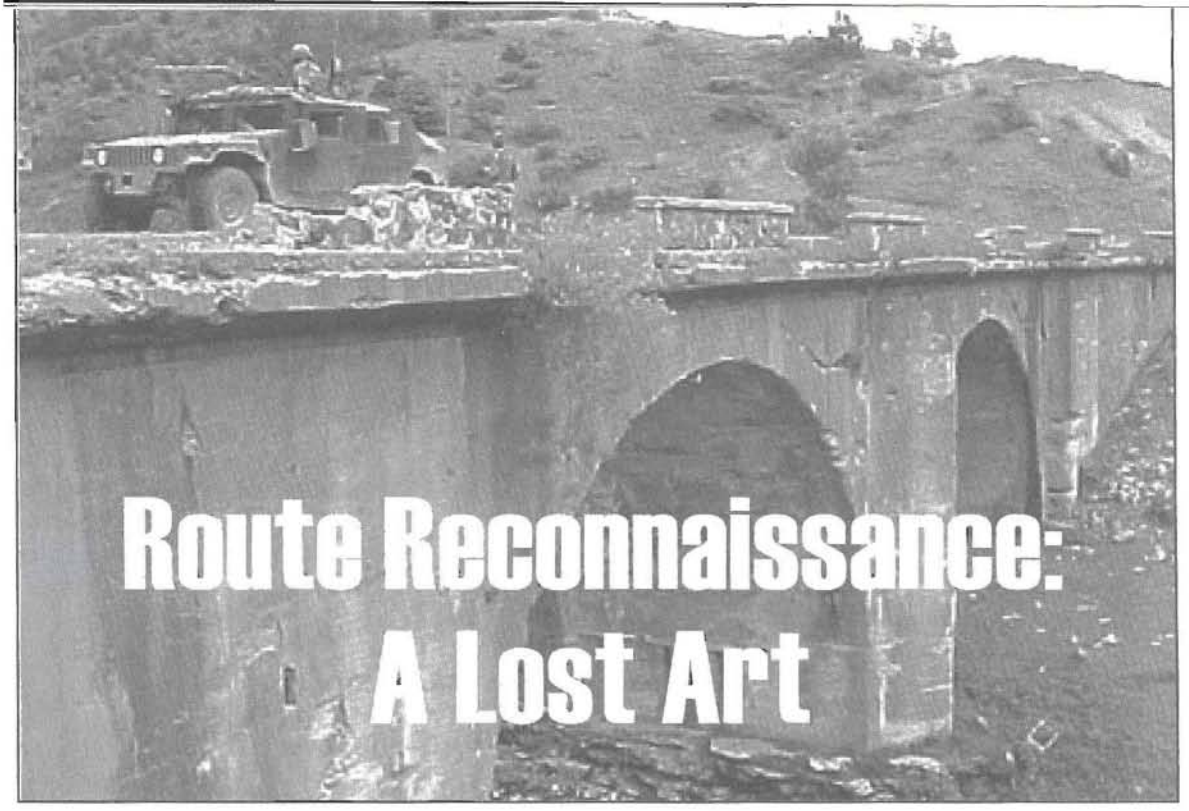


Route Reconnaissance: A Lost Art

By Captain Matt Pasvogel

On 8 April 1999, the first elements of Alpha Company, 40th Engineer Battalion, deployed from Germany with Task Force 1-6 Infantry as part of the initial-entry force to Albania. Based on the initial mission analysis, our engineers were prepared to conduct high-intensity conflict and force-protection tasks. After the first few days in Albania, the situation and mission expanded from protecting the force to establishing a forward operating base for future operations. This base was more than 150 kilometers from our base in Tirana, Albania. While performing initial route-reconnaissance missions, we realized that they were very different from the heavily rehearsed and trained engineer obstacle-reconnaissance missions.

It did not take long to push forward the appropriate manuals and equipment to support the initial-entry force before the rest of Alpha Company arrived on 3 May. The company eventually reconnoitered more than 500 kilometers of roads and several tunnels and ferry sites and classified more than 90 bridges in Albania. Because many of today's military missions initially occur in countries with underdeveloped lines of communication, engineers must be well-trained in the vital mission of route recon. This article highlights some of the important doctrine, training, leader development, organization, materiel, and soldier (DTLOMS) issues as well as lessons we learned concerning route recon.

Doctrine

Alpha Company personnel found that Field Manuals (FMs) 5-170, *Engineer Reconnaissance*, and 5-34, *Engineer Field Data,* are packed with information that is essential to conducting a successful engineer recon. FMs 5-170 (Chapter 5) and 5-34 (Chapter 3) outline several methods for conducting these missions and describe how to properly fill out the various reports. Our recon teams and squads used these methods as guides for gathering route information and compiling it in an understandable format to pass on to higher maneuver and engineer headquarters. We developed a checklist from these two manuals to remind team leaders of the various aspects of recon missions (see Figure 1). Our current doctrine, coupled with some mission checklists, contains sound tactics, techniques, and procedures (TTP) for accomplishing route-reconnaissance missions.

Recon Checklist/Limitations

- ✓Curves < 25 meters or 82 feet
- ✓Gradients > 7 percent
- ✓Inadequate drainage
- ✓Poor surface conditions
- ✓Road width < 4.0 meters
- ✓Overhead clearance < 4.3 meters
- ✓Bridge military load class (bypass possibilities and bridge degradation)
- ✓Shoulder softness/caving
- ✓Potential quarries, lumberyards, cement, and lime
- ✓Turnouts/turnarounds
- ✓Obstacles to movement
- ✓Rock slide areas

Figure 1

Training

Although Alpha Company personnel did not focus on route recon before deploying, our junior leaders developed training plans and constructed rehearsals while in Albania. The engineer battlefield assessment from the mission analysis and a map recon provided a good start toward determining the features we needed to classify along the route. After deciding on the critical features to be reconnoitered, we used similar features within the perimeter of the Task Force Hawk base, if available, to conduct training and rehearsals. Within the base were many small bridges, sharp turns, narrow roads, and areas of insufficient drainage. Our sappers used spare time between missions to conduct butcher-board classes and walk-through exercises. It may not always be feasible to conduct training on actual features while deployed, but key leaders must conduct rehearsals of anticipated features using rock drills and walk-through exercises.

Leader Development

With all the high-intensity-conflict training needed at the home station, we found it hard to dedicate the time and resources needed to train soldiers and leaders to standard on route-reconnaissance tasks. Because of our level of training before deploying, we constantly disseminated new TTP or lessons learned as they developed. Every time a recon team completed a mission, the leader back briefed the engineers at the tactical operations center (TOC) concerning the team's compiled data. The back brief also included any new techniques the team discovered and validated. The TOC disseminated that information to other leaders during daily operations meetings or mission rehearsals. Conducting thorough rehearsals and sharing information were very helpful to engineer leaders at all levels.

Organization

Alpha Company categorized its engineer recons as initial, intermediate, or deliberate, depending on the time allowed and the enemy situation. During the initial or leader's recon, there was little time for engineers to gather detailed data. These recons usually consisted of a senior NCO or platoon leader riding with the task-force commander to get an initial assessment of the route. The engineer took digital photos to use for making an initial assessment of whether a feature might constrain vehicular movement.

After the initial recon, we tailored a team of four to six engineers to conduct an intermediate recon. While on this mission, the soldiers measured and collected data to help assess the route classification accurately.

Once the route was classified, engineers conducted one final recon, if it was needed. This deliberate recon consisted of heavy engineers, heavy equipment transporter operators, heavy wheeled-vehicle operators and, if they were available, U.S. Army Corps of Engineers representatives to further assess whether calculated constraints could be eliminated by constructing bypasses, upgrading roads, reducing curves, or repairing and/or reinforcing bridges.

At each stage of the mission, the data gathered was passed on to higher headquarters to help develop a route database for



A soldier measures a bridge section during a reconnaissance mission.

Task Force Hawk. In the future, whatever technique units use, they must not create "cookie-cutter" teams. They must ensure that recon elements are organized based on the task or mission.

Materiel

Almost all of the recon missions involved high-mobility, multipurpose wheeled vehicles (HMMWVs). At a minimum, the front and rear vehicles had mounted crew-served weapons during every movement. Each engineer team used similar equipment to help gather necessary data. The key pieces of equipment were a Global Positioning System, a digital camera, and a tape measure. These three items were part of the basic load any time a recon team went on a mission. When these teams conducted training and rehearsals, they developed a list of equipment that would help them execute their drills. We recommend that units develop recon kits that contain equipment essential to mission success. Figure 2 shows a sample checklist for a bridge recon.

Soldiers

We found that soldiers need some basic skills or abilities to be part of a recon team. For bridge recons, especially in the mountains, soldiers must not be afraid of heights. They must be agile enough to climb around or lean over the edges of bridges to measure various areas. In Alpha Company, each team identified its good swimmers in case the mission involved taking measurements over water. We picked soldiers who understood the types of data we needed to collect and the formulas used to calculate constraints or the military load class of a bridge. We found it necessary for a recon team to train and rehearse so that leaders could identify soldiers who possessed the skills needed to conduct various tasks.

Bridge Recon Checklist

- ✓Global Positioning System
- ✓Digital camera
- ✓Tape measure (100-foot)
- ✓Binoculars
- ✓Safety rope
- ✓Report forms
- ✓Radio
- ✓FM 5-170
- ✓FM 5-34
- ✓Map sheet
- ✓Compass and protractor
- ✓Calculator

Figure 2

Lessons Learned

As with many real-world deployments, units must develop training programs to compensate for tasks that are not a part of their mission-essential task list or that they could not train before deployment. Alpha Company personnel learned the following lessons during their deployment to Albania:

- **Doctrine**. Learn our doctrine, because it is sound, and use it.
- **Training**. Continue to develop training programs while deployed.
- **Leader development**. Conduct rehearsals and training to certify leaders.
- **Organization**. Avoid "cookie-cutter" recon teams; tailor them to the task or mission.
- **Materiel**. Develop checklists to complete various types of recons.
- **Soldiers**. Identify soldier skills needed for critical tasks.

Units should develop sound training plans that support their missions and develop SOPs as they are needed. Our Army doctrine provides an excellent foundation that will allow soldiers and leaders to succeed. We must not send untrained soldiers into harm's way in real-world deployments.

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