

Photo-Essay from Operation Joint Endeavor

By Major Andrew Goetz

The following photo-essay concerns the author's experiences in Bosnia during the period March to May 1996. It will be published in two parts, with this portion including an overview and information about force protection, mine clearing, and mine-dog teams. The fall issue of Engineer will include a discussion on base camps, the engineer construction effort, and heavy division engineer shortfalls. The photographs were taken by Major Goetz and the combat camera crews attached to Task Force Eagle.

Overview

I was assigned as an engineer observer with Combined Arms Assessment Team (CAAT) II, Center for Army Lessons Learned (CALL), Operation Joint Endeavor, in Bosnia. The CALL operates out of Tuzla, with an office in the division tactical operations center. Observers go out for several days at a time to visit units, then return to Tuzla to write observations and push them through the lengthy approval process. My brief two months in Bosnia did not make me an expert but did give me an opportunity to get a snapshot of engineer operations there. This "briefing" is based on events I personally observed in Task Force Eagle and the 1st Armored Division Engineer Brigade. It provides an overview of engineer operations in Bosnia-Herzegovina, not a discussion on the political or military situation.

Observations and lessons learned concerning events in Bosnia are available through the Center for Army Lessons Learned at Fort Leavenworth, Kansas, and through the Center for Engineer Lessons Learned at Fort Leonard Wood, Missouri.

Force Protection

Force protection is a major consideration that requires extensive engineer planning for perimeter wire, bunkers, towers, lighting, and fighting positions. The engineer battalion manages all construction in the brigade combat team sectors. The mission of managing the staggering quantity of Class IV materials was given to the 1st Armored Division Engineer Brigade.

Photo (left)

Guard towers are a fixture at all base camps. They are constructed primarily by the vertical platoons of the 94th Engineer Battalion. Because of poor soil conditions, a stable surface must be created to set them on. Compacted gravel, sandbags, and wide timber bases solve the problem. The towers are constructed with double walls; sandbags fill the gap between the walls and cover the roof.

To ensure that the force protection structures are safe, engineers inspect every bunker and tower and post an inspection certificate on the facility. The task force engineer takes the certification process seriously and had several structures rebuilt that did not pass the quality-control check. The construction management section attached to the division engineers provides quality assurance.



Photo (right)

As the weather warmed, local citizens attempted to penetrate perimeter wire, apparently to steal material inside the base camps. To solve this problem, engineers placed tanglefoot wherever practical. In this photo, tanglefoot is placed between the inner and outer perimeter fences.

Perimeter lighting is used at some sites to keep locals out. Task Force Eagle wanted to light the entire perimeter of their base camp, but that was easier said than done. Power distribution for a large base camp requires up to 0000 wire, something even the prime power teams are not equipped to handle. Because portable light sets are too expensive for the entire perimeter lighting mission, most perimeters are not lit. Part of the challenge in figuring out how to provide perimeter lighting is determining what the commander wants. For example, is the desired effect to enhance night vision capability, illuminate wire, illuminate grazing fire, or prevent people from seeing inside the perimeter?

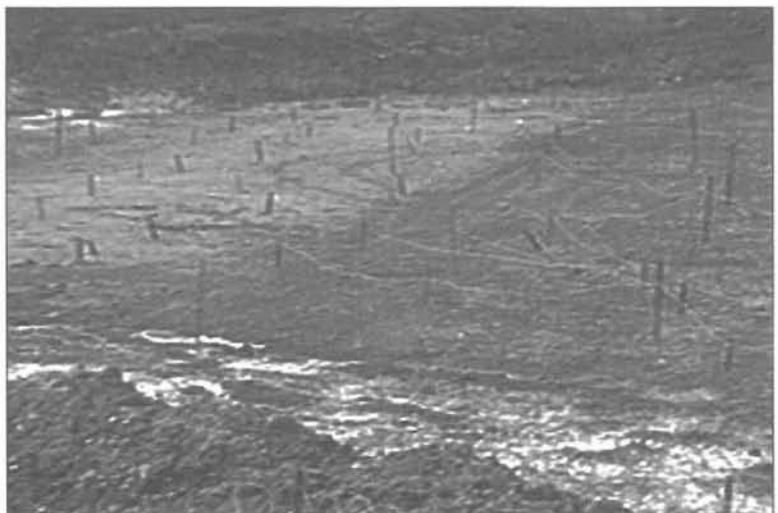




Photo (left)

Existing buildings at Tuzla Main are used for a wide range of purposes. This building is similar to many that are used as barracks. The double-decker hootches the U.N. constructed in the open bays are being removed because they pose a fire hazard. Fixed facilities at the old Yugoslavian air base are used for Task Force Eagle headquarters, the mess hall, and unit headquarters.



Photo (above)

Hesco Bastions are used as helicopter revetments at Comanche Base, Tuzla Main.



Mine Clearing in the Zone of Separation

One of the divisional engineer brigade's missions is to supervise the "demilitarization of the zone of separation (ZOS)." This includes blowing bunkers, filling trench lines, and clearing minefields. The former warring factions are primarily responsible for completing this work, but U.S. engineers provide supervision to ensure that the work is done. The U.S. engineers do some tasks themselves, such as destroying bunkers. This series of photos is from a mine-clearing mission performed by Serbian engineers and supervised by 1st Platoon, A Company, 40th Engineer Battalion.

Photo (left)

On this day, 1st Squad and 1st Platoon—with an interpreter, a medic, and two Bradleys—linked up with the Serbian engineers—a lieutenant, two soldiers, and a driver—near the edge of the ZOS. We followed the Serb's truck to their trench line. When we reached a point where the road along the trench line was too muddy and steep to drive on, we dismounted and walked.



Photo (left)

The trench line runs along a crest. The Serbs led the way to the minefields we were to clear, which were about 2 kilometers from the dismount point. The platoon leader was very "situationally aware" of the mine threat. He knew that this section of trench line had never been occupied by anyone except the Serbs, so the mine threat on their side of the trench line was very low. On the far side, however, the threat was very high. The platoon leader instructed his soldiers to stay on the Serbian side of the trench line.



Photo (above)

A series of bunkers along the ridge links with the trenches. Fighting positions are spaced randomly along the trench line. Some bunkers are very basic, while others are completely enclosed with doors and windows. Pits behind the trench appear to have once held mortar and/or small-caliber artillery. The positions look across a large valley to the Muslim side of the line. At this point the Muslim trench line is several kilometers away; at other points it is as close as 30 meters.



Photo (above)

Minefields were recorded on Serbian mine data sheets, which show the location of the minefields, how many mines they contain, and whether any of them were detonated during the war. Here, the Serbian lieutenant and the 1st Platoon and 1st Squad leaders discuss the mine-clearing operation—how many minefields are here, how many will be cleared, and how the mines will be destroyed. The responsibility and coordination required to accomplish this mission are well above what we normally expect of a young platoon leader, much less a squad leader, but we ask them to do this type of mission every day.



Photo (left)

This Serbian mine-marking sign is written in Cyrillic. Part of the Dayton Accord requires the former warring factions to mark their minefields with a barbed-wire fence on all four sides. The Serbs frequently do not do this and can't be convinced it is necessary. First, there aren't enough Serbs to carry the marking materials to minefields in remote locations such as this. Second, since they are taking mines out of the minefields, they don't see a need to mark them. Finally, they are hesitant to mark the Muslim sides of minefields because they don't know if the Muslims have mined them.



Photo (left)

After reviewing the mine data sheets, this Serbian mine-clearing team went in front of the trenches to look for mines. When they found the PMR-2A mines, they cut the wire, pulled the mines out of the ground, and threw them up the hill to the Serbian lieutenant. They wore no protective armor and were very casual about the whole thing.

Photo (right)

Here, a batch of mines is rigged for demolitions. The mines were destroyed on-site by Serbian engineers. At this time, the Serbs were required to provide their own demolitions. Later Task Force Eagle allowed U.S. engineers to provide demolitions if the factions could not.

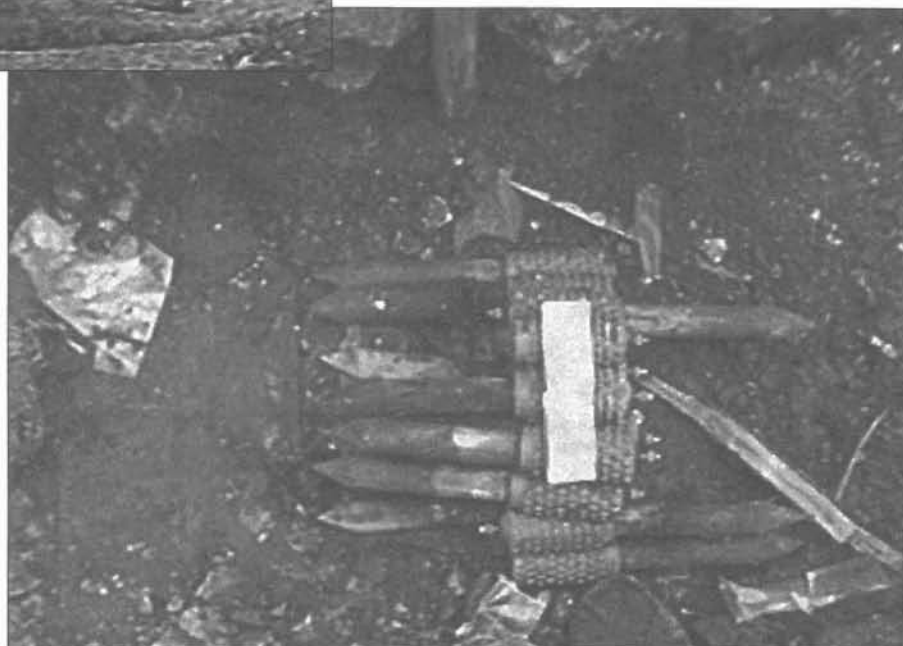


Photo (below)

On the first attempt to destroy the mines, the blasting cap fell out of the plastic explosives, causing a misfire. The platoon leader wanted the Serbs to wait 30 minutes before approaching the rigged mines but could convince them to wait only 15 minutes. The Serbian lieutenant then checked the demolitions, re-rigged them, and successfully destroyed the mines.



Photo (right)

At the end of the day, the Serbian lieutenant and the 1st Platoon and 1st Squad leaders reconciled the number of mines removed with the number shown on the mine data sheets. The sheets showed that 41 mines were originally placed in this sector. Seven of them were destroyed during the war. A Serbian engineer said that eight more mines were installed but not recorded on the data sheets. A total of 42 PRM-2A mines were removed from the sector on this day. The numbers conveniently added up, but it is impossible to determine if they are correct. This is why all minefields are considered active even though they have been "cleared."



Mine-Dog Teams

Both the Swedes and the Russians have mine dogs in theater, and in April 1996, our military police certified five mine dogs for use in Bosnia. They are the only mine dogs in the U.S. Army. These photos were taken at a mine-dog training site outside of Tuzla. The buried mines have been defuzed.

Photo (left)

This dog has located a buried mine, and the handler marked it with a mine bonnet. The team is now looking for a bypass. The second soldier marked the lane using a can of blue spray paint secured in long-handled holders. The lane marker sprays on both sides of the dog handler's boots. We should consider using this system for marking assault foot lanes through cleared minefields. (Utility companies use similar paint can holders to mark underground cables and pipes.)



Photo (above, right)

Here, the mine-dog team clears around a "casualty," and one soldier marks the cleared area with paint. After a lane to the casualty is cleared and the clearing team is out of the minefield, the rescue team moves along the lane to recover the casualty. The dog identified the mine next to the casualty; it is marked by a mine bonnet.



Photo (far right)

This U.S. mine-clearing dog is allowed to go forward on a long leash up to 20 feet in front of the handler. (The Swedish team keeps their dogs on very short leashes.) The second soldier marks the lane with engineer tape that is staked at the entrance to the lane and dragged along with the team. This is not a very effective system. In fact, if the training lane was not marked and the engineer tape already staked out, the team would not have used it. This dog successfully located the buried mines in the training lane.

Conclusion

I hope that this photo-essay helps you appreciate the vast scope of ongoing engineer operations in Bosnia-Herzegovina. The experience gained from this mission is producing skilled, confident young engineer leaders for tomorrow's Army.



Major Goetz is currently attending the Command and General Staff College at Fort Leavenworth. Previous assignments include construction branch chief, U.S. Army Engineer School, Fort Leonard Wood, Missouri; company commander, 82d Engineer Battalion, during Desert Storm; maintenance detachment commander, 3rd Engineer Brigade, 3rd Infantry Division; and military observer to the U.N. mission in the western Sahara.