a two week period while he serves on a HAVA committee.