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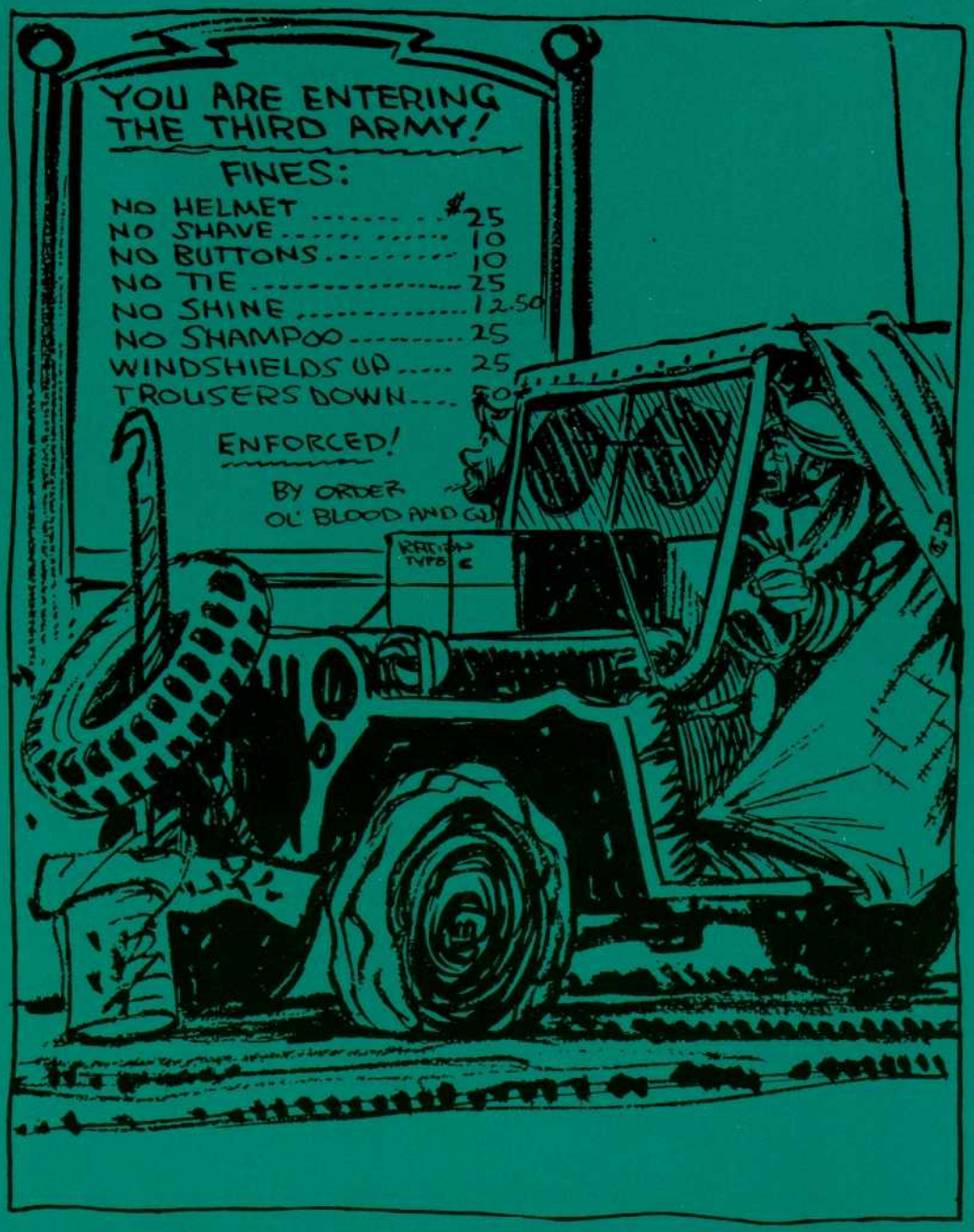
Infantry

November–December 1994



"Radio th' ol' man we'll be late on account of a thousand-mile detour."

Army National Guard: Earthquake '94 ... Page 23

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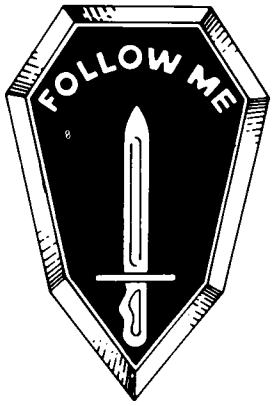

Infantry

November–December 1994 **Volume 84, Number 6**

DEPARTMENTS

FRONT COVER: From *Bill Mauldin's Army* (Presidio Press, 505B San Marin Drive, Suite 300, Novato, CA 94945). Price: $14.95 Softcover, $30.00 Hardcover. Reprinted with permission of the publisher.

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Commandant's NOTE

MAJOR GENERAL JOHN W. HENDRIX Chief of Infantry

A TIME OF CHALLENGE

This is an exciting time to assume the responsibilities of the Chief of Infantry. We approach the turn of the century with some of the best-trained and best-equipped soldiers in the world, but at the same time we are confronted with resource reductions that will challenge our ability to maintain an acceptable level of readiness. Technology has enabled us to acquire and engage targets at ranges once thought impossible; our forces have asserted their dominance of the night; and we are developing soldier systems that will extend the Infantryman's firepower, maneuverability, and survivability far beyond the capabilities of any adversary. Our technological edge gave the Coalition Forces victory in the Gulf War; we must maintain that competitive edge, but we will have to make the most of every asset at our disposal. It is in this environment that the Infantry must continue to attract, train, and equip the force that will meet the challenges of the year 2000 and beyond.

The United States Army has undergone considerable change over the past two decades and will continue to evolve as we enter the next century. Evolution is not new to our Army, but the increased constraints under which we must operate will require ingenuity, innovation, and the strictest accountability for the assets entrusted to us, as we prepare to carry out a broader range of missions than ever before.

Operations other than war will occupy an increasing share of our time and effort; in the past, this has taken the form of disaster relief at home and a combination of disaster relief and peace operations abroad. The collapse of the Soviet Union and the dissemination of comparatively advanced weapons to evolving nations around the world have presented challenges requiring response on the part of America and her allies, while misconceptions as to the United States' military capabilities and resolve have tempted still others into ill-advised courses of action. It is reasonable to expect similar challenges in the foreseeable future, and we must be prepared to respond appropriately.

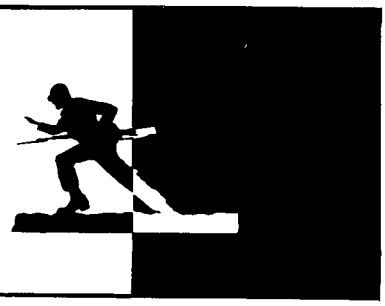
In this heady atmosphere of technological preeminence, we cannot afford to lose sight of the Infantryman, for it is he who will employ our state-of-the-art systems on the future battlefield, and it is his success that will determine the continuity of our nation and its institutions. It is therefore our responsibility as leaders to ensure that he remains the best-trained, best-equipped, and best-supported soldier in the world. In this regard, support does not stop at the logistical sustainment of his combat operations; it extends all the way to our concern for his family and their well-being. Details such as family support groups, pre-deployment briefings, effective community programs, and a chain of command responsive to soldiers' needs—to name only a few—have proved invaluable in terms of cohesiveness and the retention of good soldiers. In the coming months and years these will prove even more critical, as we continue to execute our force projection and peacekeeping missions.

Our greatest challenges will lie in the training of our fighting force, and our success in this area will demand our full attention. As leaders, we will have to make some hard choices when we allocate assets, but the training of the force must remain the first priority. Although the development and acquisition of state-of-the-art weapons and equipment will run a close second, the best equipment in the world will be of little use to a force not thoroughly trained in its employment. The technological contribution to the defeat of the Iraqi army three years ago is unquestionable, but it is impossible to ignore the impact of the Iraqis' own serious shortcomings in tactics, discipline, and logistics, all of which reflect a lack of emphasis on training.

Lately, we have focused on the defeat of Task Force Smith as a consequence of unpreparedness; devastating as that loss was in 1950, the potential for even greater disaster exists today, and we must ensure that the mistakes of 45 years ago are not repeated.

This, therefore, is the challenge that I accept as Chief of Infantry, and that I offer to you: We must examine the way we do business, exercise sound judgement in the way we commit our scarce assets, and train the force as if we were going to war tomorrow. We owe no less to our soldiers, and we owe no less to our nation.

INFANTRY LETTERS



USING PSYOP PERSONNEL

I appreciated seeing psychological operations (PSYOPs) mentioned in two separate articles in INFANTRY's July-August 1994 issue: Captain Blaise Cornell-d'Echert's article "We Need a Peacekeeping MTP" (pages 34-35), and Lieutenant James Sisemore's "Cordon and Search" (pages 41-43). I commend both authors for their understanding of the strengths PSYOPs can bring to a ground commander. Granted, once the bullets start flying, PSYOPs are of little help, but what you, as a maneuver commander, do to use them in the time before the shooting, or in operations other than war (OOTW), is worth mentioning.

In regard to Captain Cornell-d'Echert's article, PSYOP assistance should be part of any peacekeeping mission training plan, and in all operations the focus should be on understanding what PSYOP units do and how you can benefit from their actions. Both articles acknowledge that although the Army is downsizing, the number of separate deployments can be expected to increase. Now is the time to plan for and integrate the use of PSYOP assets into the training that is the basis for the conduct of missions and for their degree of success.

Because of the planning pressures on leaders, I want to offer some thoughts to assist in planning and training. These same thoughts might apply to the use of attachments from other sources as well—military police, engineers, or civil affairs.

We're the guys with the loudspeakers blaring to confuse or disrupt an enemy, but we're also the guys with the knowledge to identify the key speakers, or the influential people, within some segment of a local population. And in most OOTW missions, getting a message to the people who can best influence an outcome is paramount, especially if it involves positively influencing an otherwise uncommitted group or neutralizing an opposing force's negative effect on that group.

Additionally, PSYOPs should be viewed as an alternative source of intelligence. Seldom are PSYOP personnel deployed without some degree of knowledge pertaining to the host nation, surrounding nations, and local populations and their relationships to one another. This knowledge potentially has considerable strategic and tactical value.

Although the combat employment of PSYOP assets is better defined in current doctrine, PSYOPs can be equally valuable in OOTW, and that value is enhanced to the degree that a commander integrates these assets into the planning process. Since today's Army units are more likely to be tasked for OOTW, I encourage you to fully explore the capabilities of PSYOP personnel and the best way to integrate them into contingency and operational plans.

Incorporate PSYOP capabilities into the planning process early. Decide which PSYOP capabilities can help you perform the mission, and define their possible uses. You don't need to plan for every contingency, but you should understand that PSYOP personnel are there to help you create the environment that is most conducive to your success. Link up with them early, and ask what they can do for you.

Chances are that someone in a PSYOP unit is familiar with conditions in the area where you are about to be sent; he can come to your unit, brief you on what he knows, and outline what assistance he can offer. Once he has told you that, he'll step back and let you complete your troop leading procedures. When you want him again, just tell him when and where. He'll advise you on what he knows of the situation, combatants or noncom-batants, and what capabilities he has available. He may also advise you of known capabilities that require formal requests.

PSYOP personnel are committed to serve as a force multiplier for you, and in today's world, that means maximizing the results with minimal resources. So before you put your PSYOP team on guard duty, find out what else they can do to assist you.

The employment of PSYOPs in OOTW evolves with technology. The most visible attribute of today's leader may be his creativity in using all available assets. PSYOP units are committed to accomplishing the mission and to reducing the degree of uncertainty faced by every commander.

DOUGLAS NICKELSON
SGT, U.S. Army Reserve
Olathe, Kansas

COMBAT MISSIONS COME FIRST IN METLs

How to approach the training and execution of operations other than war (OOTW) is one of the most pressing issues currently facing the Army. Infantry leaders in particular are thrust into the middle of the issue as more and more infantry units are tasked to perform OOTW. After reading the letter headed "Why Not Legitimize OOTW Training?" (INFANTRY, July-August 1994, pages 5-6), I decided to join the discussion.

Fighting and winning the nation's wars remains our primary mission. We should, in general, continue to base unit mission essential task lists (METLs) exclusively on warfighting tasks. Although the number of OOTW mis-

sions is increasing, we have to be judicious in the amount of time and other assets we commit to training for this mission. We all know that training for a known mission is the smart thing to do. Everyone would agree that you have to prepare your soldiers for the anticipated mission and conditions. The METL, however, is something completely different.

The nature of the METL acknowledges that Army units do not have the time and resources to gain and maintain proficiency in every potential task. No commander out there believes his unit could deploy and be asked to perform only its METL tasks. So he has always accepted risk on nonessential combat tasks. Each commander must ask himself, "Are OOTW tasks essential, high-payoff tasks worthy of using the limited training resources available? For some units, the answer may be "yes," but for many it may be "no."

As for OOTW training, it is an oversimplification to say OOTW tasks are merely combat tasks conducted under different conditions. But many of the skills honed by combat-related METL training can also serve a unit well when it is called to conduct OOTW. First and foremost, OOTW requires extremely well disciplined troops and competent leadership throughout the chain of command, particularly at small-unit level. Combat training that is well planned, resourced, and executed develops that leadership and soldier discipline, and gives a unit more versatility than does OOTW-specific training.

The writer of the letter mentions that the U.S. Army has executed OOTW for more than 200 years, but in fact the Army has rarely, if ever, dedicated its training to OOTW. For example, Operation JUST CAUSE in Panama rapidly moved from combat into what we now call OOTW. Although OOTW was not a part of our vocabulary back then, the involved units were versatile enough to adjust with no previous training in its execution.

Specific OOTW tasks generally will not serve soldiers and units well when conducting combat operations. When deciding where we're going to accept that risk in training, consider this: If required, any competent infantry company commander, given a well trained and disciplined unit, can plan, establish, and operate a food distribution site. Certainly, it will be better if the unit has trained and rehearsed this mission, but if the commander has accepted risk in training OOTW, he can still accomplish the mission. The skills honed in combat-related METL training will serve this commander and his unit well. The mission analysis, troop-leading procedures, detailed planning, rehearsals, leadership skills, and soldier discipline required to accomplish the combat-related METL tasks will enable the unit to accomplish this mission.

But consider the other side of the coin: In a unit with limited training resources (mainly time), any OOTW training will divert resources from combat training. If this same unit has been planning to conduct OOTW, it may have executed the food distribution site mission a number of times in training. It has probably learned some valuable lessons, developed an SOP, and become proficient at the task. What happens if the unit is deployed to a warfighting situation or the OOTW has turned into combat operations at company level? When the commander is ordered to execute a night attack or other combat mission, how well will the skills developed during OOTW training serve this unit? Even before OOTW was part of the landscape and we were focusing exclusively on combat training, combat operations were hard to execute to standard. Without well planned, resourced, and executed combat training, this unit will be unable to execute the combat mission to standard. Most after-action reviews and take-home packages from the combat training centers will confirm our difficulty in achieving and sustaining proficiency at our combat-related METL tasks even before we became entangled in OOTW.

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The writer of the letter is mistaken when he alludes to a prohibition in Army doctrine against placing OOTW tasks on a METL. Field Manual 25-101, *Battle Focused Training*, does not prohibit anything from being placed on a METL. If the writer has been told otherwise, that is his commander's philosophy, not Army policy.

Still, although they can be, OOTW tasks generally should not be placed on a METL. Obviously, preparing for contingency missions is prudent and does not violate the spirit and intent of FM 25-101. If a unit is pre-selected for a specific OOTW mission on an "on-order" basis, then perhaps training OOTW tasks makes sense. But training for a specific contingency mission is as far as we should go with OOTW tasks and the METL. Units that are not operating under a specific contingency, or warning order, should continue to focus exclusively on combat-related METL tasks.

We must be careful about how we approach this issue, particularly from a training standpoint. As the letter writer points out, many OOTWs look a lot like combat to the soldier taking fire. For the infantry soldier, the discipline to follow orders, interpret guidance, and execute rules of engagement (ROEs) is a normal part of any operation. (Isn't a trigger line an ROE?). Let's not make this tougher than it is.

I'm not certain how well we can ever anticipate and prepare for the many situations and ROEs that are possible in OOTW, but I'm absolutely certain that we can seriously degrade the warfighting skills of the best-trained army in the world if we do this wrong. Although it is best to train specifically for any given mission or situation, the Army has proved that in a crunch, even without

prior OOTW training, it *can* successfully conduct OOTW. On the other hand, we know that without adequate combat training we *cannot* successfully execute combat operations.

ROBERT S. TAYLOR
CPT, Infantry
Fort Monroe, Virginia

BICYCLE INFANTRY

Readers of Captain Kevin D. Stringer's article "Bicycle Infantry: The Swiss Experience" (INFANTRY, September-October 1994, pages 10-12) may be interested to know that infantry soldiers here at Fort Benning trained on bicycles in the early 1940s. The National Infantry Museum collection has photos of infantrymen loading their two-wheeled steeds into a C-47. Additionally, the museum has a World War II British folding bicycle used in airborne operations.

Of greatest interest on this subject are two color prints in the museum collection. One, from the cover of the French newspaper *Le Petit Journal* dated 3 October 1897, shows armed French soldiers mounted on bicycles in "square formation." The other print shows Imperial German officers, complete with spiked helmets, observing training of mastiff dogs attacking dummies dressed in French uniforms and mounted on bicycles.

The museum has a total of four military bicycles in its collection.

DICK D. GRUBE
Director, National Infantry Museum
Fort Benning, Georgia

PORTABLE INFANTRY SHOCK WEAPON NEEDED

Recent combat in the former Yugoslavia and in Somalia has again demonstrated the urgent need for an organic infantry direct fire weapon. In Panama, we had M551 Sheridan tanks for main-gun shock effect. But when helicopters were shot down in Mogadishu, and the relief convoy of soft-skinned vehicles was blocked, the Rangers had no shock weapons to use in regaining fire superiority over an enemy who had more men, more terrain familiarity, better cover and concealment, and unlimited ammunition.

Although combining arms is a desirable goal, the infantry needs back-up weapons to use when artillery and air support cannot be brought to bear for various reasons—enemy action, weather, restrictive terrain, cities, communications difficulties, and political constraints.

Our current hand-held infantry shock weapons—AT4s, LAWs, 90mm recoilless rifles (RRs), and M3 Ranger antiarmor weapon systems—are not effective for pinned-down forces; because the gunners are exposed getting into close-range firing positions, the positions are at best unstable. In addition, their small warheads can do little damage to large buildings.

Vehicle-mounted shock weapons are always ready to fire at the first sign of trouble from a safe standoff distance with enough explosive effect to regain fire dominance. But our current hard-top HMMWVs (high-mobility multipurpose wheeled vehicles) are armed with heavy machineguns that lack instantaneous shock effect. They must be fired continuously for a time to saturate a target. And the TOW missile will not work at close range; it needs at least 65 meters to arm and still more for the gunner to track it to the target. Besides, the TOW is not economical for reducing buildings, bunkers, or enemy infantry, and the tracking time exposes the weapon and its crew to enemy counterfire.

At ground level (airborne, light infantry, Special Forces), we need a fire-and-forget shock weapon that will be there when we need it. That weapon is the M40A2 106mm RR. It is still in the inventory of our Special Forces units for foreign weapon training purposes, and it can be mounted on HMMWVs or other vehicles, as some of our allies have done. Infantrymen can also ground-mount the M40A2 and tow it into firing position.

The M8 armored gun system is years away from replacing the Sheridan, and the M2 Bradley fighting vehicle is too heavy for scarce airlift capabilities. But three 106mm RR HMMWVs could be airlanded from a C130 or airdropped with two squads of infantry. The new laser SACMFCS (small arms common module fire control system) may be adaptable to the 106mm RR to replace the spotting rifle aiming system for improved accuracy without signature. Hand-held thermal imagers such as the AN/TAS-5 Dragon night tracker could be used with night vision goggles for night driving and firing. In short, the 106mm RR HMMWV could quickly be made "state-of-the-art."

I believe we have an urgent need for the 106mm RR, and it could be filled in a matter of days at little cost. The weapons are now available in storage, along with a large quantity of ammunition, but not for long. They have been slated for destruction.

All that is needed is for airborne, Special Forces, or light infantry unit commanders to request 106mm RRs for their designated M998 soft-top HMMWVs. The units that already have the rifles would need only the gun-mount kits.

MIKE SPARKS
U.S. Army National Guard
Fayetteville, North Carolina

KEEP TO ARMY STANDARDS

I am writing in regard to the item in your Swap Shop in the July-August 1994 issue ("Save Those Old Boots with New Lacing Technique," page 48).

I realize that your magazine "does not necessarily reflect the official Army position" and that what you publish "does not supersede any information presented in other official Army publications," as stated in the inside front cover. The problem is that soldiers seldom read fine print such as this.

Certainly, it is the individual soldier's responsibility to ensure that he maintains the Army standard, but many soldiers who read that item will assume that it's okay now to use 550 cord to lace their boots.

As a senior noncommissioned officer, I spend most of my day making on-the-spot corrections to officers and soldiers and educating them on what the regulation says. You would be surprised by the number of officers and NCOs who don't know the right way to do something because they spend their time reading magazines that publish nonstandard information.

Don't get me wrong. INFANTRY is a great magazine. However, I would like to see information that reenforces and updates Army policy, not information that is non-standard.

LARRY GRAHAM
CSM, U.S. Army
Fort Wainwright, Alaska

BOOK AUTHOR PROTESTS CHOICE OF REVIEWER

As a journalist for more than two decades, I was shocked by INFANTRY's selection of Lieutenant Colonel Albert Garland (retired) to review my book *Reconciliation Road: A Family Odyssey of War and Honor*, about my grandfather, Brigadier General S.L.A. Marshall.

Not only is Garland an interview subject included in the book's text—which should have disqualified him from writing the review—he is also quoted (accurately) in the book from our interview as saying, "I just flatly resented [Marshall]. . . I could never understand Slam's influence. I was against Slam from the beginning."

INFANTRY's readers are the real losers here. A more objective reviewer could well have assessed the findings in *Reconciliation Road*, the most thorough published treatment yet of Marshall's life and career, one that includes personal interviews with all of the major figures in the Marshall controversy, both supporters and critics. Instead, Garland's animus leads him to spend the first half of the "review" telling readers what he himself thinks about Marshall rather than discussing the book and its findings.

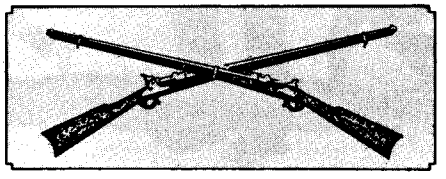
Lastly, I should point out that I served as an Army officer for one year and nine months, then applied for a discharge from the service as a conscientious objector under a rigorous and demanding process set forth in military regulations. I had to convince a battery of Army officers in personal interviews that my religious beliefs were sincere; every one of them recommended approval of my application. Months later, I received an honorable discharge approved at the highest levels of the service (as did 7,492 other COs who were granted honorable discharges during the Vietnam era).

I do not think that receiving an honorable discharge from the military after a process of intense scrutiny should subject us COs to inclusion among, as Garland puts it, "those who chose to turn their backs to their country."

JOHN DOUGLAS MARSHALL
Seattle, Washington

ATTENTION, VETERANS OF TET 1968

Having published six books on the Vietnam War, I am now writing another. The subject is the defense of Saigon, Bien Hoa, Long Binh, and Tan Son Nhut during the 1968 Tet offensive.



The units involved included the 199th Light Infantry Brigade; the 11th Armored Cavalry Regiment; Company A, 1st Battalion, 4th Cavalry (1st Infantry Division); the 2d Battalion, 27th Infantry, and the 3d Battalion, 4th Cavalry (25th Infantry Division); Company C, 1st Battalion, 502d Infantry, and the 2d Battalion, 506th Infantry (101st Airborne Division); the 716th and 720th Military Police Battalions; and the headquarters detachments of Military Assistance Command, Vietnam (MACV), USARV (U.S. Army in Vietnam), and the II Field Force Vietnam (FFV).

I would greatly appreciate hearing from anyone who served in any of these units during Tet 1968 so we can arrange an interview for the book.

Please write to me at the address below, or call me any time at (314) 645-1867.

KEITH WILLIAM NOLAN
220 Kingsville Court
Webster Groves, MO 63119

REMAGEN REUNION

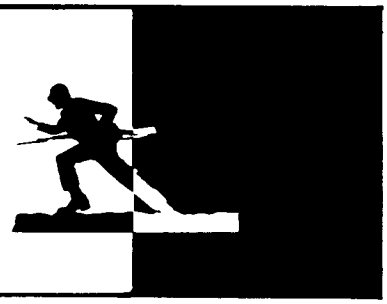
A 50th anniversary reunion is scheduled for 7 March 1995, at Remagen, Germany. The planning committee is trying to find every veteran of the "Bridge at Remagen."

If you were there, or if you would just like to share in this event, please send your name and address, and the committee will mail you a short questionnaire to be completed and returned for planning purposes. Returning the questionnaire in no way obligates you to go on the trip or to pay anything.

My address is P.O. Box 8573, South Charleston, WV 25303.

ELVIN F. MARTIN
Bridge of Remagen
Reunion Committee

INFANTRY NEWS



THE M4 CARBINE will soon replace selected pistols, submachineguns, and M16 rifles in certain Army units. The M4 is a lighter and more compact variant of the M16A2 rifle, with essentially the same capabilities out to a range of 500 meters. It is capable of semi-automatic and three-round burst fire. The M4 has an integral accessory mounting rail at the top of the receiver and a removable carrying handle similar to the one on the M16A2 rifle. When the carrying handle is removed, the rail can be used to mount day and night optic devices and sights.

Eventually, selected M4s in infantry units will be modified to include a mounting rail above, below, and to each side of the barrel to allow several accessory configurations.

The M4 will replace, on a one-for-one basis, all .45 caliber submachineguns, selected .45 caliber and 9mm pistols, and selected M16A1 and M16A2 rifles. The pistols carried by infantry commanders, executive officers, and operations officers will not be replaced. Fielding of the M4 is scheduled to begin in early 1995.

Units of the U.S. Special Operations Command will get the M4A1, which is identical to the M4 except that it is capable of semi-automatic and full automatic fire. Fielding to these units has begun and should be completed in January 1995.

AN IMPROVED RAIN SUIT is scheduled for fielding in the first quarter of Fiscal Year 1996 to replace the current wet-weather parka and trousers. The suit (parka and trousers set) features:

- Reduced bulk (a compact self-storage package) and weight (1.3 pounds).
- Improved wind and rain protection and durability.
- Improved flexibility and breathability.
- Compatibility with the current field jacket liner.
- Woodland camouflage pattern.

The rain suit has undergone extensive tests and has been well received by the soldiers participating in its testing.

This is one of the many improvements made possible by the Soldier Enhancement Program (SEP). The SEP was established in 1989 as a means of improving the combat effectiveness of Army infantrymen through the development of lighter, more lethal infantry weapons and improved equipment.

The SMAW-D BUNKER defeat munition (BDM) was recently type classified for limited procurement after undergoing tests against other candidate systems. The SMAW-D is a disposable version of the U.S. Marine Corps' SMAW (shoulder-launched multipurpose assault weapon) system.

The BDM—a stand-alone, single-shot munition fired from a disposable tube (like the AT4 and the M72A3)—is capable of defeating earth and timber field fortifications. The complete munition, in the unpackaged carry mode and including a night sight mounting fixture, weighs only 16 pounds. It will be carried and operated by a single soldier.

This munition is intended for fielding to contingency forces, beginning in Fiscal Year 1996, to fill a capability gap until the MPIM (multipurpose individual munition) is fully developed.

BRADLEY CORNER

The Bradley Modernization Program is designed to update and improve Bradley fighting vehicles so that the Bradley will remain the infantry's primary fighting vehicle system through the year 2010.

This two-part program consists of the Bradley A2 Operation DESERT STORM (ODS) improvements, and the Bradley A3. Contractors will retrofit A2s to A2ODS configuration in unit motor pools, and more than 1,600 M2/M3A2s will be remanufactured to produce A3 Bradleys.

The A2ODS variant incorporates six needed improvements:

Bradley Eyesafe Laser Range Finder. This range finder enables the crew to determine target ranges from 200 to 9,990 meters within plus or minus 10 meters. It is integrated into the vehicle's integrated sight unit (ISU) and applies automatic super-elevation to the weapon system.

Precision Lightweight GPS Receiver/Digital Compass System (PLGR/DCS). The PLGR gives the crew three-dimensional positioning (longitude/latitude, grid location, and elevation). Working with the DCS, the PLGR indicates turret azimuth, direction, distance, and way points with "steer-to" indication, all shown on independent commander and driver displays.

Battlefield Combat Identification System (BCIS). The BCIS gives the crew a means of interrogating suspected vehicles to determine whether they are friendly or unknown. A series of visual and audible signals—symbolizing friend, un-known, or friend-in-sector—help reduce fratricide.

Missile Countermeasure Device (MCD). The MCD enables Bradleys to deter thermal-guided antitank guided missiles (ATGMs), thus improving crew survivability.

Improved Vehicle Restowage. Restowage consists of bench seats, mounted water ration heater, electric engine access door lift, outside stowage for personal gear, and three 25mm hot boxes that contain 50 rounds each of linked ammunition.

Driver Thermal Viewer (DTV). The DTV provides the driver with improved day-night visibility in all weather and dust conditions. In addition, its 40-degree field of view and its range allow the driver to detect potential targets at more than 1,200 meters.

The near-term improvements on the A2ODS vehicle will serve as the logical progression to the future Bradley A3, which will add the following systems:

Improved Bradley Acquisition System (IBAS). The IBAS provides direct-view optics, charged coupled device (CCD) TV, and a second-generation FLIR (forward looking infrared) for extended target detection, recognition, and identification. The IBAS incorporates a full-resolution digital fire control system that provides dual-target tracking, automatic super-elevation and target lead, auto gun target adjustment, and automatic boresight. With an integrated dual-launch capability, IBAS will accept the future antiarmor missile system-heavy (AMS-H) TOW replacement.

Commander's Independent Viewer (CIV). The CIV enables the vehicle commander to scan the battlefield, day or night, independently of turret orientation. The system also allows the commander to hand off a target to the gunner electronically and continue to scan the battlefield using the CIV's CCD-TV or second-generation FLIR.

The 1553 Databus. This assembly incorporates modern digital tech-nology that eliminates point-to-point connections and many turret components found on earlier Bradley variants (A0, A1, A2, and A2ODS).

Digital Core Electronics Architecture and Vehicular Command and Control Operating System (VCOS). The VCOS improves command and control and also digitally integrates the vehicle's acquisition, survivability, mobility, and sustainability functions. The system displays graphics, maps, and the battlefield situation on independent displays for the vehicle commander and the squad leader in the rear of the vehicle. In addition to tactical information, the squad leader's display gives him a forward view of the battlefield through either the CIV or the IBAS.

The fielding of the A2ODS variant is scheduled to begin in Fiscal Year 1996 and the A3 in Fiscal Year 2000. The Bradley Modernization Plan improves infantry capabilities and the vehicle's compatibility with the M1A2 Abrams tank, which will make the Army's combined arms team a formidable force well into the 21st century.

Comments or recommendations on the Bradley Modernization Program may be submitted to the following:

Infantry User Representative
Bradley Proponency Office
1st Battalion, 29th Infantry
Ft. Benning, GA 31905
DSN 784-6201 or (706) 544-6201

TRADOC System Manager-BFVS
Commander, U.S. Army Infantry Center
ATTN: ATZB-BV
Ft. Benning, GA 31905
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The MPIM is not expected to be available until Fiscal Year 2001, at the earliest.

THE SGI AFFILIATION Program is designed to help units stay up to date on the latest doctrine and developments at the Infantry School.

Regiments can now establish a "one-on-one" dialogue with Infantry School small-group instructors. This program will parallel regimental affiliations with each participating regiment being assigned a small-group instructor as its point of contact.

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THE BATTLE LABORATORIES of the U.S. Army Training and Doctrine Command (TRADOC) have grown, in a little more than two years, from conducting only materiel experiments to creating doctrine, training, and force design for the Army of the future.

Resources will now be turned toward Force XXI, which will examine the redesign of the force, from the individual soldier all the way to echelons above corps. The battle labs will look at all the battlefield operating systems, not just maneuver.

The labs were able to begin work on Force XXI largely because of the lessons learned from an Advanced Warfighting Experiment (AWE) conducted in April 1994 at the National Training Center (NTC), during which a brigade-level task force took on the NTC's opposing force.

The task force was made up of two infantry battalions, an armor battalion task force, and the 194th Separate Armored Brigade, with the 3d Brigade, 24th Infantry Division, serving as the brigade headquarters.

All of these forces received near real-time information on the NTC battlefield through the digitized communication systems of the armor task force, along with the limited digital capability of other brigade elements. The experiment proved the value of digitizing Army units, and also taught the battle lab community how to conduct future experiments properly, design analytical systems to study the results, involve the testing community, and train while experimenting at the combat training centers.

Over the coming 18 months, various battle labs will conduct about 90 experiments, nearly all of them connected to Force XXI. Some of the larger experiments will further examine digital communications and their effects on organizational design, tactics, and training. A major AWE will involve infantry forces during a rotation at the Joint Readiness Training Center in November 1995. The AWE will explore digitization issues in a dismounted environment.

Because of budget constraints, the battle labs do not concentrate on developing major weapon systems but work toward modifying existing capabilities or systems through technology.

The close partnership between TRADOC and the Army Materiel Command (AMC) helps keep the Army current in technological developments. Each of the battle labs has a full-time AMC materiel developer, who provides technical advice, on-the-scene acquisition expertise, and liaison with industry. This experimental and cooperative approach has greatly shortened the time it takes to acquire and field new capabilities.

Six battle labs became operational in 1992:

- Early Entry Lethality and Survivability, Fort Monroe, Virginia.
- Battle Command, Fort Leavenworth, Kansas.
- Dismounted Battlespace, Fort Benning, Georgia.
- Mounted Battlespace, Fort Knox, Kentucky.
- Combat Service Support, Fort Lee, Virginia.
- Depth and Simultaneous Attack, Fort Sill, Oklahoma.

Since then, two offshoots of the Battle Command Battle Lab have been activated. One of these, at Fort Gordon, Georgia, experiments with hardware for battle command, and the other, at Fort Huachuca, Arizona, studies intelligence, electronic warfare and information warfare operations.

BRADLEY CORNER

The Bradley Modernization Program is designed to update and improve Bradley fighting vehicles so that the Bradley will remain the infantry's primary fighting vehicle system through the year 2010.

This two-part program consists of the Bradley A2 Operation DESERT STORM (ODS) improvements, and the Bradley A3. Contractors will retrofit A2s to A2ODS configuration in unit motor pools, and more than 1,600 M2/M3A2s will be remanufactured to produce A3 Bradleys.

The A2ODS variant incorporates six needed improvements:

Bradley Eyesafe Laser Range Finder. This range finder enables the crew to determine target ranges from 200 to 9,990 meters within plus or minus 10 meters. It is integrated into the vehicle's integrated sight unit (ISU) and applies automatic super-elevation to the weapon system.

Precision Lightweight GPS Receiver/Digital Compass System (PLGR/DCS). The PLGR gives the crew three-dimensional positioning (longitude/latitude, grid location, and elevation). Working with the DCS, the PLGR indicates turret azimuth, direction, distance, and way points with "steer-to" indication, all shown on independent commander and driver displays.

Battlefield Combat Identification System (BCIS). The BCIS gives the crew a means of interrogating suspected vehicles to determine whether they are friendly or unknown. A series of visual and audible signals—symbolizing friend, un-known, or friend-in-sector—help reduce fratricide.

Missile Countermeasure Device (MCD). The MCD enables Bradleys to deter thermal-guided antitank guided missiles (ATGMs), thus improving crew survivability.

Improved Vehicle Restowage. Restowage consists of bench seats, mounted water ration heater, electric engine access door lift, outside stowage for personal gear, and three 25mm hot boxes that contain 50 rounds each of linked ammunition.

Driver Thermal Viewer (DTV). The DTV provides the driver with improved day-night visibility in all weather and dust conditions. In addition, its 40-degree field of view and its range allow the driver to detect potential targets at more than 1,200 meters.

The near-term improvements on the A2ODS vehicle will serve as the logical progression to the future Bradley A3, which will add the following systems:

Improved Bradley Acquisition System (IBAS). The IBAS provides direct-view optics, charged coupled device (CCD) TV, and a second-generation FLIR (forward looking infrared) for extended target detection, recognition, and identification. The IBAS incorporates a full-resolution digital fire control system that provides dual-target tracking, automatic super-elevation and target lead, auto gun target adjustment, and automatic boresight. With an integrated dual-launch capability, IBAS will accept the future antiarmor missile system-heavy (AMS-H) TOW replacement.

Commander's Independent Viewer (CIV). The CIV enables the vehicle commander to scan the battlefield, day or night, independently of turret orientation. The system also allows the commander to hand off a target to the gunner electronically and continue to scan the battlefield using the CIV's CCD-TV or second-generation FLIR.

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PROFESSIONAL FORUM

A World War II Christmas Story

MAJOR GENERAL ALBERT H. SMITH, JR., USA (Retired)

Old soldiers like to tell war stories, especially to the officers and men who have now taken up the torch, and I am no exception.

I joined the 16th Infantry Regiment in July 1940 and served continuously with it as part of the 1st Infantry Division in the United States, in North Africa, in Sicily, and in northwest Europe until my departure from Europe on VE-Day, 8 May 1945. I took part in eight campaigns and three invasions with the 16th Infantry, and these experiences instilled in me a pride in the unit and a love of the 1st Division that is still with me today. To me, the "Big Red One" and the 16th Infantry (of which I served as Honorary Colonel of the Regiment from December 1983 until May 1990) are the greatest.

In December 1965 the 16th Infantry was once again overseas and in active combat, this time in South Vietnam. I was at Carlisle Barracks as a member of the Institute of Advanced Studies and wanted to send some sort of special Christmas greeting to the soldiers in my old unit. I decided that the story of the regiment's Christmas in 1944 might bring them a chuckle or a smile. This is the story:

The 16th Infantry was one of the two assault regiments to tackle Omaha Beach in Normandy on 6 June 1944. Thereafter, without any real break, the regiment fought its way across France and into Germany. It tore its way through the Siegfried Line and then had a really tough time in late November and early December pushing through the Huertgen Forest. Word trickled down that we were finally to be pulled out of the line for a much-needed rest in the peace and quiet of Belgium.

At last the dream became a reality; in mid-December the regiment moved back to a wonderful little Belgian city called Verviers. We all got baths and clean clothes and were able to sleep on cots for a change. A few lucky ones managed to get leaves to Paris, Brussels, or England. The rest of us happily settled down to enjoy 10 to 15 days of rest and rehabilitation.

Christmas parties were planned for all grades. In fact, the officers' dance, scheduled for 23 December, was the talk of the European theater—at least in that area near Verviers and Liege. We even sent out invitations. Off-duty nurses and Red Cross ladies from 100 miles around promised to attend.

Then it happened! The Germans decided to make one last great attack in the west. This was the Battle of the Bulge. As a result, the 16th Infantry spent, not two weeks, but two days, in Verviers and then moved out on less than 12 hours notice to confront the advancing German forces.

Our situation during the period from just before Christmas to well into January was accurately portrayed by a Corporal Wilhelms of the 16th Infantry, who made our Christmas card that year. The accompanying photograph does not do justice to his wonderful coloring, but the drawing does show how we spent

Front of Christmas card...

and inside.

This article appeared originally in INFANTRY, November-December 1984.

our Christmas holiday that year—in foxholes.

(During World War II, receiving mail boosted individual morale more than anything else—even more than a good hot meal. And to encourage that incoming mail, soldiers wrote home even under the most difficult conditions. Recognizing that very basic fact of life, the regiment's leaders rapidly arranged for this Christmas card to be printed and distributed to all the members of the regiment.)

What with the cold and the snow and all the rest, it was a tough period for the soldiers of the 16th Infantry. But, as always, the men did a magnificent job and, in their sector, stopped the Germans in their tracks.

That's the end of the Christmas 1944 war story, except that it all turned out well eventually. The Allies won the war, and 1st Division soldiers stayed to guard the peace in Germany until the division came home in 1955.

In my 1965 message to the 16th Infantry, I added to this story the following:

Heartfelt Seasons Greetings and the best of everything to you new members of the 16th Infantry who are waging today's war.

We know that you are doing a tremendous job over there, and that the 16th Infantry and the Big Red One will win the battles that will end the war in Vietnam—as they did in World Wars I and II. The alumni of those wars, I can assure you, take great pride in your every combat action. Our thoughts and prayers are with you.

God bless you.

How was the story received in Vietnam? Lieutenant Colonel Bill Lober, who was commanding the 1st Battalion, 16th Infantry, wrote me on 13 December 1965 and said, in part:

I can't begin to explain the deep impression your narrative of Christmas '44 had on us. Your letter was on my desk when we got in on the 9th after twelve days of jungle campaigning...to say the least, your letter and story perfectly proved the close tie between present members of an organization and those who filled the ranks in the past, a fact that we treasure highly.

Although the 16th Infantry and the 1st Division are not involved in a shooting war in 1994, they are, nevertheless, serving as they have always served. And thousands of other soldiers are still standing guard around the world. So, to the soldiers of the 16th Infantry and to all those other soldiers as well, I send you, in addition to my 1944 Christmas story, "Best Wishes for a *Merrier* Christmas and a *Happier* New Year."

Major General Albert H. Smith, Jr., began his Army career in 1940 and served for more than 33 years. Much of this service was in the 1st Infantry Division, including eight campaigns in World War II and three in Vietnam, where he was assistant and acting division commander.

Battle of Beaver Dam Creek

FM 100-5 Lessons Learned

CAPTAIN SCOTT T. GLASS

The Battle of Mechanicsville exemplifies a successful defense by a numerically inferior force. Looking at lessons learned from this battle in the context of Field Manual (FM) 100-5, *Operations*, will help today's leaders apply these lessons of history to the battles of the future.

In early 1862, Union forces under General George B. McClellan moved on the Confederate capital of Richmond. When Confederate commander General Joseph E. Johnston was wounded on 31 May at Seven Pines, command passed to General Robert E. Lee.

Lee inherited a hostile force of 115,000 on Richmond's doorstep. To improve the odds, he ordered General Thomas J. "Stonewall" Jackson's army in the Shenandoah Valley to join him at Richmond. That unit and others brought Lee's strength to almost 80,000.

Union General Fitz-John Porter's V Corps held the north bank of the Chickahominy River with 30,000 men in three divisions. General McClellan would be able to support Porter from south of the river, depending on the bridges available. In addition to superiority in numbers, McClellan also enjoyed superiority in siege and field artillery, in both quality and quantity.

Lee deployed to block Union moves on Richmond until he could create favorable opportunities to attack. His short-term goal was to defeat all or part

of the Union army, and he decided to risk committing about 50,000 soldiers to offensive operations.

The Terrain

The Chickahominy River and Beaver Dam Creek dominated the Mechanicsville battlefield. The Chickahominy rises north of Richmond and flows southeast to the James River. Fairly shallow and narrow, the creek itself did not present as serious a military obstacle as the wide swamps on both banks. Mechanicsville Bridge provided the only practical crossing in the immediate battle area. About one and one-half miles upstream, the Meadow Bridge supported the crossing of the Virginia Central Railroad.

Beaver Dam Creek runs south through the battle area, emptying into the Chickahominy. (The creek today averages chest deep, is about 20 feet wide, and has high, sharp banks.) Marshland 80 to 100 yards wide framed the creek with thick, tangled undergrowth. Although infantry could cross with little trouble, the cavalry and artillery required a bridge.

Both sides of Beaver Dam Creek featured militarily significant ridgelines. The eastern ridge, although slightly lower than the western one, afforded observation and fields of fire beyond Mechanicsville, and the force holding it had a significant advantage.

Two roads that figured in the battle provided crossings suitable for cavalry and artillery: Mechanicsville Turnpike became Old Church Road as it left the village and crossed Beaver Dam on a bridge one-half mile northeast of the village. Cold Harbor Road left Mechanicsville heading southeast and then ran south until it turned east to cross at Ellerson's Mill.

Broken woodlands lined both the east and west ridges but grew thicker on the east ridge. Small groves grew in marshy lowland by the creek near the Cold Harbor Road bridge. In each area, trees grew thick enough to disrupt troop formations.

Mechanicsville controlled four intersections, and troops moving east or north from the Chickahominy needed the road junctions. Also, a handful of dwellings and trees in the village could screen troops from observers across Beaver Dam Creek. Ellerson's Mill sat near the Cold Harbor Road bridge, and water in the millrace flooded the land around the bridge approaches.

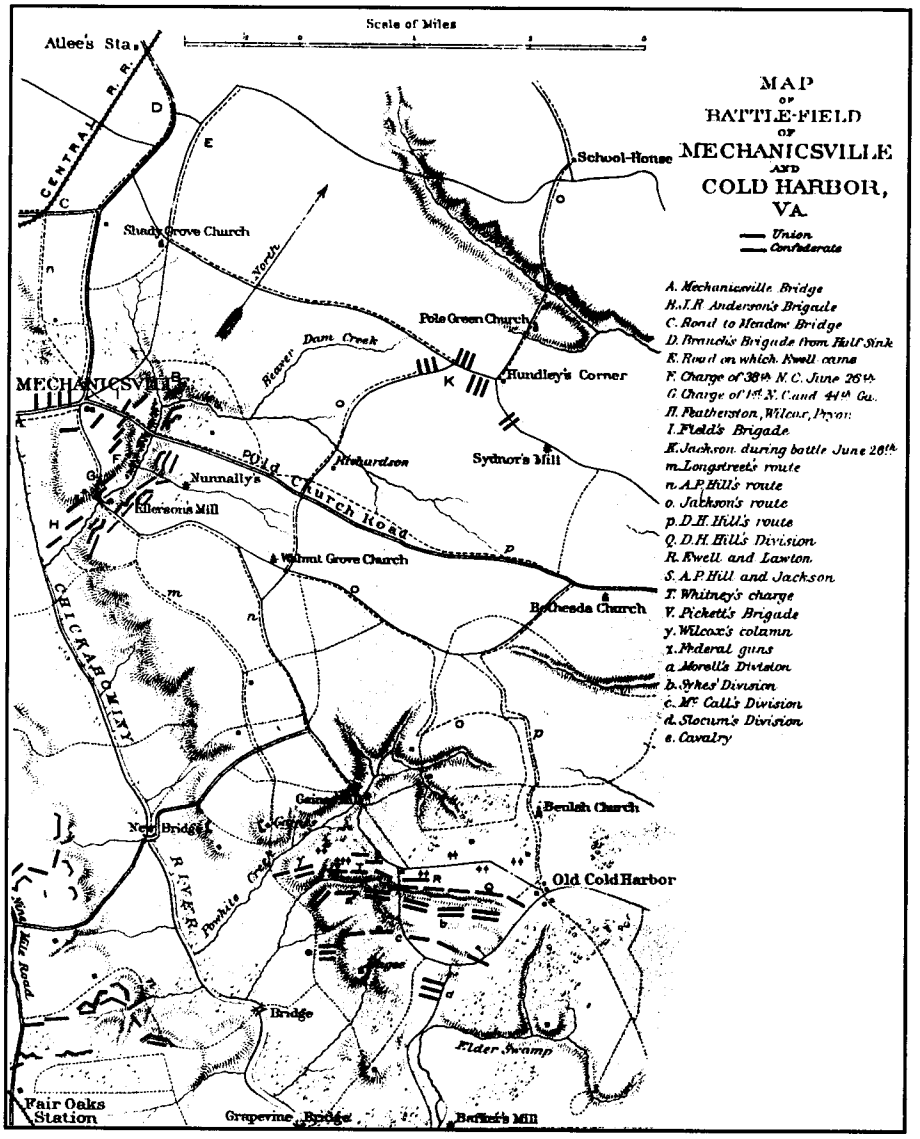
Weather conditions favored defensive operations. Good visibility improved observation, and the heat and high humidity would soon tire attacking troops.

The Attackers

General Order #75 stated Lee's intent. Jackson was to advance southeast along the Chickahominy's northern bank. As he passed their fronts, the forces under Generals A.P. Hill, D.H. Hill, and James Longstreet would cross the river and advance on Jackson's right flank. Jackson's mission, as clearly defined in the order, was to turn a Union position on Beaver Dam Creek. The order expected light contact as units moved southeast but counted on Jackson to turn any Union positions on the north bank of the Chickahominy.

Confederate operations were aimed at defeating a part of McClellan's army before he could reinforce it from south of the river. At no time did Lee envision attacking Beaver Dam Creek frontally, nor did his plan address the contingency of a Union stand along it.

Lee allowed his generals to draft the plan's timeline, believing they could



best judge when preparations would be complete. Initially, 25 June was selected for the attack, but Lee delayed this ambitious timeline by one day and set H-Hour for 0300, Thursday, 26 June.

The attacking force included the combined forces of four Confederate maneuver units—one corps, and three divisions:

Jackson's corps (17,000) was to depart assembly areas north of Richmond early 26 June and move southeast. Lee expected Jackson's advance to become known and cause the Union troops to abandon any positions that overlooked Beaver Dam Creek.

A.P. Hill's division (14,000) would push across the Chickahominy at Meadow Bridge, connect with Jackson's right, and pursue any Union withdrawal from Beaver Dam Creek.

D.H. Hill's troops (10,000) would cross at Mechanicsville Bridge and support A.P. Hill's right. One attached artillery battalion provided D.H. Hill with three batteries.

Longstreet (9,000) would cross after D.H. Hill and complete the advancing line of divisions by filling the gap between Hill's right and the Chickahominy swamps.

The Defense

Porter assigned General George A. McCall's division (9,000) to defend along Beaver Dam Creek. The division had joined McClellan in mid-June with three brigades of Pennsylvania Reserves. These were reserves, however, in name only, having been in active service since 1861. McCall had three seasoned cannon batteries for direct support, and McClellan's artillery reserve had other batteries nearby for his use.

On 19 June, McCall received orders to move to Mechanicsville, and the leaders immediately recognized the eastern ridgeline as key terrain. The regimental commanders directed the preparation of rifle positions in depth on the front slopes, and troops worked around the clock to improve them. Well-sited cannon emplacements behind the infantry positions allowed interlocking fires on bridge crossings, open areas, and roads.

Obstacles complemented the terrain in three belts, each of which could be observed and fired on: First, the Mechanicsville Bridge was demolished. Second, trees were felled on the western ridge, creating abatis. Third, trees were chopped down along the creek bank to clear fields of fire and make more abatis.

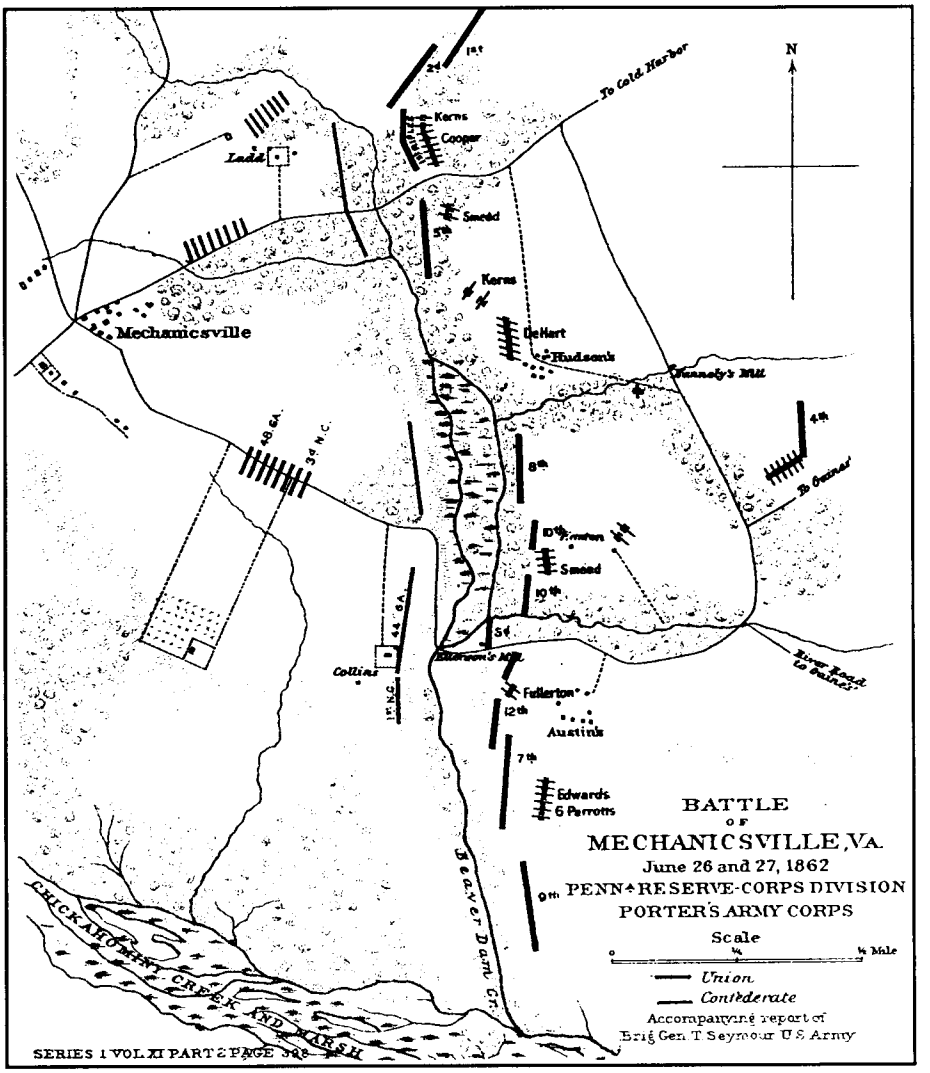
McCall defended with two brigades on the eastern ridgeline along a two-mile front. Each brigade commander held one regiment as a local reserve. One brigade and two batteries were in McCall's reserve behind the center. One regiment and battery in Mechanicsville provided force protection.

For early warning, McCall placed sharpshooters to watch the bridge crossings over the Chickahominy, while a cavalry force guarded roads leading into Mechanicsville from the north. McCall would not be caught napping.

Sequence of Events

At 0100 on 26 June, Confederate units moved to assembly areas near Mechanicsville Bridge. Building up false cookfires before marching at night concealed the movement. H-Hour (0300) passed with no movement from Jackson. A.P. Hill expected Jackson to cross his front line at 0400 and had his soldiers awake and standing by. Jackson had planned to start moving around 0345, but he did not begin moving until 0800. Then Union cavalry delayed him with obstructed roads and bridges, while wrong turns in unfamiliar country cost him still more time.

At 1000 an impatient brigade com-



mander of A.P. Hill's, General L.O. Branch, crossed above Meadow Bridge. As his troops turned southeast toward Mechanicsville, they alerted Union pickets. By 1200 McCall knew specific details of Confederate moves and made adjustments. He sent more troops into Mechanicsville, moved a battery up to cover the Old Church Road crossing, and sent sharpshooters to support the cavalry that was harassing Branch. Jackson and his corps, now seven hours behind schedule, would not affect operations on Beaver Dam Creek that day.

A.P. Hill crossed at 1500, reasoning that Jackson would arrive by the time he deployed. Hill's men came under heavy fire from artillery around the village and the eastern ridgeline. Union forces in Mechanicsville moved back to the eastern ridge. Possibly mistaking this movement for the desired retreat, Hill deployed to attack and pursue.

As Hill's lead brigade cleared the village, Union guns above the creek engaged the Confederates, exacting a severe toll. McCall reinforced his upper line with a cannon battery. Concentrated rifle and cannon fire blunted Hill's first attack and overwhelmed his supporting artillery. The Union battery fires then neutralized each deploying Confederate battery, whose return fire was either short or inaccurate.

At 1600 A.P. Hill attacked again. He ordered one brigade toward woods north of Old Church Road to flank the Union guns and another brigade directly toward the creek. The two brigades used thick undergrowth to get their regiments close to the creek. The 35th Georgia crossed the creek after two bloody attempts, but Union infantry wounded the regiment's commander and sealed off the lodgement.

D.H. Hill could not immediately support A.P. Hill. Lee's order had attached engineer officers to divisions for "overcoming all difficulties to the progress of the troops." But no engineers or materials had been positioned near the damaged Mechanicsville Bridge. Units waited for repairs until a footway allowed General Roswell Ripley's brigade to cross just after 1600. A two-hour delay slowed D.H. Hill's artillery; one battery crossed, but the rest of his guns were too late to support operations.

This photo of Ellerson's Mill, taken three years after the battle, shows shell damage to the roof. (Photo courtesy Richmond National Battlefield Park.)

McCall massed against A.P. Hill's second attack and used a regiment from the reserve to reinforce the line.

A.P. Hill kept attacking but not with the mission of crossing. He still expected Jackson's arrival to turn the position on Beaver Dam Creek. While he knew the disadvantages of storming the Union earthworks, he wanted to keep McCall occupied and prevent any shift to receive Jackson.

At 1700, A.P. Hill mounted a third separate attack with General W.D. Pender's brigade toward the Cold Harbor Road crossing. This attack did not coordinate with or support the other attacks. McCall countered by moving a regiment and battery to the threatened point.

Stalled Confederate assaults then allowed Union guns to concentrate on this third attack. Cannon and rifle fire mangled the Confederate formations so rapidly that none advanced within 100 yards of the creek. One company in the 38th North Carolina lost 27 of 32 men.

Around 1800 Pender thought he saw an opportunity to flank the Union left, but had no troops available and asked D.H. Hill for Ripley's brigade. Lee, now on the field, agreed, despite D.H. Hill's objections. Also present was Confederate President Jefferson Davis, who—in a strange turn of events—confirmed Lee's instructions to D.H. Hill.

When Ripley issued his order, however, the mission changed. Instead of working around the Union left flank, he would attack a battery covering the Cold Harbor Road crossing, using two regiments, the 1st North Carolina and the 44th Georgia. The shocked commander of the latter unit, Colonel Smith, asked Ripley three times to repeat the orders.

Just after 1900, Ripley attacked directly into the teeth of McCall's defense. McCall saw the attack forming and deployed another regiment and battery at the threatened point. Abatis disrupted the tight formations; the 44th Georgia re-formed and continued under intense shelling that mortally wounded Colonel Smith. Union riflemen joined in as the advance came within 400 yards. The 44th Georgia color-bearer's eight gunshot wounds testified to the volume of fire.

This firepower smashed the attackers, and only unit fragments reached the creek abatis. Ripley found both regimental commanders mortally wounded and many company comman-ders shot down. He ordered the men to lie down and return fire. Darkness allowed the few who were uninjured to crawl back.

The attacks ended with nightfall around 2100. The defensive center of gravity—the eastern ridge, had not been seriously threatened. The attackers had lost more than 1,500 dead and wounded. The Union force, fighting from prepared positions, had lost about 390, little more than the 44th Georgia alone.

Union leaders prepared for continued operations under cover of darkness. Fresh companies rotated with tired ones. Infantrymen cleaned gunpowder-fouled rifles, and quartermasters brought up supplies of cartridges. Artillery batteries replenished their ammunition chests. The Union troops had accomplished all these vital tasks by 0100 on 27 June.

Meanwhile, Confederate preparations for 27 June met with difficulty. One battery could not resupply with shells until 1200; damaged field pieces were not repaired; and the evacuation of the wounded dragged on throughout the day.

Very late on 26 June, Union forces detected Jackson. His presence threatened Union supply lines and the Beaver Dam Creek position. Since holding this creek no longer offered a military advantage for the defenders, Porter ordered McCall to withdraw before dawn.

The first Union regiment moved at 0500, covered by artillery fire. By 0700 ambulances had completed the evacuation of the wounded. Confederate attempts to cross early on 27 June, while ultimately successful, did not disrupt the withdrawal.

FM 100-5 Lessons Learned

Seen in the context of FM 100-5, the battle of Mechanicsville offers several lessons:

Mass (pages 2-4 and 9-1). Union forces repeatedly massed the effects of defensive fires to smash Confederate attacks. The placement of reserves allowed combat power to be massed quickly when needed. As Confederate artillery batteries arrived on the field, massed Union cannon fire rendered them ineffective.

Unity of command (page 2-5). With both Lee and Davis issuing orders, no one commander controlled the battle. Although A.P. Hill may have held nominal control by commanding most of the committed troops, he did not direct Ripley's attack.

Unity of effort (page 2-5). Confederate leaders attacked with different objectives. Lee wanted to bypass Beaver Dam Creek. A.P. Hill wanted to hold the defenders in place. Pender's intent was to cross the creek. Ripley attacked a battery. Because of this confusion, attacks were made under conditions that were extremely unfavorable to the offense.

Obstacles (page 10-2). McCall's obstacles allowed Union forces to engage the Confederates at their greatest disadvantage. Destroying the Mechanicsville Bridge prevented surprise, disrupted Confederate operational tempo, and kept D.H. Hill's artillery off the battlefield. The abatis held Ripley in kill zones beside the creek where all weapons were concentrated against him.

Flexibility (page 10-2, 10-4). The Union employment of reserves at critical times either contained or defeated each attack. The reserve had no other specific mission, which allowed the reinforcement of threatened areas.

Protecting the force (page 9-1). The Union defense provided for force security. Surveillance units gave ample warning, delayed the attack, and allowed the timely reinforcement of threatened areas. Security force warnings enabled McCall to defend with a clear knowledge of the Confed-erate forces.

Deception (page 6-9). Confederate deception efforts were successful. Lee secretly repositioned 30,000 troops in assembly areas, and the simple ruse of building up campfires overnight worked at army level.

Logistics (page 12-11, 12-12). Lee had anticipated potential problems in General Order #75, but his logisticians executed it poorly as well. Class V resupply and medical recovery were delayed.

Terrain (page 10-2, 14-4). McCall exploited the terrain advantages, and the Confederates did not. Although Lee's army had Virginia soldiers who were familiar with the battle area, no commander seemed to use this advantage. The Confederates had controlled the area until 19 June, yet D.H. Hill complained of having no accurate maps. As a result, no tactical commander knew the terrain.

Time available (page 10-3). The defenders constantly improved positions as the leaders learned the terrain. The one-day delay of the Confederate attack until 26 June proved costly, because it gave McCall more time to improve his defense. The attackers wasted precious time: Despite more than 12 hours in position near the Mechanicsville Bridge, D.H. Hill was needlessly delayed by bridge repairs.

When viewed in the context of FM 100-5, the area defense anchored on Beaver Dam Creek successfully held the Union Army's separated right flank. McCall's conduct of the defense built on strengths and concealed weaknesses. Although outnumbered three to one, he avoided the full effects of Confederate combat power. As a result, his force survived intact and fit for continued operations.

The Confederate offensive moves on 26 June failed, by FM 100-5 standards. The moves began with a five-to-one advantage and let it slip to three-to-one. Even then, they could not bring this combat power to bear at a critical point and time.

These lessons learned from mistakes more than 130 years ago at Mechanicsville are similar to those made on modern training battlefields. By exploiting the costly lessons of history, Army leaders can lay the groundwork for successful operations in the future.

Captain Scott T. Glass, a Quartermaster officer, is an advisor to the Resident Trainer Detachment, 148th Support Battalion, Georgia Army National Guard. He previously served in the 82d Airborne Division and the 1st Infantry Division. He is a 1984 ROTC graduate of the University of Georgia and holds a master's degree from Webster University. Three of his great great grandfathers served in the 44th Georgia Infantry at Beaver Dam Creek.

Lasers On the Modern Battlefield

MICHAEL R. JACOBSON

The U.S. armed forces now use lasers in training devices, range finders, illuminators, target designators, and communications. Eventually, this list will also include laser countermeasure systems and weapons. As the use of lasers on the battlefield increases, the likelihood of damage to eyes and optical devices will also increase.

Almost all tanks, and many aircraft and artillery fire control vehicles as well, have laser range finders that can cause damage to unprotected eyes within small arms range. The biggest differences among these lasers are in wave length and power level.

Some examples of lasers with different wave lengths are the range finder on the M60A3 tank, which uses a ruby laser; the range finder on the M1 tank, which uses a neodymium YAG (yttrium aluminum garnet) laser; and the multiple integrated laser engagement system (MILES), which uses a gallium arsenide laser. Unfortunately, protection against lasers of one wave length will not necessarily protect against those of another wave length.

All lasers can present eye hazards. Even "eyesafe" lasers are not safe at extremely close range, and magnifying optics geometrically increase the effects of a laser; for example, seven-power binoculars magnify laser energy seven times seven, or 49 times the power of the laser.

The damage from a laser can range from temporary flash blindness, similar to that from the flash bulb on a camera, to partial loss of vision, to permanent blindness. When soldiers use binoculars or other magnifying optics, the danger is greater, or they can be affected at greater ranges. Pilots, vehicle and tank gunners, antitank guided missile gunners, scouts, soldiers in long range surveillance units, and forward observers are therefore the most susceptible.

Nevertheless, all military eye injuries reported so far have been to individuals who were not wearing the correct protective eyewear, or who failed to understand the danger of lasers. Preparing soldiers for operations on the laser battlefield therefore requires attention to doctrine and training.

As indicated in the U.S. Army Training and Doctrine Command's 1990 study, *Directed Energy Training Awareness Study*—doctrinal infor-mation on directed energy weapons (DEWs) is not receiving enough emphasis from higher commands and is not reaching most Army personnel. The study therefore recommends the addition of a DEW engagement—similar to a nuclear, biological, chemical engagement—in Bradley, TOW, and tank gunnery, in which a crew is warned and must take appropriate action, such as putting on protective eyewear or filters and using electro-optics instead of direct-view optics. (This study is available through the Defense Technical Information Center, DTIC, Document #AD-B166 169.) Doctrine now recommends the thermal sight as the best choice for eye protection, and the effects of both friendly and enemy lasers should be added to the Simulations Network (SIMNET) training simulator.

Additional information on laser threats can be found in the Combined Arms Training Activity (CATA) Special Text 1-1, *Directed Energy Warfare (DEW) Awareness Training*, and a CATA laser awareness tape. Familiarity with FM 8-50, *Prevention and Medical Management of Laser Injuries*, is essential for all medical personnel.

A list of scenarios in which lasers can be integrated into training is available in Fleet Marine Force Manual (FMFM) 3-55, *Tactical Directed Energy*. A change to FM 71-2, *The Tank and Mechanized Infantry Battalion Task Force*, will expand the DEW section to include how to fight with directed energy weapons. Eventually, offensive and defensive DEW tasks should also be added to mission training plans (MTPs).

Laser awareness training is particularly important to the Army National Guard and Army Reserve, because they have limited training time and much of their equipment does not have the same level of laser protection as that in the Active Army.

Additionally, I believe that a rotation focused on laser effects should be planned and executed at the National Training Center and the Joint Readiness Training Center for both active and reserve component units. The results of these rotations could be used to help fill the gaps in the Army's doctrine, as the Marine Corps has done with Fleet Marine Force Manual (FMFM) 3-55. Likewise, I hope some farsighted Army officer at the Command and General Staff College or the Naval Post Graduate School might consider working on a study of U.S. Army offensive and defensive laser doctrine.

Finally, the armed services must ensure that the development of joint

doctrine continues so that they will be better able to work together in a DEW environment. To help individuals with laser training, I have produced a bibliography of articles and books that is available upon request. (Write to me at Foreign Analysis Division, Directorate of Threat and Security, ATTN: ATZB-IST, Fort Benning, GA 31905-5372; or call 706-545-1561 or DSN 835-1561.)

Units that have a planning mission involving the former Yugoslavia must ensure that their soldiers have adequate laser protective eyewear and that they are thoroughly briefed on its use. Before its dissolution, Yugoslavia had an extensive laser industry and produced hand-held, tripod-mounted, and tank laser range finders. Fortunately, it appears that all of these range finders are neodymium YAG, operating at a wave length of 1.06 microns, against which the current laser protective eyewear is effective. These lasers are not visible to the naked eye, however. *Jane's Battlefield Surveillance* lists the OMU-2, a Yugoslavian artillery laser range finder, as the most powerful laser, with an operational range of 30 kilometers. Its power level of two megawatts and its beam divergence of 0.7 milliradian translate to a hazard of 900 meters to unprotected eyes.

The Yugoslavians have also produced a number of laser detectors and warning devices fitted to vehicles and ships. The range of wave lengths for these systems is .66 to 1.1 microns, which will detect all U.S. lasers, including ruby, gallium arsenide, and neodymium.

Perhaps the most important things to remember about laser eye injuries are that they occur at the speed of light and that they must be quickly and accurately identified and evacuated for treatment. Research is beginning to indicate that the probability of long-term sight loss can be reduced if an injury is treated correctly within 24 hours. Ideally, laser casualties should be evacuated as soon as possible to San Antonio, Texas, the home of both the Army's and the Air Force's top eye specialists. (Army medics have received a special card containing information on testing and evacuating soldiers with laser eye injuries.)

Medical units should prepare for and conduct laser mass casualty exercises. One unprotected Bradley company, for example, could present a battalion aid station with as many as 45 casualties. Aid stations can also expect to handle many soldiers who think they have been hit by lasers when they have not; proper

training will help prevent these "psychological" casualties.

A new generation of more powerful lasers operating in different wave lengths is designed to attack eyes and electro-optical sensors. The effects of these weapons on eyes include flash-blindness, a temporary degradation in visual acuity; glare or dazzle, indicating a temporary degradation in visual acuity that could cause a mission to be aborted at night; minimal lesions, minor retinal burns and dark spots in the field of vision; or hemorrhagic lesions, severe retinal burns with bleeding inside the eye and immediate loss of vision, some of which can be permanent. Damage to optics includes the temporary saturation of a forward looking infrared (FLIR) sensor or image intensifier; crazing, or surface cracking, which indicates permanent damage to the surface of optical material; and fogging, which indicates permanent damage to the surface of an optical material by cracking not visible to the naked eye.

In addition to training and doctrine, survival on the laser battlefield also requires the correct warning and protective equipment. Although lasers can determine range, guide munitions to targets, and damage eyes and optics, most of them can also be detected by laser warning receivers and blocked by smoke, dust, rain, snow, and laser filters.

The only laser warning receiver in the Army's inventory is the AN/AVR-2 for helicopters, but the Army does have the ballistic laser eye protection system (BLEPS), and each unit should have sets on hand for all personnel. (This system loses its protection if it is used with magnifying optics such as binoculars.) The aviation community has recognized the laser threat to pilots and has a variety of laser glasses and visors available.

The number and the types of lasers on the battlefield will continue to increase. Leaders and equipment operators must know not only what their laser devices can do but what protection the equipment can offer. For example, not all versions of the Bradley fighting vehicle have the same level of laser protection, nor do all sights on the same vehicle.

The use of lasers on the modern battlefield is more than a safety issue; it is an operational issue that encompasses the need for doctrine, training, and equipment. Still, as with the nuclear, biological, and chemical (NBC) environment, the laser environment will not present a significant problem if soldiers are adequately trained and equipped for it.

Michael R. Jacobson is an intelligance research specialist in the Directorate of Threat and Security, U.S. Army Infantry Center at Ft. Benning. He is a lieutenant colonel in the U.S. Army Reserve assigned to the 87th U.S. Army Division Exercise, Birmingham, Alabama. He previously served on active duty in various Armor and Intelligence positions.

The S-2's Three Steps
To Successful Scout Operations

CAPTAIN BRUCE A. NIEDRAUER

Whether at one of the training centers or in combat, the most challenging task for a maneuver battalion S-2 is producing a workable reconnaissance and surveillance (R&S) plan. To meet his collection requirements, the S-2 most frequently turns to the battalion's organic scout platoon, and the scouts tend to be overburdened or misused.

Through careful planning and employment, a scout platoon can make the S-2 a hero, and there are three steps he can take to improve scout R&S operations:

- Set the stage for success by tasking the scouts with the right type of mission, one that takes full advantage of their unique abilities, without abusing them.
- Once a specific mission is determined, develop a complete, viable plan.
- Take care of the scouts; if the S-2 doesn't, nobody else will.

The scout platoon can perform a wide variety of missions. They are indeed the eyes and ears of the battalion and, in addition to standard R&S missions, they can support the battalion through economy of force.

The following are some possible missions for the scouts:

- Determine and report the strength, equipment, disposition, organization, and movement of enemy forces.
- Locate reserves, command posts, and key facilities.
- Perform reconnaissance and surveillance of specific sites, routes, or areas, and determine enemy movement patterns.
- Maintain surveillance over suspected infiltration routes and avenues of approach.
- Perform pathfinder procedures for airborne and air assault operations.
- Conduct battle damage assessments.
- Conduct deception operations.
- Locate and observe targets for direct and indirect fires.

CHECKLIST
FOR SCOUT MISSION PLANNING

- **Determine the need for scout operations with the commander and S-3.**
  - **Can someone else do it better?**
  - **Is it feasible, suitable, acceptable?**
- **Give scout platoon leader a warning order.**
- **Request data base and intelligence preparation of the battlefield (IPB) products from brigade S-2, and issue maps.**
- **Determine transportation method, with S-4 and S-3 air.**
  - **Select landing zones, primary and alternate.**
  - **Request aircraft.**
  - **Request other transportation.**
- **Select reconnaissance specifics and mission parameters.**
  - **What do we want to collect?**
  - **What are the priority intelligence requirements (PIRs)?**
  - **Convert PIRs into collectable specific information requirements (SIRs).**
  - **When do we need it? What is the last time information is of value?**
- **Communications requirements:**
  - **Primary and alternate communications means.**
  - **Need for retransmission site or relay?**
  - **Call signs, frequencies, cipher.**
  - **Operational schedules.**
  - **Reports and reporting.**
- **Contingencies:**
  - **Escape and evasion plan, routes, rally points.**
  - **Communications breakdown.**
  - **Wargame possible contingencies.**
- **Conduct overflight, if possible.**
  - **Primary and alternate LZs.**
  - **Overfly and photograph reconnaissance box and march route.**
  - **Debrief overflight.**
- **Other mission requirements:**
  - **Deception, false insertion.**
  - **Requirement for specialists: demolition, tactical air control party (TACP), ground surveillance systems (GSS), engineer, host nation.**
  - **Fire support planning: mortars, artillery, naval gunfire, close air support (with FSO).**
  - **Coordination with adjacent units.**
  - **Passage of lines.**
  - **Link-up plan.**
  - **Extraction.**
  - **Refit plan.**
- **Issue five-paragraph operations order and R&S matrix, including:**
  - **What to look for (SIRs, signatures, and indicators).**
  - **Where to look.**
  - **When and how long to look.**
  - **Coordination.**
  - **How to report.**
- **Monitor mission.**
- **Conduct debriefing.**

• Provide security for main body through screening operations.

Although the scout platoon is versatile, it is a small unit that can easily be overtasked. A full-strength scout platoon with three squads and a platoon headquarters can normally accomplish two or three separate tasks. Given more, the scouts tend to lose focus on the specifics of each mission. Tasking them with the wrong missions or with too many missions will only lead to disaster. Mission selection is the basis for successful operations.

Successful use of the scouts is a direct result of good planning. Because the scouts normally deploy well before the main body, the planning process is often compressed. As a result, the planning time available must be used carefully. A complete, well-thought-out plan allows the scouts to execute the mission with minimal problems.

Once the plan is complete, it needs to be developed into a full, five-paragraph operations order (OPORD). The scout platoon leader, his plan, and the platoon OPORD will be only as good as the one provided by the battalion staff.

The accompanying checklist provides a standard format for scout mission planning and ensures that no important details are omitted.

The S-2 needs to be the proponent for all scout operations. Coordination with all other staff sections is important, but it must be the S-2 who ensures that nothing is neglected. If the helicopters don't show up, for example, it may well be the fault of the S-3 air, but it's the S-2's R&S mission.

The S-2 must watch out for the welfare of the scout platoon. Everyone wants something from the scouts—the battalion commander, the HHC commander, the S-3—but nobody is charged with providing for their needs. The scout platoon leader and platoon sergeant must pay close attention to the training, missions, and logistical support of the unit. Working out of the tactical operations center, the scout platoon sergeant can act as the liaison between the scouts and the staff. If he is not available, the S-2 sections must provide the link. If their administrative and logistical needs are coordinated, the scouts will be free to concentrate on the S-2's collection mission.

Scout operations are the bread and butter of successful R&S plans. The S-2 and the scouts must therefore have a good relationship, one that is based on mutual trust. First, the S-2 lays the groundwork for success by assigning the scouts a mission that fulfills his needs and that they can reasonably accomplish. Second, he develops a workable plan. Third, he takes care of his best intelligence collectors.

These three steps will improve any R&S plan and ultimately improve a battalion's probability of success.

Captain Bruce A. Niedrauer, a Military Intelligence (MI) officer, served as S-2 of the 1st Battalion, 508th Infantry, and as S-3 of an MI battalion, and is now assigned to the 306th MI Battalion at Fort Huachuca. He is a 1986 ROTC graduate of San Jose State University.

Cordon and Search

Lessons Learned in Somalia

MAJOR MARTIN N. STANTON

Early in 1993 the 2d Battalion, 87th Infantry, in Somalia was assigned responsibility for a humanitarian relief sector at Marka. For the next four months, the battalion was involved in security and counterbandit operations along the entire length of the lower Shabelle Valley (Figure 1). These operations included convoy security, show of force, continuous patrolling of the area of operations, and cordon and search.

Cordon and search operations were normally conducted when the battalion received intelligence of bandit operations in a certain area. This intelligence was usually obtained from interrogations or volunteered by local people. (Often these people would inform on each other in an effort to have us go in and disarm their opponents.) Although much of this intelligence had to be accepted with some skepticism, we eventually developed a good idea of where selected bandit groups were in the valley.

One of the areas of frequent bandit activity was the airfield south of Afgoi near the small village of Lantabur. This airfield was the main site in the country for the delivery of *khat*, the mildly narcotic stimulant grown in Kenya and chewed by most of the people in Somalia. Its traffic was very profitable, and many of the bandits in the valley either

participated in the khat trade or preyed on the traders. Unfortunately, they also preyed on normal commerce in the valley.

The airfield was a constant hub of activity, and our intelligence about the banditry in the vicinity was fairly consistent. The battalion decided to conduct a cordon and search of this area to catch the bandits in the act. We placed a clandestine observation post (OP) at the airfield, which gave us a confirmed base of intelligence on the periods of maximum activity there.

The reconnaissance plan for the operation called for the antiarmor section of Company A to be inserted on 13 January to observe the airfield for up to three days. It would catalog flights and the number of people and vehicles present at any given time. Because of the relative openness of the terrain, a single OP from the treeline to the end of the airfield was considered enough. A reaction platoon would be about five kilometers away, with the retransmission element, in case it had to reinforce the antiarmor section because of enemy contact.

If the pattern of daily activity held true, on 16 January the battalion would conduct a cordon and search of the airfield (Figure 2). Only one company-sized element was available for the operation (one company was in Baledogle for airfield security and another was conducting port security in Marka). The cordon would have three blocking positions, one inserted by air and two by ground. The western flank of the cordon, consisting mainly of open ground, would be secured by helicopters.

Unfortunately, during the early morning hours of the 14th, the HMMWV (high-mobility multipurpose wheeled vehicle) that was inserting the antiarmor section got stuck in a conspicuous place along the trail. Although it was camouflaged as well as possible, it was likely to attract attention, and we did not want to lose the element of surprise. Company A immediately launched along the beach to link up with the reaction platoon and get into position east of the OP. A resupply convoy, which was headed to the Baledogle airstrip under the battalion executive officer (XO), was dragooned into providing the southern

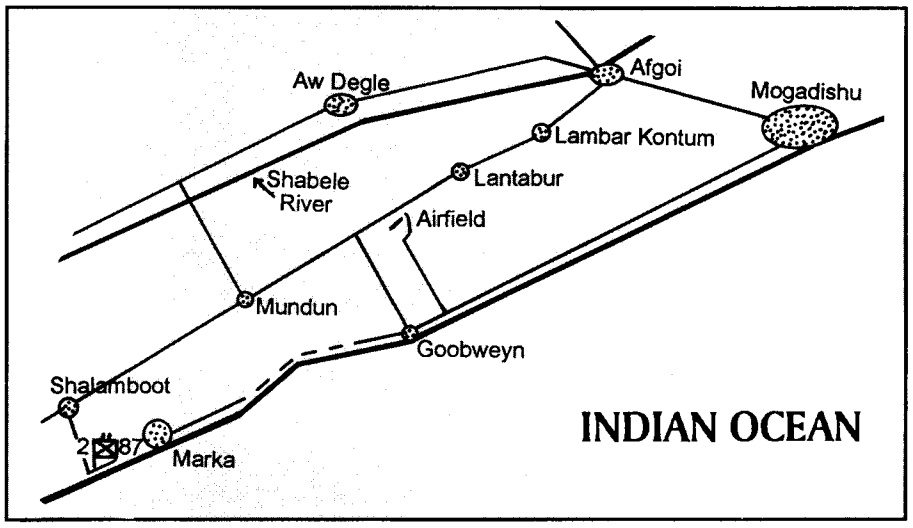


Figure 1

blocking position. Coordination was made for aircraft, but the only ones available were two UH-60s that made daily logistics flights, and these were given to us until 1200. When the antiarmor section reported a tremendous amount of activity at the airfield, the commander decided the operation would be carried out at 1100, the earliest that all ground elements would be in position and the aviation elements able to execute.

The adjusted scheme of maneuver developed for the operation was fundamentally the same. Company A would provide the majority of the forces, with the Baledogle convoy occupying a blocking position along the main road south of the airfield. The company would move along the coast in HMMWVs and approach the airfield along the dirt track until they were short of the OP. The Baledogle convoy would hold in the vicinity of Mundun and then move up the road until it reached the blocking position. Simultaneously, Company A's air assault platoon was to land on the road south of Lantabur and north of the airfield. Upon discharging the troops, the helicopters would move off to positions west of the airfield to discourage escape attempts over the open ground. Once the troops were dropped off, Company A was to move in from the east and sweep through the airfield complex, searching all vehicles and huts for weapons and detaining any bandits who offered resistance.

The operation went off almost flawlessly: The two logistics helicopters dropped the air assault platoon at the same time the convoy rolled into position and set up a blocking position to the south. As soon as the Somalis saw the helicopters fly in and land the troops, the airfield came alive with vehicles leaving as fast as they could. Most of them traveled north and were stopped and searched by the northern blocking position. A few tried to go west away from the troops. Company A moved in from the east and began its search of the airfield and the few vehicles that remained. All key blocking positions in the cordon were established almost simultaneously.

The helicopters performed their role flawlessly, pursuing vehicles that tried to escape in their direction and herding them back to the road and our checkpoints. The aircraft were assisted by elements of the 3d Battalion, 17th Cavalry, which was conducting operations in the area. After hasty face-to-face coordination on the ground, the cavalry commander agreed to provide one gunship and two scouts to help our battalion maintain the western end of the cordon. The five helicopters were quite intimidating and succeeded in keeping the Somali vehicles on the road. They were also a key factor in discovering the Somali bandits who were inclined to fight. No vehicle that was inside the cordon escaped the search.

The vast majority of the vehicles searched carried nothing but khat, which

we let the occupants keep. We picked up about a dozen discarded rifles on the road leading to the checkpoint, but found the really big haul in two abandoned dump trucks at the airport—box after box of small arms ammunition, hundreds of rifle grenades and rocket-propelled grenade (RPG) rounds, along with three heavy machineguns, an RPG-7, and a 75mm recoilless rifle. Apparently, we had interrupted a major weapon shipment from an arms cache in our area of operation (AO) to the warlord forces in Mogadishu.

The search of all the vehicles stopped by our checkpoints concluded around 1400, and all elements returned to the battalion base site at 1530. We learned several valuable lessons from this cordon and search effort:

Human intelligence is vital to this type of operation. All of the intelligence we used could be directly attributed to a human source or to U.S. confirmation of such a report. The importance of having interpreters in a unit cannot be overstated. This operation could not have occurred without the excellent intelligence gathered by the companies and their interpreters in the course of daily operations.

The antiarmor sections of light infantry companies are useful for reconnaissance operations in a low-intensity conflict environment. The additional 13 men give the company commander a dedicated reconnaissance element. This dedicated element was especially important to our operation, because the battalion scout platoon was already committed to another mission.

Detailed reconnaissance of routes to and from the objective area should be conducted whenever possible. Whenever a vehicle passes through an area or down a road in an AO, the occupants should report the road's trafficability and terrain conditions to the S-2 as part of a standard debrief. (The HMMWV that got stuck was on a trail that had not been reconnoitered.)

The units on all sides of the cordon must emplace themselves as quickly, and as simultaneously, as possible. Otherwise, enemy elements may manage to slip out on the unoccupied side.

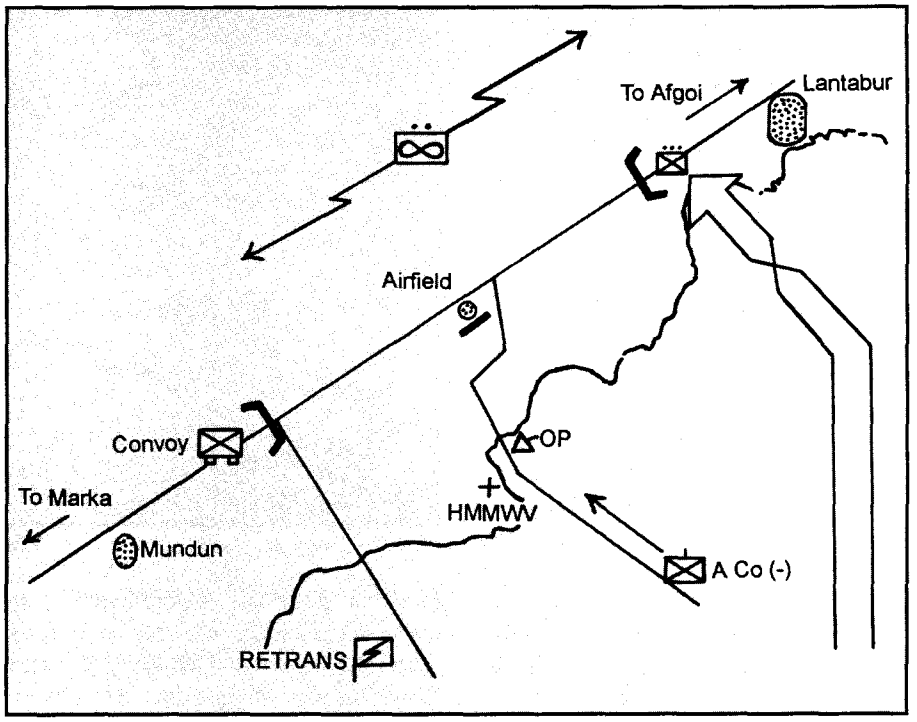


Figure 2

If the cordon is emplaced by dissimilar means (air and vehicle), their movements must be synchronized.

Ideally, all sides of the cordon should have ground elements. In our case, securing one side of the cordon with screening helicopters was an expedient made necessary by the lack of troops available, and made possible by the openness of the ground. To prevent holes in the cordon, each unit must have visual contact with its flanking neighbors.

HMMWVs are the best ground vehicles for this type of operation. In Somalia, HMMWVs were far more mobile than any local vehicle we encountered. Their ability to maneuver over rough terrain and to seal the encirclement quickly with mounted infantry was decisive in this operation. Somali vehicles, even those with four-wheel drive, are almost all roadbound, and a cordon that blocks all roads should be effective in limiting vehicle escapes. Because of poor maintenance and overloading, few of these vehicles were capable of cross country movement.

A checkpoint or blocking position does not have to be large; a squad with an automatic weapon is enough. A vehicle should be included in each blocking position or checkpoint, if possible, to imply mobility and firepower by its presence.

Everyone involved in an operation of this sort must be responsive to changes in plans. When the execution date for our cordon and search operation was moved up, the scheme of maneuver had to be modified almost "on the fly." Subordinate commanders have to be able to react to quick fragmentary orders. Because the synchronization of elements sometimes occurs during movement, all leaders involved in the operation must also have a clear understanding of the commander's intent. Although the schedule and the details of our operation changed, the overall intent—establishing a simultaneous group of blocking positions around the airfield—remained the same.

Often critical assets, such as aircraft, are limited by competing demands in theater. Although we had four aircraft laid on for the morning of the 16th, they could not be dedicated to us for a three-day period. In addition to the logistics aircraft we got for two hours, a scout–gunship team was placed under our operational control, and another OH-58 was loaned to us for command and control when the cavalry

commander and his aircraft showed up to coordinate training in our AO. Although all of these were obtained well inside the normal request windows, all operations staffs recognized the fleeting nature of the tactical opportunity. The accelerated coordination of air assets to execute the operation two days early was an excellent example of cooperation between units.

Four UH-60s should be placed under the operational control of the battalion for the duration of the operation so it will be better able to react to changes in the situation. In spite of the coordination successes and the cooperation of the aviation element, we were lucky to be able to proceed with this operation: If the aviation battalion had not had a logistics run to Marka scheduled that morning and agreed to let us use the aircraft for troop movement, the operation probably would have been canceled.

Operation staff members should always look for ways to blend the assets used for one mission into another, if it will not detract from the completion of either mission. In an environment such as Somalia, where a battalion can be conducting three or four operations at the same time, this blending of assets can be important. For example, the resupply convoy to Baledogle provided the perfect ad hoc southern blocking position along the main road. All that was needed was some quick coordination with the XO, and the convoy performed its role flawlessly.

Helicopter gunships are a tremendous psychological advantage, especially in open country. The bandits in Somalia would abandon their weapons rather than fight the gunships. The gunships were also instrumental in herding any stray vehicles back onto the road.

Because of the distances from the objective area, retransmission elements are often needed for effective communications between the reconnaissance element and the battalion headquarters. These elements must be emplaced clandestinely, preferably at night, off the beaten path and camouflaged, in positions that are known through prior reconnaissance to fit the required communications profile. They must also have attached security elements.

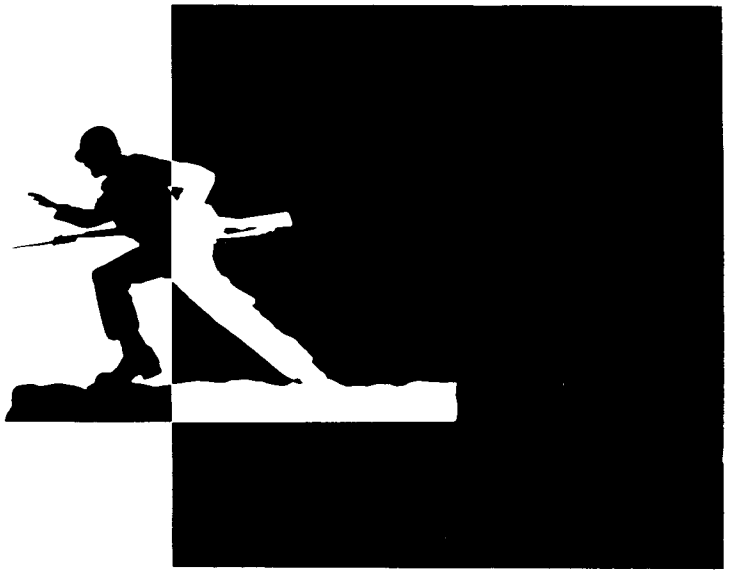
Mine detectors are sometimes essential in searching for buried weapons in yards or under floors. Units should observe fresh-turned earth and sweep all fresh graves. Although mine detectors were not used in this operation, weapons were found in fresh graves during an operation in Kismayu.

TOW vehicles are useful in cordons established on terrain with greater intervisibility distances. If a TOW platoon had been available for the airfield operation on 14 January, it could have been used on the western side of the cordon instead of the helicopters. If the cordon remains after dark, soldiers on these vehicles have the thermal sights to pick up movement and the mobility to go and check on it.

Troops need to learn to look for concealed weapons. Weapons can be found on roofs, under floors, in latrines, or broken down and hidden in wells and cisterns, wrapped in plastic bags.

This was the first of many successful cordon and search operations conducted by the 2d Battalion, 87th Infantry. The common element in these operations was the greatest possible reconnaissance and intelligence gathering during the time available. Also contributing greatly to success were the simultaneous cordon around the area to be searched and the ability of leaders at all levels to react to rapid changes in the situation. The success of this operation and others was a testimony to the ability of these leaders to do just that.

Major Martin N. Stanton was S-3, 2d Battalion, 87th Infantry, 10th Mountain Division, during its operations in Somalia. He previously served in the 2d Battalion, 2d Infantry, at Fort Lewis. He is a 1978 ROTC graduate of Florida Technological University.

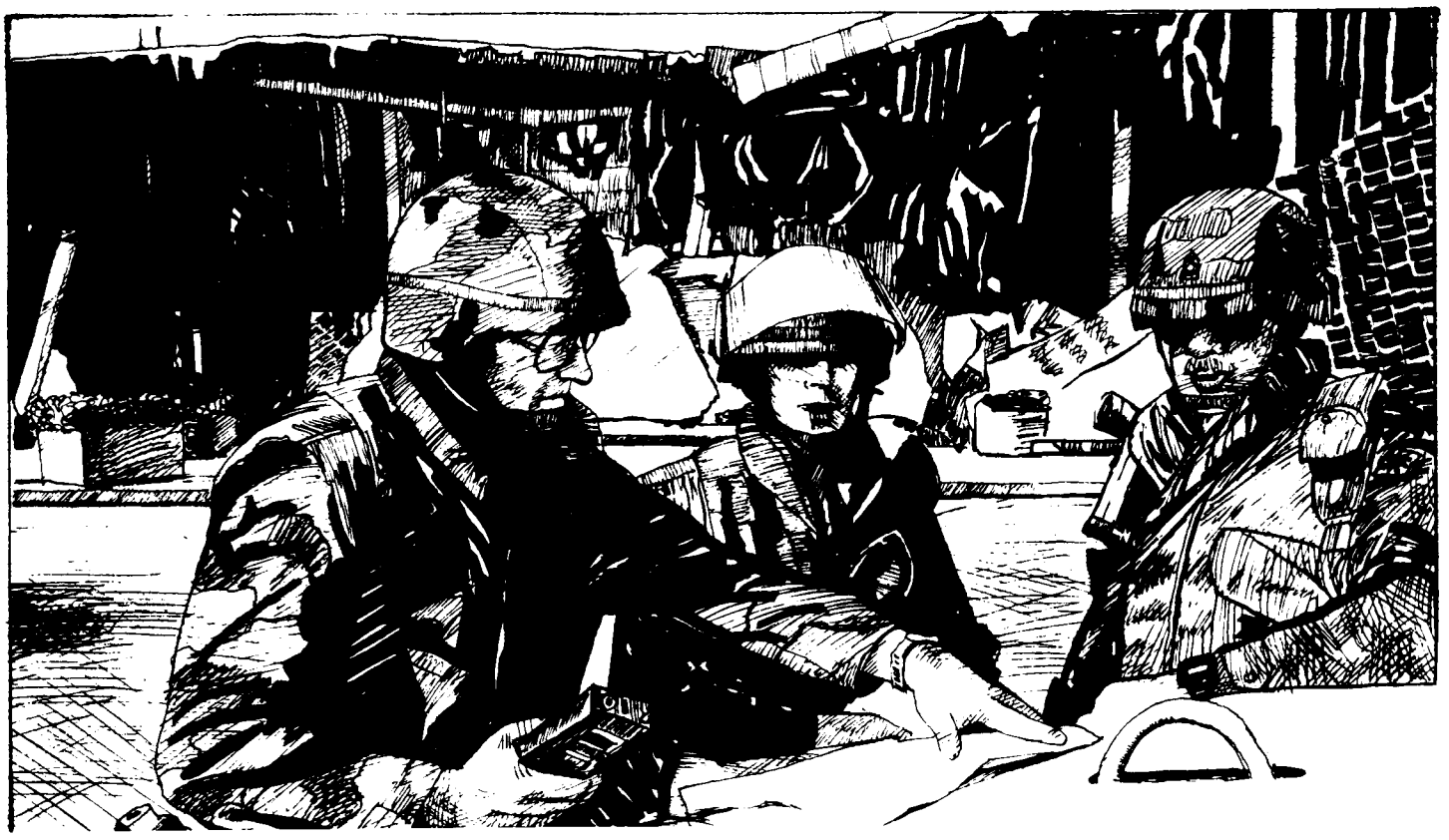


FIFTY YEARS AGO IN WORLD WAR II
NOVEMBER-DECEMBER 1944

By the winter of 1944, the Axis Powers' dream of victory had been replaced by the harsh realities of battles lost, fleets sunk, and cities bombed. In the Pacific, liberating forces were closing in on the Philippines, U.S. submarines prowled the waters off the home islands of Japan, and in China Japanese Army units were crumbling under the relentless pressure of Chiang Kai-shek's forces. In Russia, the grip of yet another winter was tightening on German armies once thought invincible; they were now forced to fight with dwindling resources, dependent upon supply lines threatened by the most massive partisan effort in history, and against the ever-growing strength of the Soviet ground and air forces. In Europe, American and Allied military strength had swelled in the five months since D-Day and had gained momentum in spite of bitter German resistance. The end was in sight, and in six more months the European war would be over.

These and other highlights of World War II are excerpted from Bud Hannings'* A Portrait of the Stars and Stripes, Volume II, *available for only $50.00 from Seniram Publishing, Inc., P.O. Box 432, Glenside, PA 19038.

2 November	*The 323d Infantry Regiment, 81st Infantry Division, attacks to dislodge a determined Japanese force on Peleliu, Palau Islands.*
4 November	*The Second Ukrainian Front seizes objectives en route to Budapest, in the face of fierce German and Hungarian resistance.*
12 November	*British Lancaster bombers sink the German battleship Tirpitz in Norway's Tromso Fjord.*
14 November	*Elements of the U.S. 90th Infantry and 10th Armored Divisions force crossings of the Moselle River in France.*
16 November	*When his squad of the 95th Infantry Division is caught in a crossfire, Staff Sergeant Andrew Miller singlehandedly assaults and overwhelms a machinegun crew at bayonet point, then knocks out a second gun, killing two enemy, wounding three, and capturing two. He wipes out another machinegun by himself on the following day and displays similar astonishing heroism on at least two other occasions, until he is killed in action in Germany. He is posthumously awarded the Medal of Honor.*
25 November	*In the British Eighth Army area of Italy, elements of the Polish 2d Corps cross the Marzano river, while the British 4th Division advances to the Lamone River, permitting the Indian 10th Division to drive north against stiff German resistance.*
8 December	*Private Elmer E. Fryar, U.S. 511th Parachute Infantry, singlehandedly holds off an entire Japanese platoon, killing at least 27 and preventing his company from being outflanked. He later jumps in front of his platoon leader, taking a sniper's bullet; mortally wounded, he throws a grenade, killing the sniper. Private Fryar's valor and self-sacrifice are recognized by the posthumous award of the Medal of Honor.*
16-26 December	*The Germans' planned stroke to demoralize U.S. forces with a decisive defeat materializes in the Battle of the Bulge. Although directed against U.S. 99th Division units still recovering from the carnage of the Huertgen Forest, the German penetration is slowed, brought to a halt, and eventually reduced by units rapidly shifted to meet this new threat. A key event of the Bulge is the relief of the embattled 101st Airborne Division that sustained losses of 1,541 officers and men in the defense of Bastogne.*



EARTHQUAKE `94: Operations Other Than War

LIEUTENANT COLONEL WILLIAM V. WENGER

At 0431 on 17 January 1994, the greater Los Angeles area experienced an earthquake that registered 6.8 on the Richter scale. In a few hours, the 3d Battalion, 160th Infantry (Mechanized), California Army National Guard, was mobilized to help civilian law enforcement agencies protect citizens and property during the rescue and recovery period, and in an area that spanned 350 square miles.

Mobilization for emergencies was nothing new for the 3d Battalion. This was the fourth time in less than two years that it had been mobilized to deal with state emergencies:

In April 1992, when the most costly and deadly civil disturbance in U.S. history broke out in Los Angeles, it was the first tactical battalion called to duty, the first to deploy to the streets, and the last to demobilize almost a month later. *(See Colonel Wenger's article, "The Los Angeles Riots: A Battalion Commander's Perspective," in INFANTRY, January-February 1994, pages 13-16.)*

After intensive training following these operations, the battalion was mobilized in February 1993 as the task force headquarters to test the revitalized concepts and procedures that had been incorporated into new contingency operation plans. This highly publicized mobilization demonstrated to the citizens of Los Angeles and of California as a whole that the National Guard had successfully addressed the procedural problems noted during the riots and was now well prepared to execute any future civil disturbance contingency mission.

In April 1993 the governor again mobilized the battalion as the Guard task force headquarters in anticipation of a disturbance resulting from a highly publicized civil rights trial. As always, the battalion's 12 companies spread over the greater Los Angeles metropolitan area, and the soldiers consistently performed above standard.

Now, in a shaken, blacked-out, and frightened Los Angeles, the call went out once again, and by 0830, I was ordered to mobilize the battalion. By that time, some of the junior leaders were already involved in offering assistance to the public. About 0600 a platoon leader had notified me that 100 to 200 people displaced from their homes by the earthquake were seeking sanctuary in the armory in Glendale. At about the same time, a staff sergeant of the communications platoon had begun organizing the homeless, who are sheltered each winter in the battalion's armories, as they are in other Guard facilities. Other soldiers, anticipating the mobilization, had begun arriving on their own initiative between 0700 and 0800.

Contacting the battalion's soldiers, who live in a 250-mile radius from headquarters, was difficult because of damaged communications. The telephone systems in the Los Angeles basin were only marginally operational. (The 911 system was completely out.) Cellular units and paging systems were working but were jammed with calls. As a result, more than 30 percent of the soldiers in each company simply could not be reached by telephone. Others were delayed in getting to their armories, some of them for as much as a week, because of damaged road networks (14 major roads and freeways were closed).

More than 30 percent of the soldiers in each company simply could not be reached by telephone. Others were delayed in getting to their armories, some of them for as much as a week, because of damaged road networks.

Despite these difficulties, the battalion mobilized more than 250 soldiers within six hours and more than 400 within 12 hours. The success of the battalion in mobilizing so rapidly was directly attributable to the emphasis that had been placed on accurate, workable telephone trees, and monthly practice alerts, along with the initiative and dedication of the individual soldiers.

Preparations to Deploy

Within the first 30 minutes of mobilization at the Inglewood armory, the battalion tactical operations center (TOC) had set up maps and communications and was gathering intelligence on earthquake damaged areas.

At first the only information came from news reports or word of mouth. Our priority intelligence requirements were to determine the most seriously affected areas, the nature and extent of the damage, and which routes were open. For operational planning we had to find out where and in what strength our soldiers would be needed, the missions we were most likely to receive from law enforcement, and the routes we would be able to use to get to our mission sites.

The battalion's intensive and detailed training during the previous 18 months certainly helped it respond to this mission. The armory security procedures—the logging in of personnel and the preparation of vehicles and equipment, including platoon and company deployment equipment packages as well as contingency armory security and communication plans—were immediately implemented in accordance with tactical standing operating procedures (SOPs).

At approximately 1100, we received a warning order from 1st Brigade to be prepared to deploy on order with full field gear, weapons, 40 rounds of 5.56mm per M16, 14 rounds of ammunition per .45 caliber pistol, and riot control equipment (gas masks, batons, flack vests, and face shields). This equipment—dubbed "L.A. Gear" by the soldiers—was to be issued to them only upon receipt of the order to execute.

Within the available time, the unit's noncommissioned officers conducted refresher training on the use of deadly force. The soldiers received briefings and handouts on arming order levels, rules of engagement, and news media relations. They also received precommitment legal briefs for their mission. *(INFANTRY will send the contents of these handouts to anyone who requests them. The address is P.O. Box 52005, Fort Benning, GA 31995-2005.)*

At this point, no one outside the highest levels of command, either military or law enforcement, had been informed of possible missions. By mid-morning, however, it was obvious that most of the hardest hit areas were in the San Fernando Valley. To narrow the focus of our planning to the areas most likely to require assistance, I dispatched an unorthodox but appropriate reconnaissance and liaison team of two senior noncommissioned officers (NCOs) to make contact with police divisions and stations in the badly damaged West Valley areas. Both of these NCOs had worked extensively with law enforcement personnel in preparing for civil disturbances.

At approximately 1900, an order was issued. The 3d Battalion, 160th Infantry, would go to task force status with company-sized attachments of forces from one other infantry battalion, two artillery battalions, and one forward support battalion, for a total force of 800. These forces would be the on-the-street contingent of the 1,500 soldiers required for the division's overall operation. This order permitted the task force to issue riot control equipment, weapons, and ammunition, as of 1840. At 2124 I received orders to execute the plan, along with a specific deployment area and a Los Angeles Police Department (LAPD) point of contact.

At 2145 I led the first units to deploy to Laurel Plaza shopping center in North Hollywood. (The San Fernando and San Gabriel valleys—usually a blanket of city lights—were now almost entirely blacked out.) After a convoy of a little over 20 miles, we arrived in our area of operations and coordinated

with the West Hollywood Division of the LAPD. Within an hour, a company (plus) of soldiers was deployed over an area of 15 square miles to guard shattered malls, stores, and shopping structures. That night, the task force established its unit maintenance collection point (UMCP) and tactical command post (TAC) at the shopping center.

Missions

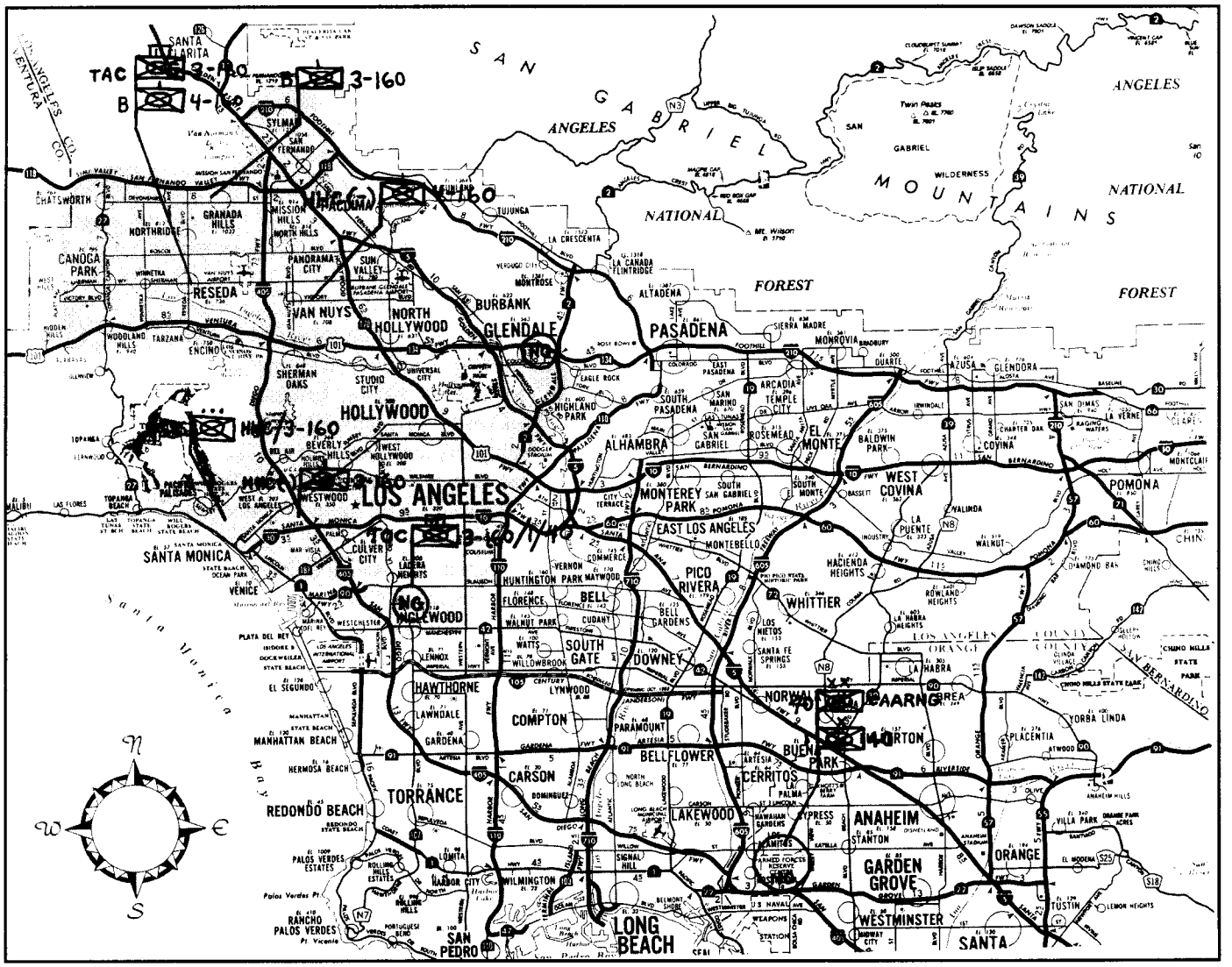
Under the direction of the LAPD, the missions of the task force included guarding apartment complexes; preventing looting in residences, shopping centers, and commercial buildings; and preventing residents from entering until authorities could inspect the damage and, in some cases, permit them limited, escorted entry to recover vital personal possessions.

Other missions included directing traffic, controlling crowds at distribution points, patrolling many city parks (where 30,000 people had camped), guarding the Federal Emergency Management Agency (FEMA) disaster MASH (mobile army surgical hospital) site, and patrolling various relief application centers and distribution sites. Later, the task force helped the division support command and the Air Force National Guardsmen erect and protect tent cities that would ultimately shelter more than 6,000 people.

Areas of Operations

The task force's various areas of operations were separated by distances of 40 to 60 miles. Units were spread over a radius of more than 25 miles from the TAC and 45 miles from the TOC. During the first days, when communications were limited, this dispersion caused considerable difficulty in command and control. The map shows a typical mission deployment and the scope of the area of operations.

Our operations began to take on a pattern that became better organized and more coherent over the next few days. For the first week, missions that originated as requests from the police divisions (in the form of 20-man military unit, or platoon, packages) were sent to the regional state office of emergency services, where they were prioritized and sent to the county emergency operations center. There, the county sheriff, with the aid of military liaison personnel, prioritized the missions, which were then passed to the division headquar-



Basic map used by permission of the Automobile Club of Southern California

or three hours of sleep. The rotation therefore became more like standard guard post operations. In this manner, the mortar section, for example, was able to man a series of posts in West Los Angeles for more than 72 hours.

After the first week, it was unclear whether this mobilization would end in a few days or continue for more than 90 days, as in the call-up for Hurricane Andrew relief. A decision was therefore made to leave the task force headquarters in place and call in 525 volunteers from six battalions, primarily from outside the earthquake-affected areas.

A relief-in-place was planned and executed on the night of 24 January, under considerable political and media scrutiny. The relief went so smoothly that many law enforcement officers were unaware that new troops had replaced their severely fatigued comrades, a superb operational and logistical achievement.

Three days later, with equal precision, the task force coiled itself up at the West Valley Division station, accounted for its personnel and equipment, checked and dispatched, and headed for their home armories spread over half the state.

Arming Orders

The arming orders used during this deployment were more realistic than those used during the 1992 riots, and they allowed the local commander more discretion.

During the riots, Arming Order 1 had required soldiers to patrol many dangerous areas with the ammunition consolidated under the control of the NCOs in charge, often hundreds of meters away from them. This level could be escalated only with approval from commanders at division level or higher. The revised arming orders required each soldier with an M16 or M203 to deploy with 40 rounds in two magazines and each soldier carrying a .45 pistol to have 14 rounds in two magazines. This ammunition was to be carried in their respective ammunition pouches. Local commanders could increase these levels under certain pre-designated conditions and with the knowledge of the chain of command.

As it turned out, however, there was generally little requirement for our soldiers to use immediate deadly force. The original response of the police and the Guardsmen, combined with the mayor's immediate imposition of a dusk-to-dawn curfew for the first three days, significantly reduced the potential for civil disturbance. After a risk assessment, and with the concurrence of the brigade commander, I therefore reduced the arming order level to the old AO-1, with the NCOIC keeping the consolidated ammunition.

Later, however, at the parks and tent cities where 30,000 displaced persons sought refuge, crowds with known gang members became rowdy and tense over areas of park "turf." Twice, the company commanders responsible for keeping order in the parks requested and received permission to return to the new AO-1 levels for specific periods. During Phase II of the operation, 1st Brigade ordered that all soldiers in the task force deploy at the new AO-1 level, in possession of their own ammunition.

The deployment of armed soldiers on the streets of our cities requires thorough training on arming orders, rules of engagement, and fire discipline. It also demands frequent risk assessment and adjustment by the local commander as circumstances change. Our troops again proved that well-trained, disciplined soldiers are perfectly capable of accepting these responsibilities.

Communications

As during the riots, communication was initially weak in this operation. Cellular phones and pagers were the primary means for the first three days of this mobilization. Tactical FM radios are useful in widely dispersed urban operations only with well-employed retransmission support. In the built-up urban mission areas, the limited number of AN/PRC 77s in a mechanized battalion are only marginally useful in the local two-mile to four-mile radius.

The deployment of armed soldiers on the streets of our cities requires thorough training on arming orders, rules of engagement, and fire discipline. It also demands frequent risk assessment and adjustment by the local commander as circumstances change.

As soon as it was determined that the probable area of most serious damage and likely deployment was the area around Northridge, Reseda, and Woodland Hills, I directed that a retransmission team be dispatched to find a position in the Santa Monica Mountains. After considerable effort and testing of five or six widely separated locations, the team set up at the Stephen Wise Temple. For the next week, this team maintained an FM link between the battalion TOC in Inglewood and the TAC in the Valley, as well as our armory in Glendale, over distances of 25 to 50 miles.

Cellular phones were made available from higher headquarters faster than they had been in the riots but still not in sufficient numbers. After the first 72 hours, county FM radios (Ericsson G.E., FM M-PA16, 25-frequency, FCC ID No. AXA TR-188-A2) were provided to all levels of command down to and including deployed platoons. These excellent hand-held radios permitted the battalion's soldiers to talk on a dedicated battalion frequency to anyone in the greater Los Angeles basin. They also had an emergency 911 frequency that linked all law enforcement and fire agencies. When necessary, a radio could be tuned to a frequency designated for other deployed units. Local law enforcement also issued a few LAPD "Rover" FM radios (Motorola MX350, eight-frequency, plus "officer down" button). These were naturally in short supply but were given to soldiers in platoons and squads as a link to local police and stations as circumstances permitted.

This cartoon by Dick Wallmeyer appeared in the January 19, 1994 issue of the Long Beach Independent Press Telegram (used by permission).

Although communications were definitely better during this deployment, there is still room for improvement. While the Ericsson radios were great when they worked, the ones issued to the National Guardsmen had a major drawback. The powerpack, a cumbersome clamshell arrangement requiring 12 AA batteries that is supposed to last two days, often lasted as little as 15 minutes, depending on the frequency and duration of use. A nickel-cadmium rechargeable battery, or single disposable batteries, would be a distinct improvement.

Pre-positioned push packages of cellular phones, Ericsson radios, and Rover radios should be purchased in sufficient quantities to provide adequate communications for a 1,500-man force. These packages should include at least a seven-day supply of batteries in company-sized (100-man) units. These could be sent to the using units immediately upon mobilization. Adequate maintenance support for these communication devices should be provided by the signal battalion and pre-arranged civilian contractors under the direction of signal battalion soldiers attached to the deployed units. The mobilization of at least a portion of the division signal battalion for retransmission and support to the tasked units would help solve these communications problems. An airborne retransmission station of the Air National Guard would also be a feasible augmentation. As of the summer of 1994, the 40th Infantry Division (Mechanized) was equipped with Mobile Subscriber Equipment (MSE). This system is useful, but only if signal battalion reserves are mobilized to support it; the system will take some time to set up.

Future military disaster relief operations must include designated National Guard cellular phones for emergency use only. The cellular phone companies are planning a system that parallels conventional phone service in which all but selected pre-arranged phone numbers will be blocked in emergencies. If we plan ahead, this will greatly facilitate emergency communications, including the military.

An evolving avenue on the information super highway may also facilitate military aid to civil authorities in emergencies. The California State Office of Emergency Services has established a network called the Emergency Digital Information Service (EDIS), also known in Los Angeles as the Emergency News Network. This is a radio and modem-line linked system that communicates a wide variety of emergency data. Current users of this network include news agencies, FEMA, the State Office of Emergency Services, the U.S. Health Department, and the California Institute of Technology Seismological Center. FEMA is interested in expanding this network nationally, perhaps with satellite linkage.

The National Guard, with a modest investment in planning and adaptation of existing systems, could monitor the network for critical data as it became available during emergencies. Also with proper access coordination, the Guard could enter data in the system by modem to coordinate with the news media for assistance in mobilizing units when other communications systems are inadequate, and for coordinating with other disaster relief agencies. This and other emerging technological aids, such as emergency TV cable data links, should be examined and included in military planning wherever appropriate.

Logistics

One frustrating situation for all levels of the task force was the catered Class I arrangement. Our caterer, who had

worked closely with the battalion during the mobilization in April 1993, provided great food and worked long hours. During the first week, however, when the missions were received so late, getting food to the widely dispersed soldiers was very complex, and it was often delayed. This problem, especially during the first four days, was made worse by inadequate communications.

The problem was soon solved, however, by feeding between 0400 and 0600 and again between 1800 and 2000, so all soldiers could either eat before the deployment or upon returning to the staging area. This rescheduling was improved by our decision to co-locate the TAC and the bivouac area for the entire task force at West Valley Park, beside the West Valley Division of LAPD where most of the battalion was deployed on 17 January. Before this time, we were unsure of the threat level on the streets and were operating out of secured armories as we had during the riots.

Until the last days of the mobilization, our medics did not have enough medical supplies (Class VIII) to cope with the heavy demands of the displaced persons. About 23 January, medical resupply became available through both military and FEMA support channels.

Class III resupply—POL (petroleum, oils, and lubricants)—was no problem. Adequate stocks of DF2 at the undamaged state maintenance facilities, combined with government credit cards for purchasing POL and relatively safe conditions for its transit (compared to conditions during the riots), allowed efficient and timely resupply. A more severe natural disaster, or one involving civil disturbance (such as loss of electrical pumping power) would significantly alter this picture. Proper logistical support, of course, is a critical component of thoughtful and thorough contingency planning.

Maps

As during the riots, a hodge-podge of maps was used. The lack of standardized maps of uniform scale and detail throughout the mobilized forces was a problem. One of our best maps for planning for the entire affected areas was a series of maps that had been stored at our headquarters since the 1965 Watts riots.

Later in the operation, we relied on a combination of maps that the Southern California Automobile Club generously supplied in abundance, and the reporting district maps of the LAPD and Fire Department. These are standard letter size (8.5x11), large-scale, easy-to-use maps with numerically designated small reporting areas. Such maps are common in most metropolitan areas.

Training

The training focus for the Army's reserve components is currently squad and platoon proficiency. But I have had the unusual experience of deploying and maneuvering an entire armed battalion task force across greater Los Angeles twice in less than two years, and the improved command and control and logistics proficiency that resulted will be included in my annual Training Management Assessment. I strongly advise that units that have been deployed on such operations be evaluated on the skills they have developed, based on their respective METLs (mission essential task lists). Active Army training brigades should also be activated to observe and evaluate the mobilized units.

As a result of the mobilization, with input from the company commanders, I was able to rate my METL (mission essential task list) and battle tasks (as stated in the battalion's training plan for Training Year 1994) as "T" for trained in virtually all staff, combat support, and command and control functions.

"One Riot, One Hummer"

The story is told of one day in Dallas, Texas, during the last century, when a prize fight had been scheduled to take place, an event that was illegal at the time. The town was strongly divided on whether or not the fight would take place, and the governor was asked to send in Texas Rangers to forestall possible violence.

On the day of the event, the mayor went down to the train station to greet the expected Rangers and was surprised when a sole Ranger, the legendary Captain W.J. (Bill) McDonald, stepped off the train. Asked where the other Rangers were, McDonald is said to have replied, "Hell, you've only got one prize fight, haven't you?" Since then, a motto of the Texas Rangers has been "One riot, one Ranger!"

A similar episode took place on 21 January 1994, when the 3d Battalion, 160th Infantry NCO on duty at the Central Valley Emergency Response Center of the LAPD was called upon to dispatch soldiers to a food stamp distribution center. Distraught citizens at the site were becoming unruly, and the local government officials had requested National Guard protection.

Since all of the available Guardsmen in the area were committed on other missions, the NCO on duty decided to go himself, with the concurrence of the division police watch commander. Leaving the police emergency command post in his assigned HMMWV, the duty NCO drove to the food stamp distribution center, where a large crowd had gathered and was getting restless. He parked across the street from the center, dismounted, and walked over to meet with the local officials responsible for the center's operation. As soon as the crowd saw the military vehicle and the NCO, their tension and hostility visibly diminished, and a sense of calm and order was soon restored. Local officials were amazed at the effect that his arrival had on what could have become a dangerous situation.

The unofficial motto of the 1st Brigade is now becoming "One riot, one Hummer!"

Public Relations

Law enforcement agencies credited the Guard's rapid deployment with the 90 percent reduction in average daily arrests during the first five days following the earthquake. The community at large said the rapid deployment of the National Guard had a remarkable calming effect.

Citizens were often distraught, angry, and frustrated at being denied opportunities to recover personal possessions from their shattered homes and businesses. A severely damaged six-story office building that threatened to collapse into a major thoroughfare housed the offices of physicians, psychologists, and other professionals who were desperate to retrieve valuable records. And many homeowners had to be barred repeatedly from entering their homes to retrieve items valuable to them. Public relations, tact, and the firm-but-fair application of authority were important parts of this mission.

Future Operations

There is no doubt that the National Guard will again be mobilized to help civilian authorities deal with natural disasters somewhere in the country. If we are to provide effective forces for these missions, our planning and training must be improved and the necessary resources must be allocated.

A critical lesson the soldiers of our battalion had learned during the riots was strongly reinforced during the mobilization for the earthquake: Deviations from Army standards and trained military procedures—no matter how creative or well intentioned—are recipes for decreased effectiveness and even mission failure. We must stick to the basics of our Army SOPs, no matter how unorthodox the circumstances, while remaining flexible within this customary and uniformly understood framework.

Training should be geared to the dedication of a properly configured task force or battalion to a specific police jurisdiction, or a series of interlocking jurisdictions, to forge habitual training and operational understanding.

The ideal plan for urban emergency assistance to civilian authorities by the National Guard is a flexible contingency plan that designates a task force of about 1,500 soldiers under a single commander. This task force should include about 1,000 soldiers for actual deployment on the streets with the rest being a proper mix of command, control, communications, intelligence, and support. Enough combat service support elements must be allocated to permit sustained operations. Communications support must include maintenance and retransmission capabilities. Medical support must include one or more doctors of medicine and physicians' assistants, along with enough ambulances and Class VIII supplies for at least seven days of operation.

With the availability of significant quantities of materiel resulting from the drawdown, officials should consider using pre-positioned, variously configured, pre-palletized push packages of equipment and supplies. These packages could be planned at state, Army area, or national level. They could be mixed and matched according to the type, complexity, and projected duration of the contingency mission.

Maps used for emergency responses should be standardized, updated, and stocked in quantities for all relief agencies, including military. In the case of cities, I recommend the adoption of the police reporting district maps, which are available in Los Angeles in both small hand-held size and larger consolidated wall maps of LAPD division areas.

Training should be geared to the dedication of a properly configured task force or battalion to a specific police jurisdiction, or series of interlocking jurisdictions, to forge habitual training and operational understanding. During the riots we were often required to work with overlapping city and county jurisdictions within the same military area of operations. Military areas of operation should mirror police jurisdictions.

Properly configured, these Guard units would be assigned to a specific area on alert status for disaster relief and civil disturbance operations. This duty could then be rotated once or twice a year. A unit that is assigned a civilian support role should dedicate a larger portion of its training time and resources to that effort, while a unit not assigned to such a role could emphasize the more conventional warfighting skills.

The National Guard can expect to be called upon to provide assistance to civil authorities more frequently in the future. This trend is certainly prevalent in California, where 47 percent of the responses to national emergencies occurred from 1987 to 1992. Comprehensive and detailed planning on a state and national contingency basis, down to and including company and platoon levels, must be improved.

A sobering consideration for future planning is the fact that this earthquake, which occurred at 0431 on a holiday, still caused vast destruction, many injuries and deaths, communication problems, traffic jams, and major complications in emergency response. If it had occurred instead at 1631 on a workday, all of these problems would have been greatly magnified.

It is critically important that the lessons learned from the recent experiences in Los Angeles—as well as those learned in other areas after hurricanes Iniki and Andrew and the floods in the Midwest and the South—be evaluated and distilled into coherent, workable plans to respond to our inevitable future emergencies.

Lieutenant Colonel William V. Wenger commands 3d Battalion, 160th Infantry, 40th Infantry Division, California Army National Guard. He previously served as the division's assistant deputy chief of staff for intelligence and as executive officer and S-3 of the 140th Military Intelligence Battalion. Currently enrolled in the U.S. Army War College, he is an ROTC graduate of the University of California at Santa Barbara and holds master's degrees from California State University at Long Beach and Pepperdine University.

MOGADISHU, OCTOBER 1993:

A Company XO's Notes on Lessons Learned

CAPTAIN CHARLES P. FERRY

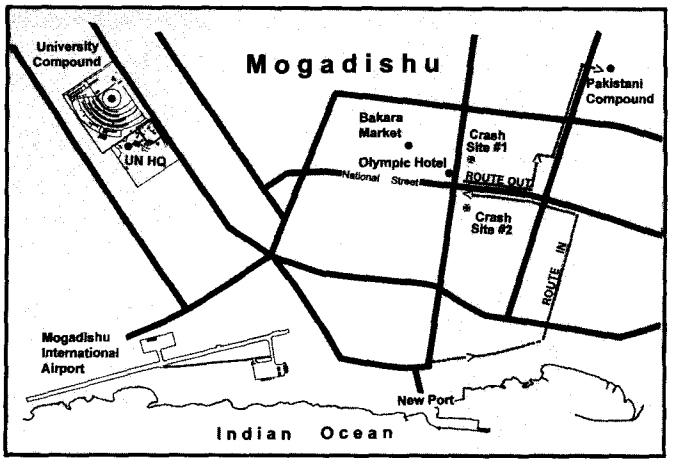
EDITOR'S NOTE: This article is the second in a two-part series on one battalion's operations in Somalia, which culminated in its breakthrough to Task Force Ranger on 3-4 October 1993. The first part, "Mogadishu, October 1993: Personal Account of a Rifle Company XO," was featured in INFANTRY's September-October 1994 issue. This second article details the lessons learned during those operations, from Captain Ferry's perspective as XO of Company A.

In the summer of 1993, the United States' only combat force in Somalia was the quick reaction force (QRF)—made up of one light infantry battalion, one attack and assault heli-

copter battalion, and a brigade headquarters. My battalion, the 2d Battalion, 14th Infantry, 10th Mountain Division, assumed the infantry battalion QRF mission on 1 August, and Task Force Ranger deployed to Somalia at the end of August.

By the end of September, every company in our battalion had been involved in several sustained firefights with Somali guerrillas and had suffered casualties. The culminating battle for the battalion was a breakthrough to the embattled Task Force Ranger on 3-4 October. For my company, this was a nine-hour battle in which we led the battalion attack into the surrounded Rangers' position, assisted in evacuating all casualties, and fought back out the following morning under continuous enemy small arms, RPG, and mortar fire.

During combat operations in this five-month period, I learned many lessons that I want to share with other units. These lessons apply specifically at company level and below:



Leadership

Field Manual (FM) 100-5, Operations, states that the most important element of combat power is leadership, and I am convinced that this is true. It was the officers and NCOs in the company who kept our attack moving during the breakthrough to TF Ranger, despite heavy enemy fire and casualties. Squad leaders and platoon leaders were most often at the very front of their units, leading the way. During many operations, the company commander was at the point of attack when the situation required it.

The soldiers saw the example of their leaders and never hesitated to follow them, often taking the initiative to act at great personal risk. The battalion commander was always with the companies on the ground, exposing himself to enemy fire like the rest of us, coolly directing the action by radio, when it may have been safer or easier to control the fight from a helicopter.

When leaders are convinced they can accomplish a mission, the soldiers will also be convinced. Despite taking several casualties during the fight into the Rangers' position, the company's junior leaders and soldiers knew we would break through, because the battalion and company commanders knew we could, and we didn't want to let them down.

A key part of leadership in the close fight is the ability to remain calm and influence subordinate leaders to do the same. When bullets are whizzing over your unit's head, and soldiers are being wounded or killed, it is imperative that leaders remain calm and forceful. Anything less and a unit could panic and lose the will to press the fight.

When giving directions on the radio, leaders should speak slowly and deliberately. Instructions are best, of course, given face to face when you can look a subordinate in the eye and know that he understands. Leaders must be prepared to show by example what they want done; when they are cool and calm, it spreads throughout the unit and reassures subordinates. Our battalion commander taught us that when under fire, we should stop, take a deep breath, calm down, figure out what's going on and where the fire is coming from, then forcefully direct our unit's actions to deal with the situation.

Preparations for Combat

The single best preparation for combat is tough, realistic live fire exercises (LFXs), starting at individual level and working up to company level where indirect fire and close air support (CAS) assets are integrated. Our battalion had conducted a series of squad, platoon, and company level LFXs in the few months before our deployment. These exercises included squad *react to contact/attack* drill; squad *enter and clear room*; platoon *react to contact/hasty attack* (day and night, integrated with mortars); and company *deliberate attack on a strongpoint* (both day and night phases, integrated with 60mm and 81mm mortars).

My company also conducted numerous LFXs while in theater, including a reflexive firing course, close quarters battle courses, platoon ambush, and deliberate attack. LFX training is best when all weapon systems can be fired—40mm HEDP (high-explosive, dual purpose), M72A2 light antiarmor weapons (LAWs), AT4s, bangalore torpedoes, and fragmentation grenades. Indirect fire assets are best when fired on the objective. During this training, the commanders took acceptable risks in allowing weapons to be fired danger-close; as a result, every soldier knew the feel of indirect fire as close as 70 meters and bangalore torpedoes as close as 15 meters, and they could tell the difference between hearing fire and receiving fire. LFXs give soldiers and leaders the best taste of what combat will sound and feel like. The extensive LFX training conducted by our unit saved lives and enabled the company to perform well under fire.

Discipline and esprit de corps are two factors that go hand-in-hand with leadership and are crucial in combat. Discipline was developed through tough physical training, road marches, field training, and military courtesy. One reason our unit was successful in combat was the excellent discipline and pride in the unit. Soldiers never questioned orders but did as they were shown or told, despite their fear. To some leaders, seeing a soldier doing pushups for a small infraction or a

junior NCO standing at parade rest may seem extreme, but it is that kind of discipline that makes soldiers react quickly to orders, and quick reactions save lives on the battlefield.

Tough, physically and mentally demanding physical training, road marches, and field training should bring soldiers to the brink of their endurance. It was routine for our battalion to conduct 25-mile road marches and eight-mile runs. These events were not popular with everyone, but they built up our mental and physical endurance. Tough, realistic training forged teamwork and our own confidence in our ability to do anything—regardless of the conditions. It developed our will to fight and never quit.

Hearing Fire vs. Receiving Fire

There is a very distinctive sound when enemy fire is coming at you. I observed or heard of several support or Allied units hearing fire and thinking they were receiving fire. The result was a one-way engagement with a lot of ammunition wasted and sometimes needless civilian casualties. On several occasions, our battalion received friendly fire from nearby support units guarding UN compounds; thinking they were receiving fire, they failed to make sure where friendly troops were or to control their fires. Fortunately, none of these incidents resulted in casualties to our unit, but they could have.

After many realistic live fires and our first firefight, everyone in the company knew the difference. Most important, when receiving fire, we would take that extra second or two to determine where it was coming from and then engage its actual source. Once you begin to engage a target, it is difficult to find where the enemy fire is coming from, particularly in military operations on urban terrain (MOUT). Fire control then becomes crucial when in contact.

Fire Control

Thousands of rounds fired down range won't do any good if they are not engaging the right targets. Worse still, it wastes precious ammunition and makes things even more confusing when leaders are trying to determine the source of enemy fire and identify targets. Friendly fire can also kill, and you must keep control of the situation to prevent fratricide, particularly in close combat. Leaders and soldiers identify targets and engage them, and then everyone nearby engages those targets.

Targets can be marked and identified with tracer rounds; M203 smoke, high explosive, or illumination rounds; voice and hand or arm signals; laser and infrared pointers; and the like. Our SOP was for fire team leaders to carry a 3:1 tracer mix; squad leaders to carry at least a 2:1 tracer mix; and platoon leader, platoon sergeant, XO, first sergeant, and commander to carry a 1:1 mix. I used a 1:1 tracer mix day and night to mark targets and direct fire effectively. It is well-placed suppressive fire, not the volume of fire, that silences the enemy and keeps his head down. Ineffective—or worse, no—suppressive fire allows him to engage your unit effectively and with impunity.

Fire discipline means using and directing your fires wisely. When an element is in contact, everyone seems to want to get in on it. During my first firefight, the platoon I was with fired a third of its basic load in the five minutes before we broke contact; in each engagement afterwards, our squads and platoons got better and better at fire control and discipline. None of our soldiers ever fired their M16s on burst—we found this wasteful, and semi-automatic fires were much more accurate and effective.

During the breakthrough operation, everyone carried a double basic load. Because of disciplined fires, most soldiers had at least some ammunition left after nine hours of sustained battle. In a firefight, leaders continually remind soldiers to watch their ammunition and know about how much they have left. During lulls in the fight, they should reload and redistribute ammunition. Resupply should be requested before ammunition is too low. In MOUT, danger-close is normal for most firefights. Most targets are engaged at 25 to 100 meters with all weapon systems, including close air support from helicopters.

A key part of leadership in the close fight—when bullets are whizzing over your unit's head and soldiers are being wounded or killed—is the ability to remain calm and influence subordinate leaders to do the same.

Ammunition, Weapons, Equipment

After our first firefight in August, we found that a normal basic load of ammunition was simply not enough. For years, I had been taught that 210 rounds of ammunition for an M16 would suffice in contact if I used fire discipline. They were right! It might last three or four hours in a sustained battle. But on 3-4 October, we were in contact with the enemy for more than nine hours, and the Rangers were in contact for more than 12.

Our basic load for Somalia included the following:

M16A2—210 rounds (including tracer) plus extra bandolier of 140 to 210 rounds. Some soldiers had extra magazines already loaded, while others carried speed loaders in their helmet bands and would reload during lulls in a fight.

M60 Machinegun—1,000 to 1,200 rounds per weapon. Assistant gunner carried rucksack with additional ammunition, and some of the rounds were often split among the squads if necessary.

M249 Squad Automatic Weapon—800 rounds. The M249 is an excellent weapon, but gunners and armorers need to pay close attention to keep the weapon in top operating condition. Areas such as the bipod legs, the feed tray cover, and other moving parts need to be checked and replaced before they become loose and cause jams. Using the M249 with magazines instead of belts of ammunition requires prac-

tice, and soldiers must be thoroughly trained with magazines if this is to be done smoothly and without losing fire power. Since the weapon is so light—compared to the M60—gunners need practice to deliver accurate fire at ranges beyond a few hundred meters. Mounting brackets must be carefully checked; otherwise, worn or broken ones will cause the 200-round magazine to fall off at the worst moment. In the absence of M249s, the M16 with an old attachable bipod can be used in the burst mode to provide accurate, reliable fire, although at a lesser rate than the M249.

M203—Gunners carried 20 rounds of HEDP, two red and green smoke, two illumination, and two rounds CS (tear gas). Sometimes, grenadiers carried additional bandoliers of HEDP rounds. The company commander's radio telephone operator (RTO) carried an M203 with extra red and green star clusters and smoke rounds for signaling and directing fires. Because of its light weight and its capabilities, the company commander may want to consider carrying the M203 himself.

In a MOUT environment, our M203 HEDP round was highly effective. In contact we would try to put red smoke on the area where enemy fire was coming from to designate targets for the company and attack helicopters. Our gunners put luminous tape on their leaf sights to use at night, and this was effective. M203 gunners rarely, if ever, get an opportunity to fire live rounds on live fire exercises. It takes a lot of range time for a grenadier to be able to consistently put rounds through windows at 50 to 75 meters at night and under fire. Our current qualification standards, which call for grenadiers to qualify every six months (Category 1), is not good enough. We spent lots of extra time with our grenadiers in theater to make them really good, and it paid off during enemy contact.

MK19 Grenade Launcher—We used HMMWVs mounted with the MK19 in the same way doctrine says to use tanks or Bradley fighting vehicles in the support-by-fire role. This was our most devastating weapon, and it was highly effective in suppressing or destroying enemy positions. During operations, elements attached to us from the antiarmor platoon were equipped with the MK19. The weapon's HEDP rounds can level unreinforced concrete buildings, or at least put large holes in them. Each vehicle carried at least seven or eight cases of ammunition. MK19 fires must be tightly controlled because of their destructiveness, and because a gunner will quickly run out of ammunition if his fires are not controlled. We delivered MK19 fires as close as 30 meters to friendly troops.

AT4 or M72A2 LAW—Since there was no armor threat in Mogadishu, we preferred carrying the LAW and usually kept our AT4s on a vehicle or carried them only for specific missions. The LAW is small and compact, and a soldier can carry three of them in place of one AT4. The LAW has a smaller backblast and is a bit safer to use in the tight quarters of MOUT. The effects of both weapons are good if correctly employed. If fired through unreinforced concrete, they create only small holes eight to 16 inches in diameter, but they can easily rip doors and windows off their frames, creating tremendous shock effect and an instant breach into a building.

Grenades—We used both concussion and fragmentation grenades for entering and clearing rooms. The fragmentation grenades were normally issued to leaders from fire team level on up. Because of the rules of engagement (ROEs), we preferred to use the concussion grenade. It has the same shock effect—only not so lethal; it doesn't cause as much damage to the structure; and it is safer to employ around friendly troops and noncombatants. Concussion grenades are also lighter to carry, and extras can be carried in M16 bandoliers.

Soldier's Load and Equipment

As light infantrymen, we had trained with heavy rucksacks on long road marches and infiltrations and always wore our Kevlar helmets. But we had not trained much wearing body armor, and the toughest thing to adjust to in Somalia was the added weight and heat of both the body armor and the basic load of ammunition.

The single best preparation for combat is tough, realistic live fire exercises, starting at individual level and working up to company level, where indirect fire and close air support assets are integrated.

If we are going to train wearing helmets, we should also train wearing body armor. In addition, we should use any available training aids to simulate loaded magazines, grenades, additional M60 ammunition, and the like, to get the soldier accustomed to carrying a combat load. For units whose missions call for rapid deployment to combat on short notice, this training should be mandatory.

The technology and equipment are also available to equip all soldiers with *real* bullet-proof body armor, such as that available to the Rangers. It is a bit heavier, but it saved the lives of several Rangers in Mogadishu. One Ranger during the early October battle was reported to have been hit three times in the chest by small arms fire, and each time he was able to get back up.

An infantryman's speed is his survival in close combat, and leaders must make hard choices in deciding what they need in the fight and what they can afford to have delivered later. Leaders always talk about lightening the soldier's load, but continue to overload him by not making the necessary support arrangements. To compound this problem, most light infantrymen tend to distrust their field logistical system, so they end up packing more than they can carry and still fight effectively.

The only things a soldier should have to carry into a firefight are ammunition, water, a small squad radio, night vision goggles, and maybe a butt-pack. Along with helmet, body armor, protective mask, and rifle, this load already weighs 60

to 85 pounds. Rucksacks with warm clothing, extra water, ammunition, batteries, sleeping bags, and so on should be pushed to the unit on call by the company supply sergeant or the support platoon. In Mogadishu, we kept most of this additional gear on the two HMMWVs we had in the company. Our company supply sergeant pushed our logistical packages (LOGPACs) out to us in the field or during many operations in the city. In some operations, we kept our company trains (two HMMWVs and one front-line ambulance) with the company. The intent was always to keep the soldier's load as light as possible.

Load bearing equipment (LBE) should be worn high up around the waist to allow the legs freedom of movement. The belts should be adjusted so they can be buckled comfortably. Protective masks should be worn strapped over the shoulder up high. This allows a soldier to run fast, perform individual movement techniques (IMT), or help carry casualties without his gear beating him to death. Nothing should be attached to the LBE shoulder straps (such as first aid pouches or flashlights) that interferes with firing the weapon and the comfortable wear of a rucksack. Everything on the LBE should be tied down or "quick-taped." This applies especially to grenades, which should be loaded onto the LBE low around the pistol belt, with pull pins checked regularly and the cotter pins properly butterflied. The pull rings must be secured so they cannot be snagged during IMT. The opening on the protective mask carrier should also be secured in the same manner (I used an extra helmet band to do this). M203 gunners should quick-tape all of the M203 rounds in the vest and adjust the vest snugly around the body. All weapons should have slings on them to leave a soldier's hands free to move casualties or equipment under fire. We preferred to use top slings so the weapon remained in the ready position.

Night vision goggles (AN/PVS-7 and AN/PVS-4) were vital to our operations, most of which were at night. In training, many soldiers and leaders do not like to wear the AN/PVS-7s on the head harness; they are uncomfortable and it takes some time to get used to using them this way. But in combat, everyone in our company used them with the head harness, and this gave us a big advantage against the Somali guerrillas, who had no night vision capability.

In a firefight, the goggles easily pick up small amounts of light and are excellent in determining where fire is coming from. Friendly soldiers are easier to identify, especially if marked with infrared chemical lights or luminous tape. Leaders can better direct their fires and detect the impact location. At night, a soldier without the goggles can tell where tracer rounds hit on hard targets, but the AN/PVS-7 enables him to see where regular ball ammunition hits against hard targets or buildings. With some practice, a soldier can aim his weapon and engage targets at close ranges while wearing these goggles. Many soldiers, including me, became adept at running and performing IMT while wearing them.

Demolitions

We used demolitions on many operations in Mogadishu. Typically, a light engineer squad attached to the company was our primary demolitions team. The squad's favorite charge for breaching the walls of compounds or houses was the "picket charge," a three-foot engineer stake packed with four to 12 pounds of C4 explosive. The flat edge of the picket was placed up against the wall and held in place with another stake until detonated with a non-electric charge. The backblast was about 50 meters straight back, and there was some danger of flying projectiles or pieces of engineer stake. Because most of the blast went forward and backward, however, a soldier could stand safely to the side as close as 20 meters. The blast made a hole about four feet wide and eight feet high on unreinforced concrete, and produced a good shock effect on the enemy inside.

For times when we did not have an engineer squad with us, we trained leaders on demolition tasks specific to MOUT. We made a company demolitions kit, which I normally kept on my vehicle, containing at least 20 to 25 pounds of C4 at any given time. After experimenting, we fabricated several general-purpose charges of two, five, seven, and ten pounds. The C4 was packed in old M60 bandoliers so it would be easy to carry.

Non-electric firing devices were made with 30-second fuses and a quick-attachment device. Several NCOs in each platoon were trained on their employment. When the company was called on alert, I issued the charges and firing devices for the two-pound and five-pound charges, and kept the larger ones at company level. On unreinforced concrete, the most common construction in Mogadishu, the two-pound charge made a small mouse hole; the five-pound charge made a hole large enough for one man to get through; the seven-pound charge made a hole big enough for two men at once; and the 10-pound charge made a hole big enough to drive a HMMWV through and could have destroyed an entire building.

We also used our demolition kit to clear stumps from helicopter landing zones and to dispose of unexploded ordnance on training ranges or old duds found in our area of operation. These instances were always training opportunities, and the soldiers enjoyed setting the charges and watching their handiwork. After a while, the use of demolitions became second nature.

Command and Control

FM communications within the company during combat operations were generally good, because we were normally close to each other, but communication with battalion was often difficult. This problem was usually resolved when the battalion commander moved his tactical command post close up behind or between the companies during operations.

Often, the reason we could not talk to someone on the radio was that he could not hear us over the sound of incoming and outgoing fire. We then made it standing operating procedure that on contact each RTO or leader carrying a squad radio immediately put his hand mike up into his ear, clipped the helmet straps, and kept it there. This improved responsiveness during a fire fight. Another excellent piece of equipment that is already in the Army system is an earpiece transmitter.

Our company commander's RTO had one, and it allowed him to keep his hands free to copy messages or defend himself with his weapon. In the end, when in contact, the best means of relaying instructions is in person, but this is not often possible.

In a close fight in a MOUT environment, it is extremely difficult for a company commander to maintain complete control of everything. The fight is a series of close actions involving squads and platoons.

On 3-4 October, under fire, my commander had to fight his own three platoons, plus seven or eight Malaysian armored personnel carriers and four Pakistani tanks. He was also talking to battalion, coordinating with TF Ranger on the helicopter crash site, directing helicopter gunship strikes, and giving instructions. He used me extensively as second-in-command to help him control the fight, and used the first sergeant to solve problems quickly or to go to an element that needed extra help.

I mirrored the commander's communication ability with one radio on the company net and the other on the battalion net. If I needed to talk on the battalion administrative-logistical net, I would switch to it. This was the way all rifle company XOs operated in the battalion. Often, the commander would be up front near the lead platoon trying to find out what was going on, and I would be with the other two platoons, ready to maneuver them when called for or when I knew what my commander wanted.

If the commander was too busy fighting the company to talk to battalion, I would send situation reports to keep the battalion commander informed in the meantime. During one firefight in September, I directed the withdrawal of the company under pressure for a short time while my commander directed helicopter air strikes into the area from which we were taking fire.

Again, the first sergeant normally stayed with the commander and was his immediate problem solver, while I normally went to the second most critical point. We always accepted the fact that the commander could go down, so I always backbriefed him on the entire company plan after the platoon leaders finished their platoon briefs. All the company XOs in our battalion attended battalion briefbacks and listened to every commander's brief so we knew the plan as well as the company commanders did. This was also important in helping me anticipate what my commander would need done.

The duties and responsibilities of the rifle company XO—as shown in FM 7-10, *The Infantry Rifle Company*—worked well in my company. A company XO must be with his company in a fight; there is no way he can be second-in-command if he is supervising the combat trains or running LOGPAC operations.

MOUT Tactics, Techniques, and Procedures

In all our operations in MOUT, we followed doctrine by isolating the objective, gaining a foothold (breaching), and then attacking to clear the remainder of the objective. In several cases, outside isolation was performed by a mounted element. This mounted element—HMMWVs equipped with MK19, .50 caliber, or M60 machineguns—could move fast to blocking positions and also had a lot of firepower.

A foothold was seized in several ways, the immediate problem being to get into a building or compound. In addition to the picket charge, general purpose charges, and the effects of LAWs and AT4s (more often during our attack-to-clear missions), we entered buildings using bolt cutters, sledgehammers, or picket pounders. The MK19 and M203 can also create breach points in buildings.

Once inside a compound or building, a unit clears the rest of the objective by entering and clearing rooms and buildings. This is where fire teams and squads execute battle drills, which should be well rehearsed and aggressively executed. Our company leaders received close-quarters battle (CQB) training from a TF Ranger mobile training team in September. The company then conducted three days of reflexive firing and CQB live fires, adopting the CQB enter-and-clear-room battle drill as our company SOP. We adopted it partly because the ROEs required us to selectively engage targets that we considered a threat. We were not allowed to enter a building and clear it as described in the FM 7-8 drill manual, in which a fragmentation grenade is thrown and then the room sprayed and cleared. The CQB battle drill is a basic set of plays; with training, any man in the company could be paired up with other soldiers and still know what to do. The drill also is better when dealing with possible noncombatants and is more controlled, which helps prevent fratricide or injuries.

These CQB techniques have been used by Special Forces and Rangers for many years, and we successfully employed them after only three days of intensive live fire. We did make a few minor modifications to accommodate the specific weapons we had. Fire teams were broken into support and assault elements. The M249 gunner usually remained in the hallway as the support element; we preferred not to assault a room with the M249 because of ricochet problems and the need to fire selectively.

The assault element consisted of the team leader, the M203 gunner, and a rifleman. This element fired on semi-automatic only and could initiate the assault with a concussion grenade if the team leader felt it was necessary. The assault team then quickly entered and gained control of the room using reflexive firing techniques. Because the rooms were usually small and cramped, most of our squads liked to clear a room with only two men. The drill is flexible, however, and can be done with two, three, or four men. Since the buildings were usually dark inside, we used flashlights attached to our weapons as pointers. Most of us used the smaller "Mini Mag" flashlights. We became very good at hitting targets like this during our train-up, and in some ways it is easier than daytime, because it focuses the shooter. The flashlights are also convenient for conducting prisoner searches.

Helicopter Close Air Support

The ROEs did not allow us to use any of our mortar systems during most operations, and we had no artillery in theater until after mid-October. The only fire support element available was the attack helicopter company that was part of the quick reaction force. These scout weapons teams normally consisted of one OH-58 Kiowa and one AH-1 Cobra. This support is most responsive when the helicopters are released to the company commander, operating on the company command or fire support net. Targets are marked with colored M203 smoke or illumination rounds, tracer fire, or using verbal directions. Friendly positions are marked with infrared strobe lights, glint tape on every soldier's helmet, colored smoke, and VS-17 panels. At times, air strikes with 20mm cannon fire and 2.75-inch rockets were brought to within 50 meters of friendly positions.

We normally had the Cobra pilots do a dry run first and then come in "hot." Once the initial strike was made, adjustments for subsequent strikes were given to the pilots. The pilots would not fire from stationary positions because of enemy ground fire, but would execute "running" gun runs, engaging targets while flying on a line perpendicular to our forces. "Running" fire is not as accurate as "stationary" fire, which is a big reason for the dry run.

Air strikes are still only suppressive fire, however, and did not completely destroy enemy positions or buildings. Many buildings that were struck were reoccupied by Somali guerrillas within minutes. Scout weapons teams are also excellent scouts and can provide a lot of information on what is happening just outside the immediate area. (It should be noted, though, that the pilots are not always accurate in their reporting, because they are flying fast and do not really have a feel for the situation on the ground; and, in a close fight, they have trouble distinguishing between friendly and enemy soldiers and fires.) The pilots can also assist a ground unit with navigation. One of our sister companies had a Cobra put an infrared beam on the road and followed it into an objective. Best of all, helicopters have a fast response time, and the pilots who fired for us were always eager to help.

Casualty Evacuation

Handling casualties quickly becomes a critical task. As the company XO, I normally wrote the service and support paragraph of the company operations order that included casualty evacuation. I planned in detail how to mark casualties—where they were to be taken, and who was responsible for taking them. I designated the location of the company casualty collection point (CCP) in accordance with the commander's guidance, who would be responsible for it, and primary and alternate means of moving casualties to the battalion CCP.

Each of our platoons was assigned a medic, and each squad had at least one combat lifesaver. The medics and lifesavers received regular training sessions from our battalion surgeon and physician's assistant in theater, focusing on combat wounds. This training saved lives in fire fights. The lifesavers were often able to assist the platoon medics and bought time for a soldier until the surgeon could get to him. Often, they could deal with minor wounds and quickly return the soldier to duty.

A forward medical treatment team (FMTT)—consisting of the battalion surgeon, a senior medic, and usually one other medic—was attached to the company for every operation. Since our operations or engagements were always 360-degree fights, it could take some time for the tactical situation to allow a vehicle or aircraft to evacuate a casualty. The combat support hospital (CSH) was also located nearby in the city, alleviating the need for a battalion aid station in the combat trains. The medical platoon leader and battalion S-4 normally set up an ambulance exchange point with the combat trains, and transferred casualties from the engagement area to the combat trains, particularly during the fight on 3-4 October. The FMTT therefore played a vital role for us and saved the lives of many soldiers forward with the company. The company senior medic and the surgeon were primarily responsible for the CCP.

An injured soldier received initial attention from a combat lifesaver or platoon medic and was then moved to the CCP. For this reason, the platoon medics *must stay forward* with the platoon. At the CCP, our surgeon and medics stabilized and evaluated casualties, prioritizing them and letting me know whether they needed immediate evacuation or could wait. The tactical situation most often determined whether or not they were evacuated immediately. Several times, lightly injured soldiers were returned to duty. (Almost every soldier wanted to return to his platoon, whether he was able or not.)

I would inform the commander of the casualty and then send the battalion commander a brief casualty report, consisting of last name, type of wound, and status. I would then switch to the battalion A-L net to coordinate a medical evacuation. Casualties were usually evacuated by front-line ambulance to the ambulance exchange point and then to the CSH by vehicle or helicopter. (In our experience, most of the wounds were gunshot or shrapnel to the extremities and neck. Gunshot wounds in legs or arms most often shatter or break a bone, so a soldier with a gunshot wound to the leg cannot be expected to do any walking.)

Identification tags are vital when soldiers arrive at the CSH, both for identification and for blood type, and leaders must see that all soldiers wear them. It was not possible to fill out our Casualty Feeder Reports (DA Forms 1155) or Witness Statements (DA Forms 1156) during an operation. I usually kept track of casualties in my head and then sorted them out once back in our compound. We also kept several body bags on our front-line ambulance and used them for those killed in action.

The battle roster number method of accounting for casualties did not work for us. A soldier's battle roster number changes every time he changes position on the Unit Manning Report (UMR), and it is unrealistic to expect the S-1 to keep

up with these changes in the UMR during sustained combat operations. We always identified soldiers by their Social Security numbers, which enabled the S-1 to obtain any information on the soldiers and to render reports to higher headquarters.

Enemy Prisoners of War

Along with a casualty evacuation plan, units must plan for enemy prisoners of war (EPWs)—or detainees, as we called them. In our situation, we also had to plan what to do with noncombatants. Prisoner/search teams were designated in the platoons. A dedicated element, usually the mortar and fire support squad, handled the movement of detainees and noncombatants to company or battalion collection points. These teams should have plenty of flex cuffs and EPW tags. The first sergeant and I carried extra cuffs and tags, because somebody always seemed to need them. We stapled these tags onto shoe tags with string to tie them on the detainees or sometimes just stapled them to their shirts. Captured equipment or documents were normally tagged back in garrison, then turned in to the S-2.

Initially, we did not tag the detainees well, and battalion had a hard time telling who was hostile and who wasn't. We then made tags using a code system. For example, B1/B meant that the detainee was taken from building number one and resisted being taken. Any code can work, so long as it is quick and everyone understands it. We captured detainees on almost every operation, and our prisoner search teams soon became proficient at searching individuals, houses, and vehicles.

Units should train to expect a prisoner to resist, not simply put his hands up and comply with all instructions. Often, a Somali would resist being flex-cuffed and had to be manhandled. Leaders had to make sure their teams were prepared for this and that excessive force was not used once the person had been subdued. Everyone had to be searched, including women and children. To avoid problems that could arise from touching the women, we used small, hand-held metal detectors with great success and made them part of our basic load.

PSYOPS and Interpreters

Psychological operations (PSYOPS) personnel and interpreters were invaluable to us. Two to four interpreters were attached to the company at any one time. All of our operations were conducted in a crowded, MOUT environment. When a rifle company surrounds an objective before first light and initiates a raid, panic from non-combatants is to be expected. The interpreters, along with the PSYOPS loud speakers (either mounted on a HMMWV or backpacked), could keep a crowd from panicking, issue instructions, and do on-the-spot interrogations of detainees to try to take advantage of immediate intelligence.

Rules of Engagement

The rules of engagement were always being updated while we were in Mogadishu, as the Somali guerrillas escalated their actions. The commander always briefed the rules, as they specifically applied to each mission, in layman's terms so that each soldier understood what he could do and could not do, and leaders were able to ask how to deal with specific situations they might encounter. The company commander also set the tone in the unit by making it clear that soldiers would be the ones to make the final decisions and he would not second-guess them. He stressed that he did not want the men to hesitate because they were worried about the rules and said he would back up their decisions. This attitude gave the soldiers the confidence to execute missions aggressively and protect themselves.

We used a graduated response technique to accomplish many operations. The best way to explain this is with an example:

During a pre-dawn battalion raid in early August, we surrounded a block of four houses in which we suspected there were several Somalis who were responsible for the ambush and death of four military policemen. With an outer cordon established and assaulting elements in place, a PSYOPS message was played telling the occupants they were surrounded and had two minutes to come out or be killed. After several Somalis did come out, my company entered and cleared two buildings that were next to the two target houses.

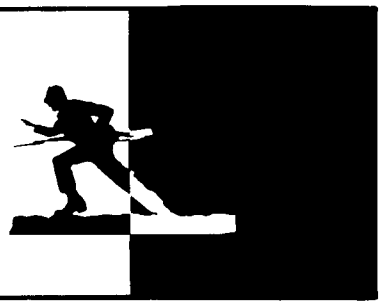
First, we had interpreters tell the occupants to open the door. The door on one house opened, but the other had to be sledgehammered open and the occupants forced outside. After a group of about 25 Somali men, women, and children were cleared out of the area, the same message was played again. After two minutes, CS gas was put into the two target houses with no one coming out. As this was happening, crowds began to build outside the cordon and were broken up by warning shots. After another two minutes, a final message was played, followed by a picket charge blasting a hole in the house. Another company then assaulted the target buildings, taking more detainees who were in shock from the blast, and the battalion withdrew off the objective.

The key to this technique is that the operation can immediately escalate into a full assault if any fire is received, and the force is protected. The benefit in our case was that noncombatants could be removed from the objective, and we often captured guerrillas without a shot.

Most of the tactics and techniques we used were already published doctrine (in FM 90-10-1, *An Infantryman's Guide to Urban Combat*), but with a few modifications based on an analysis of the situation. Many of these lessons learned simply confirm those from other recent conflicts. In several hotspots throughout the world, there remains a real possibility of future conflict in a MOUT environment, and we should train realistically to be prepared for it.

Captain Charles P. Ferry also served as a rifle and scout platoon leader and as S-1 in the 2d Battalion, 14th Infantry, and is now assigned to the 82d Airborne Division. Before his commissioning, he served as an infantry mortarman and a Special Forces weapons sergeant. He is a 1989 ROTC graduate of Brigham Young University.

TRAINING NOTES



Unit Level Training

In Survival, Evasion, Resistance, and Escape

CAPTAIN RODIE CHUNN

If you're a highly motivated soldier, whether in a leadership position or not, you can organize and successfully run a survival, evasion, resistance, and escape (SERE) course for your company or battalion. As a young staff officer, I quickly learned that most commanders are willing to provide you with the personnel you need to conduct this training if you also offer the training to their personnel.

You don't need formal Army-approved SERE training to conduct this training, but you should seek out SERE-qualified personnel to teach the escape and evasion (E&E) portion of the course. You can find out who is SERE-qualified by calling the first sergeants in the battalion.

The course described here was conducted by my aviation company in Korea, but it can be conducted by any type of unit and tailored to meet specific needs. The four phases—planning, train-up, execution, and recovery—can be modified as needed.

Planning Phase

During the planning phase of the SERE training event, you will do many of the same things you would do in planning for a field training exercise. One of the first requirements is to get approval from the commanding officer. In seeking that approval, be prepared to brief a general concept of the way you'll conduct the training.

Next, visit the battalion S-3 and select three days on the battalion master calendar that will not conflict with other planned training events. Although SERE training can be conducted in one day, it is better to plan for three consecutive days. If you decide later that one day will meet the needs of the unit, you can do it in one day. But if you decide you need the extended period, you will have that option as well. Allow at least three months for planning the first course so you'll have plenty of time to request training aids, a training site, helicopter support, and pyrotechnics.

Then start the process of selecting instructors. Either hand-pick them, or place a sign-up sheet in the orderly room listing the subjects to be taught, and ask volunteers to fill in their names. Choose two instructors for each station to make sure at least one of them will be there to cover the subject. If the course includes five stations—traps and snares, fire building, shelter building, water procurement and outdoor cooking, and escape and evasion, for example—you should have ten primary instructors. The stations in this example are the minimum number of subjects for an effective SERE course. If possible, however, recruit six more instructors and add rope bridge, rappelling, and combat lifesaving stations. The instructors will become subject-matter experts on their stations, setting them up and then briefing the officer or NCO in charge on how to build and use them during the train-up phase.

Opposing force (OPFOR) personnel are necessary to challenge the students while they conduct the E&E portion of the course. Recruiting the OPFOR may be the easiest part of the planning phase. If the unit has a soldier who is special forces or Ranger qualified, recruit him as the OPFOR officer in charge (OIC). Have him recruit about 12 volunteers from the battalion and break them into OPFOR teams. The OPFOR OIC obtains the vehicles, radios, and other equipment the teams need, then reports back to the course OIC on the OPFOR plan.

If an enemy prisoner of war camp is used, recruit an OIC for it, and ensure that standards of conduct are followed so that no one is hurt or physically abused. Safety must be paramount throughout the conduct of the course.

The most important part of the planning phase is to find the right piece of ground and get the training area request through S-3 channels for approval. Begin with a map recon-naissance and choose about three potential areas, then conduct a ground reconnaissance at each site. Look for areas that seem to be good for traps and snares, for example. This area should have small trails and lots of saplings, and the shelter-building site should have plenty of small trees and concealment. Next, conduct an aerial reconnaissance along the proposed E&E routes at each site. The station training site should be relatively flat, and the E&E route should be rugged and offer concealment.

Once you've found the best site, request that site and also the next best site, which will be an alternate if problems arise in acquiring the primary site. Walk the terrain to find out how long it takes to negotiate, remembering that the students will probably be doing it at night, the ideal time to move. (Our station training area was about a 300-meter square connected to an E&E corridor nine kilometers long and three kilometers wide. Although it doesn't take long to cover nine kilometers over flat terrain, this was nine kilometers of 2,000-foot mountains, which took 12 hours to negotiate.)

Pyrotechnics are helpful in adding realism, but use them carefully in dry weather. In another country as we were, you don't want to have to tell your hosts that you burned their land because you didn't check the status of its dryness. At a post in the continental United States, the local range control will provide this information. Get the pyrotechnics request to the S-3 early; most units require ammunition requests three months in advance.

You'll find many things that you need readily available—vehicles, helicopters, communications equip-ment, MREs (meals, ready to eat), and medical support—but they will require formal requests (by memorandum) through S-3 channels.

When coordinating vehicle support, ask for enough to get the instructors to and from the training area. Students attending the training should be transported by their own units; this procedure makes it easier to focus on other problems that may arise. Also make sure backup vehicles and drivers are available.

Being in an aviation unit, we had no problem with helicopter support, but even if you're not in an aviation unit, a simple request through S-3 channels will get it for you. Submit the request as soon as the support requirements have been defined. Although most aviation units will provide aviation support from a field environment, it is more difficult because they will be involved in planned field training of their own.

Ideally, one OH-58 Kiowa and one UH-1 Huey or UH-60 Black Hawk will be enough for the course. The OH-58 will provide OPFOR support at night in searching for the students conducting the E&E portion of the exercise and may also be used to conduct reconnaissance. The UH-1 or UH-60 will extract the students at the planned pickup point upon completion of the exercise, which may be a night extraction. Both helicopter crews must therefore be current on night vision goggles (NVGs). The flight time needed to complete the E&E course will vary, but five to 10 hours of OH-58 flight time and four to six hours of UH-1 flight time should suffice for the entire course.

Ask the S-3 to task other units in the battalion to provide SINCGARS (single-channel ground and airborne radio system) or other radios during the E&E portion. Each E&E team should have at least one radio, but preferably two—one SINCGARS and one AN/PRC-90 aviation survival radio. Additionally, the tactical operations center should maintain communications with the rear area or garrison, the E&E teams, and the supporting aircraft. Long-range communications normally require an RT-292 antenna. When communications with the E&E teams are lost, the supporting aircraft should maintain communication. In the event of an injury, a quick response may prevent further injury or loss of life and limb.

Planning for food and water is easy. Get the formal request for MREs (meals, ready to eat) to the mess sergeant, and have the NCOIC pick them up on the date requested. Soldiers will sign for MREs when they are issued. Make sure enough water is available on the training site. Also set up a few water points along the E&E route, and declare them "safe zones."

Plan to have a qualified medic or combat lifesaver on site if possible. Although the teams will be scattered throughout the course during the E&E portion, a medic will prove invaluable in case of injury. If someone is injured during the E&E portion, find out where he is and direct the recovery aircraft to him. Since this mission can prove difficult at night, direct the injured soldier to start a fire, turn on his strobe light, or use his flashlight for signaling. Once the aircraft reaches him, have the pilot confirm the grid location and the extent of the injury. Next, decide whether a medevac aircraft is required or if the on-site medic can handle it. If the injury is serious, have the pilot fly the medic to the mishap location to provide interim treatment until the medevac arrives. The helicopter pilot can contact the other aircraft from the air and direct it to the site.

Train-up Phase

During the train-up phase, the instructors for the station training are confirmed, the land request is approved, and the logistical support is coordinated. The instructors are then briefed on preparing their stations. Once they understand the concept of the training, they begin building their stations. This phase of the course may be done in three or four consecutive days or may be spread over two or three weeks. The battalion training calendar may dictate the train-up days that will be available.

The instructors will need some tools and reference materials during this phase—machetes, shovels, knives, parachute cord, copper wire, and any other tools that will help in building the stations. Field Manual 21-76, *Survival, Evasion, and Escape*, is a good reference; the easy-to-carry Ranger Handbook contains useful information on survival topics; and AR 350-30, *Code of Conduct/Survival, Evasion, Resistance, and Escape (SERE) Training*, is good for regulations governing SERE training.

The individual stations should appear realistic and professionally prepared. For example, when lashing limbs together to build a shelter, use vines found in the area instead of parachute cord. Build many types of shelters that would be used in the particular climate or tactical situation. The shelter-building station will take the most time to construct. Five or six shelters may take up to 30 or 40 man hours. Other types of stations include the fire-building station, water procurement and outdoor cooking, and traps and snares.

Since one objective of the SERE course is to stimulate imagination, these stations can be built in many different ways. The instructors should read about numerous methods before building the stations and then, during the building process, record the best techniques, the time required, and the best terrain for them. While the instructors are building and rehearsing their stations, the site OIC and the OPFOR OIC should conduct a ground reconnaissance of the E&E route, also selecting water points, trafficable roads, and possible pick-up points.

The final portion of the train-up phase consists of rehearsals. The instructors brief the OIC on each of the stations. They train to a standard of 30 to 40 minutes per station, which allows for a thorough explanation of the subject and hands-on training.

Execution Phase

The execution phase is broken down into two events—station training and the E&E course. Conduct the station training first. When the students arrive at the training site, the OIC briefs them on the training objectives, safety, and administrative requirements. Next, they are broken into groups to conduct the station training. Once this training is complete, the students are divided into two-man teams and are inspected for proper equipment, such as maps, compasses, radios, and food and water. After this inspection, the teams are released in intervals at the start point. The OPFOR is placed in a position to allow the students a fair start. The OPFOR aircraft should begin the search about an hour after the last team has left the start point.

As the E&E teams get closer to the release point, the requested utility aircraft should be on standby to extract them. To keep radio traffic to a minimum, the extraction aircraft should arrive at the pickup point at predetermined times without being called. If the extraction aircraft lands at the point and no one is there for pick-up, it leaves and returns at the next predetermined time.

Recovery Phase

During the recovery phase, personnel and equipment are accounted for, and the after-action review (AAR) is conducted. During the AAR, students are encouraged to comment on both positive and negative aspects of the training. Additionally, certificates of completion and awards are presented to the students at this time.

Clearly, running a SERE course requires some planning and train-up. It is not an easy event to put together, yet it's not too difficult either if you rely on your commander and first sergeant to help you over the hurdles. If you commit yourself to training soldiers to fight, win, and survive in a combat environment, in the process you'll also accomplish training that will help save lives in combat.

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Search and Attack

CAPTAIN KEVIN J. DOUGHERTY
CAPTAIN RICHARD C. TOWNES

The search and attack is one of the techniques used to conduct a conventional movement to contact to find, fix, and finish the enemy. This technique is usually employed in a fluid environment against an enemy operating in dispersed elements with no conventionally fixed lines. In this type of environment, it is especially important for the battalion commander to make a thorough analysis of the intelligence preparation of the battlefield (IPB).

The IPB process helps the commander visualize the terrain, weather, and enemy in formulating his courses of

action. This detailed analysis is vital to his decision on how best to concentrate his combat power in the execution of the search and attack.

According to Field Manual (FM) 100-5, *Operations*, the principle of *mass* requires commanders to "mass the effects of overwhelming combat power at the decisive place and time." Likewise, FM 7-20, *The Infantry Battalion*, lists as one of the characteristics of offensive operations, the "concentration of the battalion's combat power on the enemy at the point of attack" (page 3-1).

When discussing the deliberate attack, few commanders would deny the wisdom of these fundamentals. But when discussing a search and attack, many would shy away from mass in favor of decentralization and dispersion. These are qualities inherent in search and attack operations, but only in a relative sense. Decentralization and dispersion are techniques for achieving the characteristics of the offense. Most notably, decentralization contributes to speed (tempo), and dispersion to surprise. Neither addresses con-centration.

There are at least three possible techniques a commander considers when planning a search and attack operation. We call these the *27 independent squads*, the *linear search*, and the *decisive point* techniques.

The 27 independent squads technique (Figure 1) overemphasizes decentralization and dispersion. A commander focuses on the search part of the operation instead of the attack part. This technique is usually the product of a weak analysis of the intelligence available to the commander in developing his concept. In the typical scenario, a battalion commander divides his zone into three company zones. The company commanders follow suit, giving the battalion nine platoon zones. The platoon leaders continue the pattern, and the result is a 27-squad search and attack operation. The search and attack does, in fact, consist of "multiple, coordinated patrols" (FM 7-20), but too many commanders emphasize the *multiple* at the expense of the *coordinated*.

The commander accomplishes his search task by saturating the battalion zone with squad-size patrols and finds the enemy beyond his wildest expectations. Unfortunately, he finds the enemy in a way that puts friendly weaknesses up against enemy strengths. FM 90-8, *Counterguerrilla Operations*, says, "Guerrilla tactics are characterized by elusiveness, surprise, and brief, violent action." If we fight the battle with dispersed squads and teams, we do exactly what the enemy wants and do not use our tremendous firepower advantage. In short, we forget an important characteristic of the offense: concentration.

So how do we obtain concentration in

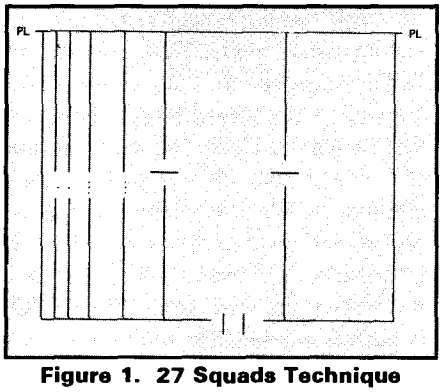

Figure 1. 27 Squads Technique

a search and attack? FM 7-20 contains diagrams (pages 3-19 and 3-20) in which a dispersed battalion masses after finding the enemy, but this is no easy task. In those examples, what if the patrol in the north makes contact at the northernmost point of its sector when the patrol in the south is at its southernmost point? What if both patrols make contact at the same time? How can either patrol fix the enemy long enough for the finish force to arrive?

One way is to follow what we call the decisive point technique (Figure 2). This technique follows the concept development guidance in FM 7-10, *The Infantry Rifle Company*, which is quick to point out that developing a concept for a search and attack is much the same as developing a concept for any other offensive operation: "The decisive point must be determined and a concept developed for generating overwhelming combat power there. The initial concept must include actions to finish the enemy forces once they are located."

As an example, during the low-intensity conflict phase of a Joint Readiness Training Center (JRTC) rotation, the generally accepted decisive point is the enemy's battalion supply point (BSP). To win at this decisive point the commander must first determine where the BSP is, and this is where the IPB is most critical.

Many S-2s argue that they can't template the BSP with the limited information they have before entering the battalion zone. We agree that an S-2 can't do this with 100 percent accuracy, but he should be able to identify the three or four most likely sites and rank order them. Through a careful analysis of terrain and enemy, the S-2 can eliminate much of the terrain in his zone as unsuitable for a BSP operation. He can then drastically narrow the scope of his battalion's search by looking for a site that meets the following criteria: offers cover and concealment for all the battalion's supplies, can be defended by a platoon or a platoon (minus), is near a single ship landing zone, has access to a trail network capable of supporting wheeled vehicle traffic, is relatively near a water source, and is on a reverse slope to make the most of protection and limit observation.

By providing this information, the S-2 enables the commander to focus his combat power by organizing the battalion into *find*, *fix*, and *finish* forces. Assuming that the purpose of the search and attack is to destroy the enemy, the finish force will be the main effort; the battalion commander therefore gives this force the resources to destroy an enemy of whatever size the S-2 has templated at the BSP. The other two forces will support this main effort by finding and fixing the enemy.

The fixing force should be first in order of movement and should establish blocking positions along the likely avenues of escape from the BSP. Even the best finding force will have trouble doing its job without being detected, and

once it is detected the enemy will try to evacuate his most important supplies. With the fixing force already in position, the enemy is far less likely to escape. Also, once the enemy is found, the battalion commander can focus his attention on the finishing force. (The size of the fixing force will depend upon the number of blocking positions required.)

The fixing force has now isolated the objective, giving the finding force a zone of perhaps two square kilometers in which to search—depending on mission, enemy, terrain, troops, and time (METT-T). The size of the finding force will depend upon the degree of certainty about the location of the objective. Since that location is merely templated, this degree of certainty is relatively low and, on the spectrum of

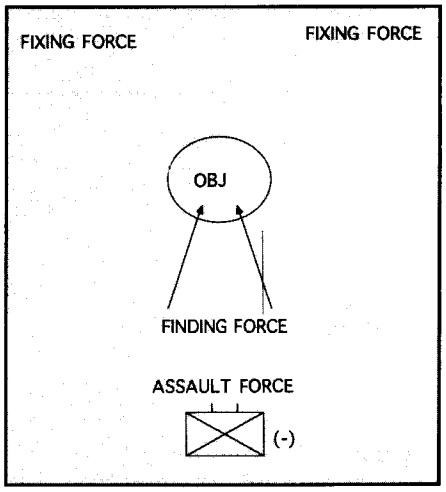

Figure 2. Decisive Point Technique

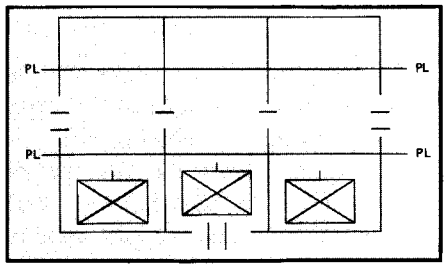

Figure 3. Linear Technique

reconnaissance, the task is related more to zone than to area. Thus, a finding force of perhaps two rifle platoons and the scout platoon, all under the command and control of a company commander, will reconnoiter the zone using the *converging routes* or the *fan* technique. If they find the BSP, they notify the finishing force; if they do not, the entire battalion moves to the second most likely BSP location and repeats the process.

The finish force must be responsive to the information obtained by the find force. If it seems that the enemy can evacuate his BSP in six hours or less, the finish force must be able to launch its attack before that time has elapsed and should therefore stay within a couple of kilometers of the find force.

This concept is not peculiar to the JRTC. For example, after much trial and error, U.S. forces participating in a drug interdiction operation in Bolivia in 1986 learned that the decisive point was a drug lab. And the lab's location was indicated by such factors as lines of communication (airfields, rivers, roads, and trails), a friendly population to provide labor and security, cover and concealment, and logistics in the form of the raw material to make the drug, water to refine it, and food for the labor force. Thus, the lessons learned at the JRTC concerning the importance of the decisive point in an operation other than war are consistent with those in the field.

We believe the decisive point technique is the best way of approaching a search and attack. But if the commander is not convinced that his S-2 has enough information to template the decisive point with an acceptable degree of certainty, he can use a more dispersed but still adequately controlled method that we call the linear technique (Figure 3). This technique is similar to the example in FM 7-20, but it is conducted with companies on line, which makes it easier to mass forces.

In the linear technique, control is achieved by having the entire battalion move in the same direction at the same pace. All battalion elements are roughly on line and able to respond to each other when one of them finds the enemy. Depending on his analysis of METT-T, the commander may reinforce the reconnaissance for this mission.

The reconnaissance force is not the only find force. Each company must organize itself into find and fix forces and also be prepared to act as the battalion's finish force. The companies advance roughly on line trying to find the enemy, most likely through successive sector reconnaissance.

The search should focus on likely enemy locations instead of on terrain. When a patrol finds the enemy, it must decide whether it can also fix and finish that enemy. The commander can control the response time through the spacing of his phase lines: The closer the phase lines, the shorter the time required to consolidate. When a patrol locates the enemy, it must also be prepared to fix the enemy frontally, while an adjacent patrol fixes the enemy on one flank and another finishes him by attacking the other flank. Either a patrol or indirect blocking fires can help fix the enemy to the rear.

The advantages of this technique are that the battalion can cover a large zone instead of a few isolated locations, as in the decisive point technique. By moving in the same direction at roughly the same speed, the battalion also clears the zone as it advances. By leaving forces behind to secure this cleared terrain, the battalion now has a relatively safe area for main supply routes (MSRs), mortar positions, trains locations, and command posts. By using phase lines and checkpoints to control the battalion's movement, the commander can ensure a rapid concentration of forces and attack after the enemy is located.

The disadvantage of this method is in weighting the main effort, which is the company that the battalion commander, with S-2 advice, believes will make contact. Still, each company must be prepared to do all three tasks—find, fix, and finish.

Until the enemy is located, there is little opportunity for supporting efforts to help the main effort. Proponents of this technique will argue that this is where the idea of shifting the main effort arises, but once the battle is joined the battalion's ability to refocus its resources is limited.

FM 7-20 suggests using the reserve,

priority of fire, and other available assets to weight the main effort, but this is difficult once the fighting begins. The original concept changes, and the commander now needs to shift the main effort. He has already task organized his forces and can't reallocate them now that he is in contact. He has already positioned his reserve so it will be responsive to his original main effort, and a foot-mobile reserve may have a hard time moving to support the new main effort in time.

Priority of fires sounds impressive, but it is a relatively insignificant means of weighting the main effort. All it means is that if two units call for fire at the same time, the unit with priority gets its mission fired first. As the main effort is shifted to the unit in contact (and if the other units are not in contact), there is little competition for fires anyway. This technique offers less concentration than the decisive point technique, but considerably more than the 27 squads technique.

The only area in which the decisive point technique is not clearly superior is in the potential for a secure MSR. In this area, the decisive point technique consciously ignores terrain to focus on the enemy. As General Sherman did in cutting loose from his lines of communication to get to Atlanta, the decisive point technique favors speed in reaching the objective over a methodical advance. We feel this trade-off is worthwhile, especially since casualty evacuation and resupply will be easier with the entire unit in roughly the same location.

The spectrum of search and attack techniques is based on a thorough analysis of the intelligence available in a particular situation. A thorough, detailed analysis gives the commander the flexibility he needs to use in finding, fixing, and finishing the enemy.

If the necessary information is not available to conduct this detailed analysis, the commander must focus his attention upon gaining that information. Without it and the resulting analysis, his orders will be based on assumptions instead of facts.

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Captain Richard C. Townes, also a small-group instructor for the Infantry Officer Advanced Course, commanded a rifle company in the 6th Infantry Division during a JRTC search and attack rotation. He previously served in the 2d Infantry Division in Korea and in the 1st Battalion, 75th Ranger Regiment. He is a 1983 graduate of The Citadel.

Back to Basics

Training Close Combat Skills

LIEUTENANT COLONEL THOMAS A. DEMPSEY

Before I was assigned to command a Basic Combat Training (BCT) battalion at Fort Knox, I served as executive officer of an infantry battalion during a rotation at the Joint Readiness Training Center (JRTC). This sequence of assignments helped me realize the special benefits of BCT, not only in terms of the training the soldiers receive but also in terms of the skills cadre members take with them when they return to line units.

During the JRTC rotation, my battalion made mistakes and took a lot of casualties at the hands of one of the deadliest light infantry forces in the world today—the JRTC's opposing force (OPFOR)—which we were encountering for the first time.

In the after-action review (AAR) that followed that battle, we got some unpleasant surprises. The OPFOR, which we had estimated at a company (minus), turned out to be less than a platoon. Nevertheless, it had succeeded in destroying an entire rifle company in a series of disjointed, squad-on-squad fire fights, while suffering only minimal losses from our infantry. All in all, it had not been a good day for us.

While the battalion would learn from that engagement and eventually locate and destroy almost the entire OPFOR company, the memory of that first experience remained a sobering one. It became evident during the AAR that the soldiers of the OPFOR had won their fire fights for some simple reasons: They had out-shot us, consistently scoring first-round hits with M16 MILES (multiple integrated laser engagement system) at ranges of 100 to 200 meters. They had also been far more effective in using individual movement techniques and executing battle drills at the buddy team, fire team, and squad levels.

Following this rotation, I spent a great deal of time thinking about the best way

fire teams and squads, confronting the difficulties and hazards of maneuvering two separate elements against a hostile force. Most soldiers serve at least once as team leaders, learning basic leadership skills that even junior enlisted soldiers may be called upon to exercise in combat. It is easy to see the improvement in combat skills as the squads move through the various lanes. By the end of the last lane, the soldiers have reached a level of proficiency that will sustain them through their first taste of combat, where the most casualties normally occur.

In the context of the overall BCT POI and mission training plans, the training environment at Fort Knox also offers unique opportunities to young infantry leaders. Company commanders and XOs, in particular, benefit from the warfighting focus and the commitment to excellence.

There are virtually no training distractions for these officers to deal with. Their single overriding priority is to graduate qualified soldiers, and all of the resources are focused in that direction. The officers can plan training in detail two to three months ahead, and then execute the plan with few changes.

BCT is an intensely satisfying environment, both personally and professionally, especially for infantry captains and senior lieutenants. In only eight weeks, a BCT company commander and XO take 200 new and completely untrained soldiers from zero proficiency all the way to sustainment training level in individual combat skills and infantry small-unit collective tasks. Consider, then, the level of proficiency that can be achieved and sustained by applying some of the same techniques in a rifle company, with experienced soldiers who already have a strong base of skill and professional knowledge to build upon.

In summary, any infantry lieutenant or captain who masters the challenges of training the Army's new soldiers is well prepared for the similar task of training the soldiers in infantry line units to win the close fight, whether it is fought with MILES bullets at a combat training center or with real bullets in the streets of a city such as Mogadishu.

BCT is a training environment tailormade for honing the skills of infantry captains and senior lieutenants in preparation for returning to infantry line units.

Lieutenant Colonel Thomas A. Dempsey commands 2d Battalion, 46th Infantry, at Fort Knox. He previously served in the 1st Battalion, 327th Infantry, 101st Airborne Division, at Fort Campbell and in Operation DESERT STORM. He is a 1975 ROTC graduate of Georgetown University and holds a master's degree from the School of Advanced Military Studies.

The Infantry OSUT FTX

CAPTAIN GARY M. BRITO

The soldiers undergoing infantry one-station unit training (OSUT) at Fort Benning participate in a field training exercise (FTX), usually during the twelfth week of the 13-week cycle. The purpose of this FTX is to give the soldiers an opportunity to improve their individual and crew tasks in the context of squad-level collective tasks and help them make the transition to the training they will receive in their units. The FTX, the culminating point of the training, also serves as a final assessment of the soldiers, is the culmination of training, and helps maintain the cadre's infantry skills.

During the FTX, the soldiers are trained in MOSs 11B (Infantryman), 11C (Indirect Fire Infantryman), and 11H (Heavy Antiarmor Weapons Infantryman). The soldiers in MOS 11M (Fighting Vehicle Infantryman) are trained in 11B skills during the FTX and then receive two weeks of mechanized infantry training after the thirteenth week.

Although OSUT company commanders have considerable flexibility in the design of the FTX for their soldiers, one technique is to conduct three or four squad tactical exercise lanes that draw out the required individual skills of all infantrymen. These skills either coincide with or overlap the combat critical tasks the Infantry Training Brigade considers important. The individual skills involved in each collective task are taken from ARTEP 7-8 MTP, *Mission Training Plan (MTP) for Infantry Platoon and Squad*; from ARTEP 7-90 MTP, *Mission Training Plan for the Infantry Mortar Platoon, Section, and Squad*; and from ARTEP 7-91 Drill, *Drills for the Antiarmor (TOW) Platoon, Section, and Squad.*

A company commander chooses the individual tasks for the FTX on the basis of his assessment of the soldiers' performance. The drill sergeants normally gather this information for him, as they track soldiers' performance during the cycle. Since the soldiers train and test on skill level one individual tasks throughout the cycle, the drill sergeants have several opportunities to assess their soldiers on each of these tasks. By the time the FTX is prepared, they have a

good idea of which soldiers are weak at which tasks and can have that information available for the commander.

Field Manual 25-101, *Battle Focused Training*, lists several sources for training assessment, including the following:

- Personal observations of training.
- Assessment and feedback from higher headquarters.
- Local external evaluations.
- After-action reviews (AARs).
- Performance scores.
- Inspections and drills.
- Common-task tests.

A drill sergeant plays an important role in the success of the FTX. Ideally, he trains soldiers of his own MOS. An OSUT company may not have enough drill sergeants qualified in MOS 11C or 11H, and augmentee support must be provided for these MOSs to improve the ratio of soldiers to non-commissioned officers.

For the FTX, soldiers are assigned to squads consisting of nine to 12 men each, depending upon platoon size. Each squad is assigned M249 machineguns, an M60 machinegun, a Dragon antiarmor weapon, and communications equipment, along with pyrotechnics, simulators, and tear gas for added realism.

Each platoon occupies a tactical assembly area (TAA) from which the squads conduct routine procedures. From the TAA, each squad conducts rehearsals and briefbacks, prepares for combat tasks, and then crosses the line of departure to execute a lane. The squads move through the lane in rotation: For example, while one squad is in the TAA, conducting routine assembly area procedures, a second squad conducts rehearsals, back briefs, and battle drills behind the line of departure; and the third squad, having already conducted rehearsals, is across the line of departure executing the squad exercise. Members of the squad in the TAA also provide an opposing force (OPFOR) on the lane, conducting an actual mission.

The drill sergeant briefs his squad, using a fragmentary order and a sand table, while the other drill sergeants (whose squads are not engaged) control the flow of the exercise lane. If execution is going poorly, the drill sergeant may stop the squad long enough to correct the problem, or may start over, either at the assembly area or the line of departure. At the end of each squad mission (or during the mission, when appropriate), the drill sergeant, with the squad and the OPFOR, conducts a thorough AAR that focuses on individual tasks.

Soldiers conduct mortar crew drills in MOPP IV.

Each MOS has specific tasks that must be executed, and all MOSs receive equal emphasis. The 11C soldiers, for example, must perform specified tasks ranging from preparing mortar positions to conducting fire missions; and the 11H soldiers must conduct TOW battle drills, tracking exercises, dismounted positions, overwatch missions, and antiarmor ambushes. The training for both MOSs can be integrated into the 11B training.

The 11C soldiers attached to infantry squads can construct mortar positions to standard, camouflage the tube positions, and conduct fire missions. The M109 mortar carrier is available for this training, in addition to special equipment such as the mortar ballistic computer. The 11H soldiers can use their mounted and dismounted TOW systems as overwatch, when the terrain permits it. High-mobility multipurpose wheeled vehicles (HMMWVs) and improved TOW vehicles (ITVs) are used for TOW training, and special equipment, such as TOW tracking boards, is available. The 11C and 11H soldiers also train on squad movement techniques during this training.

All of the soldiers conduct introductory night training, using night vision devices, and each squad conducts night reconnaissance probes or similar missions under the supervision of the drill sergeant (squad leader). The soldiers also conduct nuclear, biological, and chemical (NBC) training in which they are required to operate in full protective gear for a period of at least four hours. NBC activities may include routine squad movement, recovery operations, and field sanitation. The soldiers must also complete a 25-kilometer (approximately 15-mile) road march, usually at the end of the FTX.

All training during the FTX is tactical, including field feeding. The soldiers maintain proper uniform and camouflage, and the leaders enforce field hygiene and sanitation.

OSUT companies train soldiers who can fight in all conditions and against various types of enemies. The Infantry OSUT FTX helps polish the basic skills of the infantrymen who will serve proudly in units around the world.

Captain Gary M. Brito commanded a company in the 1st Battalion, 19th Infantry, Infantry Training Brigade, and is now an Infantry Officer Advanced Course small-group instructor. He previously served in the Berlin Brigade and as a tactical officer in the Officer Candidate School at Fort Benning. He is a 1986 ROTC graduate of Pennsylvania State University.

Infantry OSUT Company Command

LIEUTENANT COLONEL GARY G. DACEY

Many captains are disappointed, or worse, when they are assigned to command infantry one-station unit training (OSUT) companies. Many others in the Army also tend to think of training unit commands as inferior.

During my own first 17 years in the Army, I viewed the training battalion environment as one in which drill sergeants dutifully executed a program of instruction that was spelled out day by day, while officer caretakers handled VIP briefings. During those years as a mechanized infantry platoon leader, a battalion and brigade staff officer, and a light infantry company commander, I never gave much thought to what the initial-entry soldiers coming into our units did or knew.

Now, after 15 months of commanding an OSUT battalion, I realize the importance of that training and the challenge of the company commander's job. The turbulent world and the shrinking Army we face no longer guarantee us the time to re-train soldiers in their units before their deployment into harm's way. The commander of a training company, just like his counterparts in units organized under tables of organization and equipment (TOEs), exercises leadership in its purest form, managing training six days a week (in accordance with Field Manual 25-101), executing a training cycle in which there is one shot at each event, developing subordinates, and maintaining equipment. He is responsible for taking 220 civilians every 13 weeks and turning them into infantrymen who are physically fit, motivated, self-disciplined, and trained to standard.

The program of instruction contains many daily events that, in the hands of an inept commander, could amount to four hours of standing in line, 15 minutes of firing a weapon, and four hours of cleaning the weapon. But a good commander tackles each day five weeks in advance and builds interrelated training events on the basis of assessed weaknesses in the soldiers and the unit throughout the training cycle.

Several years ago, when we debated whether it was fair to send light infantry lieutenants to command heavy companies, or vice versa, we found that good leaders do well regardless of their assignments. Our excellent manuals provide the foundation, while common sense, analytical ability, caring, and leadership skills build on that foundation to achieve success. The guidance that centralized selection boards receive reflects this understanding.

There are no blueprints. The company commander who expects to find them is left in the dust of his peers who are hard at work providing the best infantrymen in the world for our Army. If a commander fails his TOE company, it affects only the battalion and the brigade; the division may feel a ripple. But if a commander fails his OSUT soldiers, it affects squads, platoons, and companies throughout the Army.

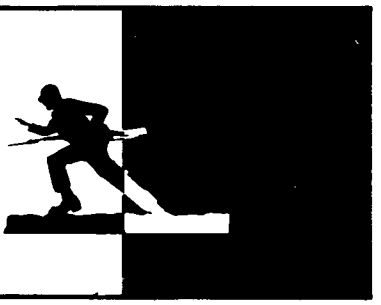
This is not to say that one job is harder than the other. Each has challenges the other does not have. But don't sell the training company commander short. The successful ones are good leaders, trainers, and maintainers with a good bit of common sense, coupled with a constant vision of excellence, just like their counterparts in TOE units. The leadership challenge is in properly controlling almost absolute power over soldiers and motivating them toward excellence. Certainly, a go-to-war TOE force is the heart of the army, but its lifeblood originates in the training base.

Serving as the infantry representative on a recent board to select officers for promotion to major, I learned that there really is no difference between OSUT company command and TOE company command in an officer's selection for promotion. A training company commander whose file was below center of mass was not selected for promotion; a TOE commander whose file was below center of mass was not selected for promotion. In either category, a commander whose file was above center of mass was selected. It was still performance—and the potential revealed in that performance—that determined selection.

The only perceivable effect of the training company command may be a lack of experience in collective training. An officer can overcome some of this deficiency, however, by staying current on branch manuals and incorporating collective officer pro-fessional development and leader development throughout the training cycle. This means only that a good OSUT commander must work a little harder to prepare himself for his next job in a TOE unit.

Lieutenant Colonel Gary G. Dacey commanded 2d Battalion, 54th Infantry, Infantry Training Brigade, at Fort Benning and is now attending the U.S. Army War College. He previously served in various command and staff assignments. He is a 1975 ROTC graduate of the University of Pittsburgh and holds a master's degree from Syracuse University.

OFFICERS CAREER NOTES



Army officers excel in taking responsibility for the soldiers and the material resources assigned to them. Success in these duties requires planning and execution. But there is one area of responsibility that officers routinely overlook: maintaining their own individual records. Too many officers do not perform the maintenance necessary to ensure that their own official files are in the best competitive form, not just for promotions, schools, and special boards but also for the numerous file reviews that may be conducted to meet special last-minute requirements.

Your file is a direct reflection of you, and its frequent review and update is a career necessity. Ensure that the information in the file representing you is correct. If you are not selected for a promotion or school because of an inaccurate file, fixing it could take months. Boards do not have time to question the accuracy of your file and, unfortunately, PERSCOM assignment officers are no longer able to help with individual record maintenance as they once did.

Selection boards generally review only three items: Your officer record brief (ORB), your official photo, and your microfiche official military personnel file (OMPF). Most of the professional development decisions about you will originate from these records, and you are responsible for seeing that these items are always ready for the board.

Officer Record Brief

Your personnel service center (PSC) should provide a current ORB for your review 60 days before a board is to convene. This is your last chance to make corrections; the ORB you correct will be the one provided to the board. A few last-minute updates, if needed, will reflect your interest and your attention to detail. Numerous pen-and-ink changes will indicate poor planning and lack of prior attention to detail.

Keep your ORB updated during your annual audits, and follow up to make sure the changes noted earlier have been made. When reviewing your ORB, this is what you should look for:

Assignment History. Make sure job titles and units are easy to understand and that the job title on the ORB matches the one on the corresponding OER. Your OERs can be used to justify changes. Replace acronyms with clear titles wherever possible; for example, use *executive officer* instead of *XO*. Ensure that the number of months in each position is accurate, and get rid of double entries for the same position. Replace old MOS codes with current codes the board will recognize.

Photo Date. Make sure the date of your official photo is current within the past five years.

Physical Examination Date. You should have a physical examination every five years, more frequently in some cases. An out-of-date physical may cause the board to suspect you are trying to hide a weight gain or a change in fitness status. Check your height and weight and physical profile for accuracy. Watch the changes to the weight and height scale as reflected on your OERs—adding height after the age of 18 is likely to raise questions.

Date of Rank. If your date of rank is incorrect, you may not be considered in the appropriate promotion zone.

Education. Make sure your civilian and military education level codes are accurate.

In brief, *check all entries for accuracy*. Use Army Regulation 600-8-104, *Military Personnel Information Management/Records*, Chapter 4, to help you update your ORB. If the ORB is not correct, work with your local PSC to get the changes made. Changes can take time, so start early.

Official Photo

Official photos are no longer placed on the microfiche but are kept on file and delivered to the board. The hard-copy photo will be the first part of your file a board member sees, and you should ensure that it will make a good first impression. Although you are required to update your photo every five years, or when you are promoted, feedback reveals that a photo less than three years old gives a better "picture" of what you look like. Get a color photo for your board. Send two copies directly to your assignment officer, and keep the negatives for your files.

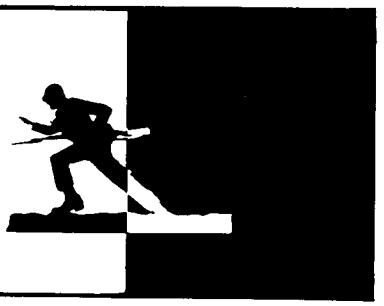
Microfiche OMPF

The contents of your microfiche OMPF are the only indication a board member has of your performance. You should order a copy every year. Send your signed request, with your social security number, to Commander, U.S. Total Army Personnel Command, ATTN: TAPC-MSR-S, 200 Stovall Street, Alexandria, VA 22332-0444.

Make sure your OERs are kept up to date and in sequence. Awards and other documents are normally held until an OER update is required. If you have difficulty with your microfiche corrections, send documentation to your branch for help. Documents that arrive too late to be placed on your microfiche are delivered to the board in hard copy.

Make sure your hard work is not ignored through a failure to maintain your own records.

BOOK REVIEWS



Dien Bien Phu: The Epic Battle America Forgot. By Howard R. Simpson. Brassey's, 1994. 193 Pages. $24.00.

The French disaster at Dien Bien Phu must surely rank as one of the bitterest defeats in recent military history. In this superb assessment, Howard R. Simpson presents the events that led the French to undertake a static defense, describes the action itself in no-nonsense detail, and finally addresses the fate of those captured when the garrison fell.

This book stands out among the many accounts of the fall of Dien Bien Phu because its author had actually been there, as a photographer and combat reporter; he writes as one who shared the privations and risks with those who were later counted among the 15,000 men who were killed or taken prisoner.

At a time when we deplore the prospect of another Task Force Smith, we need to remember the costly lessons that are the legacy of Dien Bien Phu, for it was grievous miscalculation that contributed to both disasters. One of the most damaging ills that can affect a nation is the myth of invincibility, at whose roots lie the errors of arrogance, pride, overconfidence, and a belief in the inferiority of the enemy. Although the Legionnaires on the ground knew the tenacity of their enemy, those responsible for placing these premier units of the French Colonial Army in harm's way chose to ignore intelligence that could have averted the disaster.

This battle is counted among the decisive military engagements of history, not simply because of the numbers of combatants involved—many other battles were fought with far greater numbers—but because of its pivotal significance. Indochina was the last of France's great colonial possessions in Asia, and its loss set in motion the sequence of events that eventually led to the United States' ill-fated commitment to an Asian land war.

One thing that Simpson does particularly well is to take an honest look at the military expertise of the Viet Minh, recounting both their successes and their shortcomings. As the U. S. Army assumes greater responsibility for operations other than war, we *too* need to do our homework and take an honest look at potential adversaries. Sun Tzu may not have been the first to say "Know your enemy," but it sometimes seems—from the study of past military blunders—that he was the last one to follow that advice.

This is an exceptionally well-written, accurate, and readable book, and its selection as an AUSA Land Warfare Book is clearly justified in view of its value to the professional soldier, and indeed to anyone interested in the events that decide the life and death of men and nations.

Poles Apart: The Polish Airborne at the Battle of Arnhem. By George F. Cholewczynski. Sarpedon Publishers, 1993. 336 Pages. $21.95. Reviewed by Major Richard Jung, U.S. Army.

Although the First Independent Polish Parachute Brigade has been mentioned in every major work on Arnhem and immortalized in the film *A Bridge Too Far*, little has been available in English on the unit and the fighting it saw during Operation MARKET GARDEN. Even less has been written on the high price the Poles paid in providing the only support the hard-pressed British "Red Devils" received during this bitter battle. The publication of *Poles Apart* finally fills this gap.

The Parachute Brigade was originally formed to provide the vanguard of Polish forces liberating their homeland from the Nazis. Theirs was to be "the shortest way back." Ironically, just as the Polish Home Army rose against the Germans, the brigade found itself committed to MARKET GARDEN.

As a result of detailed research and exhaustive interviews with participants, the author not only presents a moving narrative of the Brigade, down to platoon level, but also suggests, in the fate of the Poles and their commander, why no additional efforts were made to relieve the British at Arnhem. In addition, the book presents a microcosm of the experiences of all the Polish forces that fought in the West—in the Battle of Britain, at Tobruk, Monte Cassino, the Falaise Gap, and elsewhere.

The book's scope, beginning with the formation of the Brigade, is broad enough to show that the Polish paratroopers were far more important than their numbers would suggest. From the very beginning, when Polish instructors erected the first jump tower in Great Britain, to the closing moments at Arnhem as General Stanislaw Sosabowski fought alone to relieve the embattled British 1st Airborne Division, the Poles' contribution was undeniable.

Surprisingly, the author's use of the narrative format enhances, rather than obscures, tactical evaluations. A prime example of this is in the narrative presented by the survivors of the Poles' river assault, which evokes images of "living" map symbols. The 500 meters of marsh is not an open area on a map but a killing zone of knee-deep mud crossed by exhausted men carrying boats and 60 pounds of equipment apiece. At the end of the field, a small overflow dike is not a six-foot-high earthen embankment to be crossed under fire but an illusory shelter from incoming death that each wave of men sought before their final push into fast water and renewed risk.

Most readers know of the U.S. 82d Airborne Division's celebrated river assault at the Waal. But less known is the fact that the collapsible assault craft that survived that assault went up the road to the Poles. The Polish Parachute Brigade crossed without artillery support and had to carry their assault boats across half a kilometer of marsh swept by machinegun and artillery fire. Further, they had to climb a small dike before scaling the banks of the Driel to battle the swift-moving current, all while under continuous fire. A charge as desperate as that of the famed Light Brigade, this assault provided the only relief the British paratroops at Oosterbeek ever received.

NOTE TO READERS: All of the books mentioned in this review section may be purchased directly from the publisher or from your nearest book dealer. We do not sell books. But we will furnish a publisher's address on request.

The author's objectivity is evident in his candid portrayal of the Polish Brigade's less-than-diplomatic commander. In the discussions of the survivors, the book truly sets itself apart as one for the soldier rather than the armchair warrior. The author's descriptions are not bare statements of dates and data but vivid portraits of men under fire: It is hard not to be touched by the macabre humor of two soldiers who make grave markers for themselves in advance and update them each day they survive. And it is easy to visualize the flamboyant General Sosabowski, atop a "requisitioned" ladies' bicycle, literally leading British armored cars in an attack in support of his beleaguered troops.

Aside from the many tactical vignettes, the author also poses some interesting strategic questions: For instance, what if Sosabowski's urgent intercession for a division-scale crossing farther up the river had been heeded? According to a Waffen SS colonel who commanded one of the defending units, "such a crossing in this sector would have been a walkover." Most important for us today, the fate of our own Rangers in Somalia bears witness that the tactical lessons illustrated in this book are as relevant as they were 50 years ago.

The handsomely bound book, with its rarely published photos, captures the spirit that was recently celebrated on the 50th anniversary of MARKET GARDEN.

The War Against Germany: Europe and Adjacent Areas. United States Army in World War II. Center of Military History, U.S. Army. An AUSA Book. A reprint of the 1951 Edition. CMH Pub 12-3. Brassey's, 1994. 448 Pages. $30.00. Reviewed by Lieutenant Colonel Albert N. Garland, U.S. Army, Retired.

In 1951 and early 1952, the Office of the Chief of Military History (OCMH), Headquarters Department of the Army—now the Center of Military History (CMH), HQDA—published three pictorial volumes to supplement the official narrative histories—the "green books"—then being written. As the Chief of Military History pointed out in his foreword to this book, "These volumes will preserve and make accessible for future reference some of the best pictures of World War II." This particular volume has been reprinted at least once before, in 1990 by the Abbeville Press.

The volume, divided into seven sections arranged chronologically, covers activities in the European Theater of Operations from the build-up in the United Kingdom through V-E day. The photographs are accompanied by informative captions, and written text is kept to a minimum.

The intention at the time it was put together was to include photographs that illustrated "important terrain features, types of equipment and weapons, living and weather conditions, military operations, and matters of human interest." (All but one of the photographs in this volume were taken during the war by photographers from the various U.S. armed forces.)

OCMH was quite proud of its three volumes, as well it might have been. And I believe the people who worked on them would be proud of the job Brassey's has done in getting this reprint to the public. It certainly makes its appearance at an appropriate time and is most welcome.

Confederate Goliath: The Battle of Fort Fisher. By Rod Gragg. Harper-Collins, 1991. 343 Pages. $25.00. Reviewed by Major Don Rightmyer, United States Air Force, Retired.

By December 1864 there was only one remaining seaport in the South—Wilmington, North Carolina—through which the Confederacy could receive many precious supplies and luxuries that Southern blockade runners were able to bring through the offshore cordon of watchful U.S. Navy ships.

Sitting several miles up the Cape Fear River, Wilmington was protected by a series of fortifications, the most formidable of which was the infamous Fort Fisher. The fort had stood as a silent unchallenged sentinel over the city throughout the war, although Union leaders had thought several times of mounting a campaign against it. In December 1864 and January 1865, that status changed.

The first campaign launched against Fort Fisher was a joint Army-Navy effort in December, led by Admiral David Dixon Porter and General Benjamin Butler. After an abortive attempt to destroy the fort by exploding a heavily laden powder boat nearby, the Navy warships mounted a massive bombardment, followed by a successful Army amphibious landing on the peninsula north of the fort. Because of a feud between him and Porter, however, General Butler insisted that the Army troops be withdrawn and returned to Virginia's Hampton Roads. That was the final straw in Butler's checkered Civil War career and, as a result, he was removed from command.

The second attempt to take Fort Fisher occurred two weeks later under the leadership of Porter and Army General Alfred Terry, a former New England lawyer. Following the greatest sea bombardment of the war, with 59 warships participating, Terry's Army forces as well as a 2,000-man naval brigade were landed. Within two days, the combined force successfully captured the legendary fort, which subsequently resulted in the surrender of Wilmington as well.

Confederate Goliath is an excellent history of one of the war's last major campaigns, which is little known to most people. The book, a very readable account of the actions from both sides, provides several good maps and other documentary references for further study of the battle for Wilmington. It offers a good look at a joint service effort in the U.S. military of the late 1860s.

Deception Operations: Studies in the East-West Context. Edited by David A. Charters and Maurice A.J. Tugwell. Brassey's (UK), 1990. 432 Pages. Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army.

Although not an actual war, a distinct rivalry and confrontation existed between the United States and the Soviet Union during much of the 20th century. This tension was heightened periodically by the frequent and calculated strategic deception operations of both East and West.

This volume, edited by two men who have written extensively on intelligence topics and low-intensity conflict, contains 16 well-researched and thought-provoking case studies of East-West strategic deception operations. The stated aim of editors David A. Charters and Maurice A.J. Tugwell in chronicling and analyzing these ploys is to improve knowledge in four principal areas: "the circumstances in which deception has been used; its results; the proclivity of the two political systems to use deception in international relations under conditions short of war; and the systems' relative vulnerability to such deception."

The case studies are of a uniformly high quality in both scholarship and writing. Each essay is interesting and insightful, but three are especially fascinating: "James Klugmann, SOE-Cairo, and the Mihailovich Deception," by David Martin, which ana-

lyzes the deception campaign that destroyed faith in Mihailovich and made inevitable the Allied policy shift in favor of Tito in Yugoslavia; "'A True Picture of Reality': The Case of Korean Airlines Flight Number 007," by Tugwell; and "Nine Days in May: The U-2 Deception," by Charters. An excellent introduction and conclusion, combined with a detailed select bibliography, enhance the value of the volume.

The usefulness of deception depends upon perception. While the success of some of the strategic deception operations described in this volume is open to question, there is no doubt as to the success of the book as a whole. The editors and authors are to be congratulated for producing an excellent study on a timely subject.

Westmoreland: A Biography of General William C. Westmoreland. By Samuel Zaffiri. William Morrow, 1994. 502 Pages. $25.00. Reviewed by Colonel Cole C. Kingseed, U.S. Army.

The popularity of General William C. Westmoreland has risen and fallen over the years with public reaction to the Vietnam War. Long criticized for the attrition strategy that produced the high casualties and that ultimately led to stalemate in South Vietnam, Westmoreland is now undergoing reassessment as the nation comes to grips with the most unpopular war in its history. In the first full biography of Westmoreland, author Samuel Zaffiri presents a sympathetic look at the controversial commander.

Relying extensively on oral histories, newspaper and periodical accounts, and personal interviews, the author portrays Westmoreland as a born soldier, destined to attain the upper echelons of Army command. Compiling a laudable combat record in World War II, he quickly came to the attention of airborne commanders Maxwell Taylor and James Gavin. Subsequent posts following the war included secretary of Taylor's army staff, commander of the 101st Airborne Division, and superintendent of the United States Military Academy at West Point. In 1964, at Taylor's urging, Westmoreland assumed duties as commanding general, Military Assistance Command, Vietnam (MACV).

Not surprisingly, most of this biography consists of Zaffiri's efforts to justify Westmoreland's battlefield strategy and to portray the general as a victim of the Johnson administration and Pentagon bureaucracy. Consequently, neither the President nor the Joint Chiefs of Staff fare well in this account. According to Zaffiri, Johnson and Secretary of Defense Robert McNamara never subjected their military strategy to critical analysis. Nor did the Joint Chiefs raise more than a token protest over a war that they were increasingly convinced was being mismanaged by the Johnson administration.

To his credit, Zaffiri also discusses the less-than-admirable side of his subject's personality. Creighton W. Abrams, for example—although he was Westmoreland's deputy—was seldom taken into Westmoreland's confidence and was also seldom allowed access to back-channel messages. Additionally, Westmoreland's penchant for surrounding himself with proteges from his airborne days often kept highly capable officers from rendering military advice and sound recommen-dations.

Westmoreland's controversial confrontation with CBS News over the documentary "The Uncounted Enemy: A Vietnam Deception" also receives ample coverage in this biography. Again, Westmoreland emerges as a hapless victim of a ruthless network and a less-than-competent legal staff. The book ends on a more positive note with Westmoreland serving as grand marshal of the Chicago Vietnam Veterans Parade in June 1986. But Zaffiri's claim that Westmoreland's popular reception in Chicago can be properly characterized as "revenge" against those who sought to damage his reputation is dubious at best.

In short, Zaffiri paints a too favorable portrait of his subject. More critical analysis of Westmoreland's leadership and an overall assessment of his contribution to the U.S. Army would have improved this narrative. A definitive biography of Westmoreland is still to be written, but Zaffiri has taken the initial step.

RECENT AND RECOMMENDED

Hidden Ally: The French Resistance, Special Operations, and the Landings in Southern France, 1944. **By Arthur Layton Funk. Contributions in Military Studies, No. 122. Greenwood Press, 1992. 368 Pages. $49.95.**

The Soviet Withdrawal From Afghanistan: Analysis and Chronology. **By Tom Rogers. Greenwood Press, 1993. 256 Pages. $55.00.**

The U.S. Navy, the Mediterranean, and the Cold War, 1945-1947. **By Edward J. Sheehy. Greenwood Press, 1992. 208 Pages. $45.00.**

The Last Kamikaze: The Story of Admiral Matome Ugaki. **By Edwin P. Hoyt. Praeger Trade, 1993. 256 Pages. $22.95.**

At War in the Gulf: A Chronology. **Arthur H. Blair. Texas A&M University Press, 1992. 144 Pages. $9.95, Softbound.**

The Ultra Magic Deals and the Most Secret Special Relationship, 1940-1946. **By Bradley F. Smith. Presidio Press, 1993. 224 Pages. $24.95.**

The Search for Strategy: Politics and Strategic Vision. **Edited by Gary L. Guertner. Contributions in Military Studies, No. 143. Greenwood Press, 1993. 328 Pages. $59.95.**

Cold War Analytical Structures and the Post Post-War World: A Critique of Deterrence Theory. **By Cori Elizabeth Dauber. Praeger, 1993. 207 Pages. $47.95.**

Italian Prisoners of War in America 1942-1946: Captives or Allies? **By Louis E. Keefer. Praeger, 1992. 195 Pages. $49.95.**

The Black Tigers: Elite Vietnamese Rangers and Their American Advisors. **Compiled and edited by Command Sergeant Major Michael N. Martin and Lieutenant Colonel McDonald Valentine, Jr. Harmony House, 1993. 136 Pages.**

Inventing the Future: How Science and Technology Transform Our World. **By F. Clifton Berry. Brassey's (US), 1993. 224 Pages. $19.95.**

Daring to Win. **By David Eshel. Sterling, 1993. 240 Pages. $27.50.**

Paying the Premium: A Military Insurance Policy for Peace and Freedom. **Edited by Walter Hahn and H. Joachim Maitre. Contributions to Military Studies, No. 140. Greenwood Press, 1993. 208 Pages. $49.95.**

Military Helicopter Doctrines of the Major Powers, 1945-1992: Making Decisions About Air-Land Warfare. **By Matthew Allen. Contributions in Military Studies, No. 137. Greenwood Press, 1993. 328 Pages. $59.95.**

Cavalry: The History of a Fighting Elite, 650 B.C.-1914 A.D. **By V. Vuksik and Z. Grbasic. Sterling, 1993. 224 Pages. $35.00.**

Landing Zones. **By James R. Wilson. Pocket Books, 1993. 340 Pages. $5.99, Softbound.**

Point Man: Inside the Toughest and Most Deadly Unit in Vietnam by a Founding Member of the Elite Navy SEALs. **By Chief James Watson and Kevin Dockery. William Morrow and Company, 1993. 336 Pages. $22.00.**

Not by the Book: A Combat Intelligence Officer in Vietnam. **By Eric McAllister Smith. Ivy Books, 1993. 214 Pages. $4.99, Softbound.**

Quang Tri Cadence: Memoir of a Rifle Platoon Leader in the Mountains of Vietnam. **By Jon Oplinger. McFarland & Company, 1993. 220 Pages. $17.95, Softbound.**

Landing Zones: Combat Vets From America's Proud, Fighting South Remember Vietnam. **By James R. Wilson. Pocket Books, 1993. 341 Pages. $5.99, Softbound.**

Franks Report: The Falkland Islands Review. **By Lord Franks and others. Pimlico, 1993 (distributed by Trafalgar Square, North Pomfret, VT 05053). 105 Pages. $19.95, Softbound.**

Lee's Terrible Swift Sword: From Antietam to Chancellorsville: An Eyewitness History. **By Richard Wheeler. Published in hard cover in 1992. HarperCollins, 1993. 430 Pages. $30.00, Softbound.**

*U.S. Government Printing Office: 1994 — 633-120/00005

From The Editor

OUR TIES TO THE PAST, OUR RELIANCE ON THE FUTURE

Most of the infantry divisions and brigades that achieved victory in World War II have long since disappeared from the rolls of Active Army units, but some still exist as Army National Guard units or as training divisions of the Army Reserve. Valued members of the Army team, they train in anticipation of the day when they will once again be called upon to serve. The concept of reserve components is not unique to our nation; the citizen soldier has been evident throughout recorded history, and today reservists are an integral part of many of the world's armies. In an age when economic realities argue against large standing armies, the role of the reservist will become increasingly critical, but only if we are able to maintain the level of readiness that future contingencies will require.

In their efforts to meet readiness standards, Army Reserve and National Guard units face challenges that their Active Army counterparts are often spared. The use of training facilities—from pistol ranges to maneuver areas—can sometimes require considerable travel before a training event can take place, while competing demands for the limited amount of training time available, even locally, can demand detailed, hands-on management. Some soldiers have to drive great distances just to reach their units, while others may find that scheduled active duty training conflicts with needed Army schooling or critical events at their place of employment. But there are benefits as well; the fact that soldiers can remain affiliated with the same unit for years lends a degree of stability and continuity to the unit that active duty soldiers—facing the normal personnel turbulence—would welcome.

Some units have shown that, in spite of challenges, they can train to standard and accomplish the most demanding of missions, as is the case with the 3d Battalion, 160th Infantry (Mechanized) of the California National Guard. In this issue of INFANTRY, Lieutenant Colonel William V. Wenger describes his battalion's actions in the aftermath of the earthquake that shook Los Angeles in the morning hours of 17 January 1994. With operations other than war (OOTW) occupying an ever-increasing share of the Army's mission, this is an excellent example of an OOTW mission carried out at home by an Army National Guard unit. In the future, similar operations may again be performed by Active Army or Guard units, but outside of the United States, and for that reason it is imperative that commanders train in anticipation of these missions.

Some will assert that training to meet OOTW missions can be done only at the expense of training in other, more critical tasks. This is a cop-out; the two are not mutually exclusive for any commander with imagination, and soldiers who are confident that they are prepared to execute the OOTW mission will be able to get in, do the job right the first time, and return home safely.

We take care of our soldiers by training them to do the job we expect of them, and part of that training is the sharing of information. INFANTRY has published a number of articles by Active Army officers and noncommissioned officers on subjects ranging from long-range patrolling to supply accountability, and from the perspective of leaders from squad leader to battalion commander. Now we need to pass along the experience of their counterparts in the Army National Guard and the Army Reserve. If you have an idea for such an article, call, write, or send a double-spaced draft to INFANTRY, P.O. Box 52005, Fort Benning, GA 31995-2005.

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