

Drilling Wells in the Tuzla Valley of Bosnia–Herzegovina

By Major Frank Akins

Diverse missions make peacekeeping operations challenging and interesting. During the summer of 1997, the primary well for Task Force Eagle's headquarters could not produce enough water for the population. The Base Camp Coordinating Agency (BCCA) initiated procedures to locate a water-well-drilling company. Geotehnica, a local company in the Balkans, was selected for the job. The BCCA engineers expected the well to be drilled at the speed of many American well-drilling outfits, but this was not the case. These well drillers were also working on other jobs, plus their older equipment required frequent maintenance. As a result, the job took 2 1/2 months instead of the expected seven days.

Progress, however, was made in due time... Geotehnica had technical expertise and knew where to find acquifers within Tuzla Valley and at what depth. The company drilled a test well and found viable quantities of water in a gravel acquifer about 87 meters (285 feet) below the surface.To find it, they drilled through about 80 meters (262 feet) of "tight" clay (Figures 1 and 2). The first well drilled at that location caved in. A second well was successfully drilled near the first one by using high proportions of bentonite drilling mud in the drilling fluid to keep the hole open.



Figure 1. This Soviet-designed water truck transports water used in drilling mud for boring the test well and the main well.



Figure 2. This truck-mounted drill rig of Soviet design is used to bore the test well.

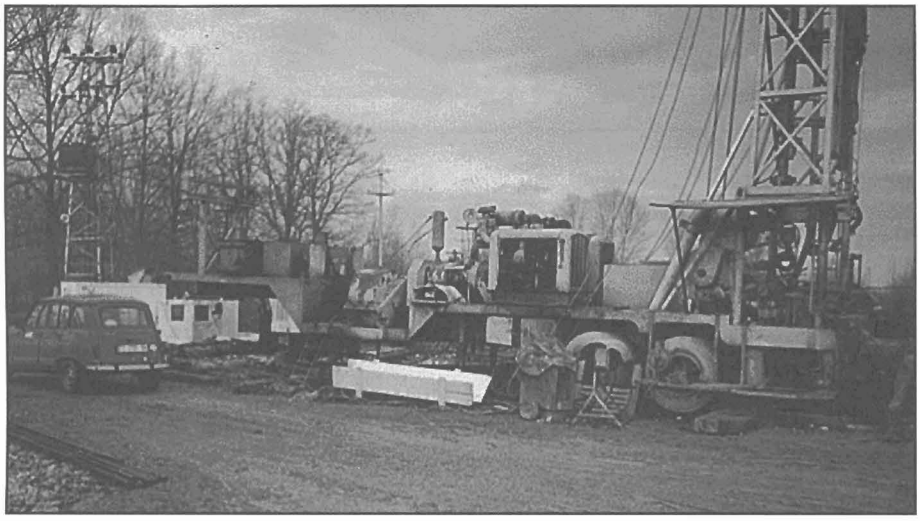


Figure 3. The primary drill rig at Task Force Eagle uses two Detroit Diesel V-8 engines. The mast is about 35 feet tall.

The bentonite caked on gravel in the acquifer and plugged the flow of water.

After the drill crew spent about 30 days purging the well with clean water, the sustained rate of flow was 5.8 liters per second (lps) (91.9 gallons per minute [gpm]) with a temporary "peak flow" capability of 10 lps (158.5 gpm) production for 6 hours. At that point, the amount of water withdrawn resumed at 5.8 lps. When operated in this manner, the well exceeded the additional required water flow per day for Task Force Eagle headquarters.

Task Force Eagle engineers were concerned that the locally contracted company took so long to drill the well. However, the work was satisfactory and a viable well was safely dug without mishap. CPT Derrick Wasson, an industrial engineer assigned to the BCCA, was the military engineer on site for liaison purposes and quality control. Using an old copy of *The Missouri Water Well Handbook,* he ensured that the well was installed correctly. Well-drilling procedures in the Balkans are similar to those used in the United States, including the rigs and operator tasks. The rig was produced in the United States, and the drill stem (pipe) was the same dimensions as those used in the United States (see Figure 3).

The well's acquifer is protected by fine, tight clay, and the well was installed to standard. It should provide adequate water for personnel at the Task Force Eagle base camp for many years.



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PERSCOM Notes

By Sergeant Major Jay Florance

Hello from PERSCOM! As the sergeant major for the Engineer Branch, I am responsible for the assignment of all engineer soldiers in career management fields (CMFs) 12, 51, and 81 in the grades of first sergeant and below. During the year that I have been in PERSCOM, I have seen many changes and reductions in force structure that directly impact the availability of assignments in the engineer community. The following information is provided to assist soldiers in their career development.

Much turbulence has occurred in the first sergeant/master sergeant arena. When battalions assign a master sergeant to a first sergeant position, they frequently fail to submit the request required to "stabilize" the soldier (retain him/her in the current duty position). The proper tool to stabilize soldiers is DA Form 4187 (Personnel Action). When PERSCOM does not receive this form, we assume the soldier is available for assignment and may prepare permanent change of station (PCS) orders to fill a required position. This situation occurs frequently and causes much confusion that impacts other soldiers. Many of the positions PERSCOM fills at the master sergeant level require that the soldier arrive at the duty station by a specific date. When we cannot move a soldier who is stabilized in a position, the replacement soldier receives very short PCS notice.

Assignment of a master sergeant to a first sergeant position is an investment in which the Army and the individual share joint responsibility. If the soldier is not properly stabilized in the position, he/she will not remain in this critical career position long enough to ensure proper career progression.

The Engineer Branch must use its limited resources to best advantage. Open and frank communication between units and PERSCOM is necessary to make this happen. The following actions will protect your unit's investment in first sergeants:

- ❒ Ensure the S1 calls PERSCOM at (703) 325-4825 or DSN 221-4825 when the commander decides to place a master sergeant in a first sergeant position. We will then agree on the best course of action for the soldier.
- ❒ Ensure your first sergeants are stabilized. Your Personnel Action Center can check the Assignment Eligibility and Availability (AEA) code listed in the Standard Installation/ Division Personnel System (SIDPERS). If stabilization is finalized, the AEA code will be a "G" followed by the month and year stabilization ends. If this code is missing, your first sergeants are not protected!

Some installations lack available master sergeants to fill first sergeant positions and may fill them with sergeants first class. If that situation occurs, call us before placing a noncommissioned officer in the first sergeant position. We will do what we can to protect the soldier and your assets.

The Engineer Branch Chief, LTC Tillotson, has sent an e-mail message to most battalion commanders requesting help in this crucial area. We stand committed to take care of the engineer force.