

Infantry



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July-August 1992

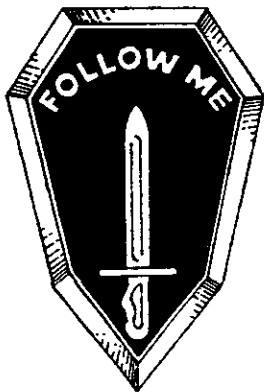
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By Second Lieutenant Augustine Acuna

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Commandant's NOTE

MAJOR GENERAL JERRY A. WHITE Chief of Infantry

LIGHT AND LETHAL

The dissolution of the Soviet Union and subsequent events have had a major effect on the United States Army. The first—and most obvious—is the dramatic downsizing that resulted from the peace dividend our political community anticipated in the face of a diminished Soviet threat. A second effect, and one with wide implications, involves the nature of the new potential threats and the way we must train and equip the force to meet them. Although this article addresses light forces, it is clear that early deploying units will include mechanized forces as well; future articles will discuss our plans for improving their lethality and survivability on the modern battlefield.

We will follow a dual approach in dealing with the new challenges posed by our changing world mission—technology and leader development. This article focuses on technological and materiel improvements and on the fielding of new equipment; subsequent issues of *INFANTRY* will discuss what we are doing to sustain excellence in training and leader development. Our focus on the soldier has never been more important than it is today. Recent changes in our noncommissioned officer courses, as well as in the officer basic and advanced courses, will produce the tough, thinking leaders that our Army demands and that our soldiers deserve. The expanded role of our premier small unit leaders' course—Ranger School—will be another timely subject. Watch for it.

During the nearly five decades since the end of World War II, we planned and trained, and focused

our materiel development to respond to the threat posed by the Soviets and their surrogates. At the same time, we oriented our contingency planning on specific global areas and scenarios. Our challenge is no longer that simple; we must now anticipate and react to a variety of regional contingencies around the world.

Because of the proliferation of military sales to third-world and developing nations, as well as to terrorist groups and drug cartels, it is now possible—and indeed highly probable—that potential enemies will possess modern, high-technology equipment. With this in mind, we must be able to defeat any adversary quickly with minimum casualties. Even though we are a smaller Army, our first-to-fight units must be both light and lethal; light in order to deploy rapidly and lethal in order to defeat a modern, well-equipped enemy. In order to do this, we need to maintain a technological edge over our opponents. Early deploying forces should receive state-of-the-art equipment as soon as it has been developed, tested, and approved for fielding.

The Concept Based Requirements System (CBRS) normally requires from five to seven years from concept to fielding, and we will not always have the luxury of that much lead time before we must confront an opponent. We have recently been able to reduce that time for some items of equipment through the Soldier Enhancement Program (SEP). This evaluation and procurement of off-the-shelf items can reduce the

time lag to as little as two or three years. Obviously, it may not be possible at present to reduce development time for all programs, but the SEP offers a significant improvement. We need to break the mold on how we do business. Why field equipment based on a five-year schedule? This delay is unacceptable for the units that are expected to be the first to fight.

We have identified four categories of equipment as being critical for early deploying units: night vision devices, weapons and munitions, command and control equipment, and those items that improve the environmental survival of the force.

The advantages of state-of-the-art night vision equipment were clearly demonstrated during the Gulf War. The superiority of our target acquisition and fire control systems enabled our mechanized and aviation crews to engage Iraqi targets at maximum ranges.

Command and control systems will become increasingly critical in responding to multiple contingencies, where we must interface with the combat units of other services, government agencies, and countries. Our command and control architecture must ensure that early deploying contingency forces have the equipment and the systems to control the high tempo such operations will entail.

Environmental survival equipment includes vehicular and personnel shelters, extreme weather gear, and individual clothing. It is important to make sure the infantryman is capable of fighting and winning under all climatic conditions.

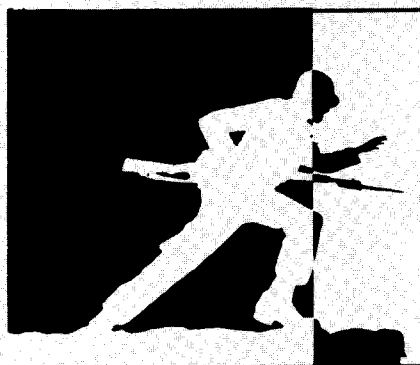
Programs in the night vision category are night vision goggles (AN/PVS-7), the infrared aiming light (AN/PAQ-4), a night sight bracket with which

to mount night sights from the soldier's assigned weapon to the AT-4 antitank weapon, a third-generation replacement for the AN/PVS-4 night sight, a target pointer, and the thermal night sight.

Two new additions to the weapons and munitions category are the bunker-defeating munition and lightweight tripod. In the command and control area, new additions include the small-unit radio and the small, SLGR/PLGR (lightweight GPS receiver/precise lightweight GPS receiver) position locators. Finally, items being considered in the environmental survivability category include extreme cold weather clothing, the thermarest sleep mat, the combat sleeping bag, and the intermediate cold wet boot and glove.

Current plans would field this equipment to first-to-fight units over a period of three to five years. Some have been fully funded while others are yet to be provided with enough funds to equip all first-to-fight units. My goal is to find the funding to field all of these items to first-to-fight units within a year after the first-unit-equipped date.

A smaller Infantry requires us to have technological superiority before committing our force to a power projection role in a regional crisis response. Our Infantry must be deadlier and more effective than any opponent. The latest munitions, weapons, technology, and training are essential components of success. The challenge of the Infantry School is to continue to give our infantry soldiers a combat edge based on advantages in doctrine, equipment, training, and leader development—and remain ahead of potential adversaries—and to improve and sustain the lethality of our contingency forces as quickly as we can.



INFANTRY LETTERS



JRTC RECONNAISSANCE LESSONS

I enjoyed the articles "The JRTC: Platoon and Squad Lessons Learned," by Lieutenants Robert F. Toole, Jr., and Stanley G. Genega, Jr., and "Zone Reconnaissance," by Captain Kevin J. Dougherty (INFANTRY, March-April 1992). Since the 112th Military Intelligence Brigade here at Fort Devens, Massachusetts, routinely sends observer-controllers to the JRTC for the intelligence battlefield operating system, I would like to offer some observations.

A common problem has been the S-2s' overusing and overtaking the scouts. As the articles described, the scouts usually become casualties when they are misused. In this case, it appears that the S-2 did not do a good estimate of the enemy situation. If he had, he would have noticed immediately that the opposing force (OPFOR) operated in squad-size elements of six to nine men. Knowing that, he should have realized that the scout platoon was too small an element for the task. A better choice for a complete zone reconnaissance would have been an infantry company.

While a platoon could conduct a fan as part of an overall zone reconnaissance, a complete company would be required to conduct three fans at the same time. Within a single-fan movement to recon an NAI selected by the S-2, a platoon could use successive sectors and converging routes. The soldiers could do a good job, not just stroll through. This would also give them at least a 3:1 force ratio over enemy units that were expected (or templated) to be in the area of operations, and it would prevent unsuccessful engagements with OPFOR elements of equal size. They would have enough mass and firepower to lay down a strong base of fire and conduct aggressive flanking movements to close with

and destroy OPFOR elements. The platoon leader could maintain momentum for the pursuit, avoid or flank ambushes and, if necessary, evacuate casualties. In addition, as Lieutenants Toole and Genega pointed out, it would be helpful if the mortar platoon leader had previously coordinated his priority targets with the company commander to support his patrols.

What we're really talking about here is effective decision making and wargaming. The cardinal rule should be to get the entire staff and the subordinate commanders together, and not leave anyone out. Crosswalk all facts and assumptions, and visualize the battle from start to finish. I fail to understand why we have to go through so much painful experience to learn and relearn basic lessons. The after-action reviews at the JRTC can be brutal, and the authors have done us all a valuable service in pointing out the correct tactics.

WILLIAM M. SHAW II
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EMPLOYMENT OF SCOUTS

During Operation DESERT SHIELD and DESERT STORM, those of us serving in the 3d Battalion, 7th Infantry, 24th Infantry Division, found that the scouts could not adequately develop the situation because there was so little time and space between them and the task force's lead elements. This was especially true during movements to contact when our scouts could not maintain enough distance between themselves and the lead companies, and the M1/M2 task force could not afford to lose momentum by reducing its rate of march.

After many hours of discussion, the officers and men of the battalion devel-

oped what we believe are some answers to this problem.

According to FM 71-2, the scout platoon should be two to six kilometers ahead of the advance guard to provide adequate warning and allow enough maneuver space. But this is not enough to allow the scout platoon to develop the situation properly. Either the task force must slow its rate of march (not always tactically feasible), or the scouts must be placed farther out in front. We believe the answer is to assume some risk and increase the distance between the scouts and the task force.

We recommend that the scouts push out 15 to 20 kilometers in front of the task force so they will have more time to develop the situation. Although the commander assumes more risk by placing them 15 to 20 kilometers forward, this risk can be reduced through training and coordination.

A major risk at that distance is fratricide from indirect fire or aviation systems. A forward observer, attached to the scouts, can help the scout platoon leader control those fires. Additionally, a restricted fire line, or other fire coordination measures, can help prevent fratricide at that distance. Likewise, if the scouts should make contact and need help, MLRS (multiple launch rocket system) rockets or aviation fires can be used to help them break contact.

The scouts should maintain their security through deliberate movement. The added distance between the platoon and the task force will allow them to achieve the stealth they need to accomplish their objective without being discovered.

If it is not advisable for the task force to slow its momentum—because of conditions of METT-T (mission, enemy, terrain, troops, and time)—the scouts must get out of the way. At this stage, they are not providing any additional

security for the task force anyway, and the lead units can usually see the same things they can see.

At this point, the scouts can be replaced by a company team that is trained and equipped to fight and protect itself. If the scouts are only two kilometers in front of the task force, they are already within direct fire range of most of the task force's weapons, and this is fratricide waiting to happen. At that point, the scouts can move to screen a flank or fall back within the task force formation to undergo supply operations in preparation for their next mission.

The scout platoon can be useful to a task force if it is given enough time and space to perform its mission. But when it has only two to six kilometers in which to develop the situation—especially if the tempo of operations is similar to those in DESERT STORM—then we need to look again at how and under what circumstances we expect our scouts to provide us with accurate information.

EDWIN J. KUSTER, JR.
CPT, Infantry
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FIRE SUPPORT IN LOW-INTENSITY CONFLICT

I would like to thank and congratulate Major Garnett Arnold for raising some important points in his article "Fire Support in Low-Intensity Conflicts," in the November-December 1991 issue of *INFANTRY*. He hits the nail squarely on the head in identifying and elaborating upon three challenges for fire support in low-intensity conflict (our most likely future): "fire support on the non-linear battlefield, avoiding fratricide, and avoiding collateral damage."

In spite of restrictions on the use of force and other "low-intensity" characterizations of LIC, combat at the squad, platoon, company, and even higher echelons can be terrifyingly intense. The squad, platoon, or other unit in the thick of it will want all the fire support possible to be immediately at its call.

Unfortunately, meeting the three challenges requires measures that tend to inhibit the use of current fire support systems as Major Arnold discusses in the context of today's weapons, organizations, and doctrine.

There are technologies in hand and a weapon system on the horizon that is ideally suited to meeting the three challenges while providing fire support of unprecedented responsiveness, precision, inherent fratricide avoidance, and "focused lethality." That weapon is the fiber optic guided missile (FOG-M). It is now known as NLOS-CA (non-line of sight-combined arms). By "focused lethality" I mean the concept of each missile with high assurance, being able to actually hit and kill its target without causing undue collateral damage. There are three important aspects of NLOS-CA's "focused lethality": The precision placement of its impact on the target, the power and favorable shot-line of its shaped-charge warhead, and the system's insusceptibility to the errors common to other fire support systems that cause a significant fraction of their lethal effects to be outside the target area (wasted firepower or, worse, fratricide and collateral damage).

An important capability of NLOS-CA that can greatly reduce the three challenges in LIC and other fluid battles is its real-time video overview of the target area. This imagery information can allow the maneuver commander to gain an accurate appreciation of the nature, extent, and disposition of the enemy in relation to his own forces (that is, "non-linearities" are revealed) and in relation to civilians and infrastructure facilities that are to be protected from injury or damage. With this "overview" information, commanders can maneuver and apply both conventional firepower and additional NLOS-CA firepower to destroy the enemy with minimal cost of friendly or civilian casualties and collateral damage.

Another important capability inherent in NLOS-CA stems from its precision, long range, battlefield overview (including self target acquisition and battle damage assessment) and its ability to

attack into defilade—the ability to perform some close air support (CAS) missions. This could be especially crucial for targets close to friendly forces and during the earliest phases of conflict when available air power is fully employed in air superiority and battlefield air interdiction missions. NLOS-CA can accomplish some CAS missions more precisely, responsively, and cost effectively than air power.

There is an important issue concerning fire support in low-intensity conflict that Major Arnold did not raise—the strategic deployment of fire support assets to the conflict area. Most current fire support systems are too bulky and heavy to be deployed by air, except in limited numbers. The first-in, first-to-fight light infantry in many scenarios will be fire-support poor. NLOS-CA is light and compact enough to accompany the lead elements of a strategic air-lifted contingency force. Once there, NLOS-CA is equally suited to providing fire support to maneuver units and to base defense forces.

NLOS-CA is not limited to providing a "knock-out punch" for only light forces in LIC situations. Its light weight, good tactical mobility, and highly lethal, multiple target, precision kill capability make it an ideal fire support force multiplier for both heavy and light forces at any level of conflict intensity.

While the Army's acquisition system struggles to bring NLOS-CA to the field, it is not too early to begin thinking of the best way to integrate and use its many unique capabilities. That is, an early and thorough appreciation of the NLOS-CA system by tactics and doctrine writers, fire support planners, and maneuver commanders can lead to early development of (hopefully) near optimal tactics, techniques, and procedures to allow future warriors to meet the challenges of fire support in LIC and to fully realize its battle-winning and life-saving potential.

RICK BRIDGES
Canoga Park, California

INFANTRY NEWS



FIELD MANUAL 25-101, Battle Focused Training, contains training management doctrine for the Army. The Combined Arms Command-Training (CAC-TNG) at Fort Leavenworth, Kansas, the proponent for this doctrine, is looking for suggestions on how the manual can be revised to better meet the needs of the entire Army.

Suggestions should include specific pages and paragraphs and specific recommendations, including textual changes or additions. Recommendations should be sent to Deputy Commanding General for Training, Combined Arms Command, ATTN: ATZL-CTT, Fort Leavenworth, KS 66027, or facsimile to DSN 552-4458.

For further information, call MAJ Ken Burke or CPT Bill Hedges at DSN 552-3919.

THE DISTRIBUTED TRAINING Program pilot test for the Infantry Advanced Noncommissioned Officer Course (ANCOC), scheduled to begin with Class 1-93, has been rescheduled due to delays in completing support materials for the 59 hours of Sergeants' Major Academy common-core subjects. (See news item in *INFANTRY*, May-June 1992, page 8.)

The pilot test for the ANCOC will now begin with Class 4-93, which is scheduled to report on 28 September 1993.

VETERANS OF THE U.S. ARMED services are easier to train than new employees from other sources and have better skills, according to a nationwide survey of small companies.

In telephone interviews conducted in April 1992, executives of 100 companies with fewer than 50 employees were asked about their overall impressions of

retiring or discharged veterans of the U.S. armed forces. Eighty-two percent thought recent veterans were more productive and more "team-oriented" than other new employees; 74 percent thought they were easier to train; and 56 percent thought they had superior technical skill levels. Fully 64 percent said they would actively recruit recently discharged veterans if a job became available.

THE NATIONAL INFANTRY Museum has planned a number of special exhibits and other activities in observance of the 50th anniversary of World War II.

THE 120mm MORTAR is replacing the older and heavier 107mm 4.2-inch mortar system, which was first introduced in the 1950s. The new mortar is lighter, easier to handle, and more



The first such activity, in December 1991, was a commemoration of the attack on Pearl Harbor that marked the United States' entry into the war. The program, which attracted wide interest, was held at the museum and was sponsored by the Military History Division of the Infantry School. It included a reception for Pearl Harbor survivors, followed by guest speakers from surrounding colleges and universities. Guided tours of the museum's World War II section were offered, and the film *Tora, Tora, Tora* was shown. In addition, the National Historical Miniatures Gaming Society presented wargame simulations of the attack, and

effective than the system it replaces. It also provides greater accuracy and range and is much safer in that the components are lighter and easier to handle and position.

Earlier this year, soldiers of the 199th Infantry Brigade (Motorized) at Fort Lewis were the first in the Army to train on the new system. These soldiers, with the help of weapon experts from the U.S. Army Infantry School, learned how to maintain, emplace, and fire the new mortar. The training included two days of classroom instruction and two days of "hands-on" practical exercises, followed by a live-fire exercise that completed the training.

Since most of the maintenance is performed by the five-man mortar crew, the weapon does not normally have to be evacuated for repair and is therefore more reliable.

The 199th Infantry Brigade will receive a total of 21 mortars for its four maneuver battalions. Army-wide fielding is scheduled for completion during 1997.

the National World War II Reenactment Society presented a demonstration, using authentic uniforms, equipment, weapons, and vehicles.

A special exhibit is being prepared using artifacts that belonged to Colonel Ray M. O'Day, a prisoner of war who was captured on Bataan in 1942 and held for three and one-half years. During those years, Colonel O'Day may have been the most inventive recycler of the century. He never allowed anything, however insignificant, to be thrown away. Among other imaginative articles, he made underwear from flour sacks, tin cups from tin cans, handkerchiefs and clothing patches from scraps, a diary using the backs of labels on canned goods sent through the Red Cross, and a sewing kit from a *Sucrets* box.

As the senior officer among the prisoners, he also assumed a leadership role, using an abundance of inner strength and ingenuity to give moral support to the others. After the war, he helped a large number of former prisoners get books about their experiences published, and he circulated among them a newsletter entitled *Chitchat*.

The museum recently received a gift of two rare and interesting weapons that had belonged to Heinrich Himmler. One of these is an over-and-under combination shotgun and rifle given to Himmler by his father in 1943. The other is a .22 caliber target rifle presented to him on his 36th birthday, 7 October 1936, by Karl Wolff, his personal adjutant and liaison officer to Adolph Hitler.

The museum also commissioned Don Stivers, a renowned artist famous for his paintings of military subjects, to create an original oil painting showing Medal-of-Honor-holder Captain Bobbie E. Brown and his men of Company C, 18th Infantry Regiment, in action at Crucifix Hill, Aachen, Germany on 8 October 1944. (Limited-edition prints, signed and numbered by the artist, will be available through the museum's gift shop, the regimental Quartermaster Sales Store, for \$125.00 each, plus a \$10.00 shipping charge. Profits from the sales will go into Fort Benning's Installation Morale

BRADLEY CORNER

FOUR TOOLS have been developed that will help soldiers maintain their Bradley fighting vehicles, and the M113 family of vehicles as well.

Three members of the civilian maintenance team of the 1st Battalion, 29th Infantry, created these tools to increase safety, improve maintenance efficiency, and decrease the time required to do specific tasks.

Such ideas and prototypes are sent to the Tool Improvement Program (TIP), United States Army Force Integration Support Agency, at Fort Belvoir, Virginia. There, the tools are tested and re-tested for durability and effectiveness. At the end of the assessment, a summary of the evaluation is compiled and sent to the U.S. Army Tank and Automotive Command (TACOM) in Warren, Michigan.

The four tools being evaluated in this program are the following:

The Track Rotating Tool provides easy access to the left and right propeller shaft cap bolts for removal and installation. Using this tool, an operator does not have to obtain additional manpower or use additional tools. Most important, it allows for a one-man operation without vehicle movement.

The Four-Way Track Gauge allows a more accurate inspection of the Bradley's track assembly, including the track pads, sprocket windows, cen-

ter guides, and track-shoe bushings. The method prescribed in the current technical manual is a visual check that can sometimes be deceiving. This tool is extremely valuable in conducting daily inspections of these areas.

The Universal Shock Extension safely and simply extends the shock of any tracked vehicle to the prescribed installation height. This method is a significant improvement over the previous techniques of prying the shocks open with a tanker's bar or extending them by attaching one or more vehicles to them. Normally, it takes between 200 and 300 pounds of tension to extend a shock. This tool simplifies the task of replacing shocks, saves money and man hours, and prevents unnecessary damage to equipment.

The Safe Guard Track Installation Tool is used to install a track on a BFV while reducing the crew's risk of injury. It is designed to prevent a crew member from catching his hand between the track pin and the inner side armor as he works the track back onto the support rollers.

Additional information regarding these tools may be obtained from Commander, 1st Battalion, 29th Infantry, ATTN: BMO, Fort Benning, GA 31905; telephones DSN 784-2401/1917 or commercial (404) 544-2401/1917.

Welfare and Recreation Fund.)

Another acquisition of special interest is a Civil War Confederate officer's sword made in Columbus, Georgia, by L. Haiman & Brothers, circa 1860, and carried in the war by Colonel P.J. Philips.

The museum has also received a U.S. flag, a crew patch, and an M-9 bayonet with scabbard that astronaut Lieutenant Colonel James Voss carried aboard the Atlantis STS-44 during its orbital flight between 23 November and 1 December 1991. The scabbard has an inscription that reads "Carried by an Infantryman to

the Ultimate High Ground!"

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the museum and the society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273; telephone DSN 835-2958, or commercial (404) 545-2958.

PROFESSIONAL FORUM



U.S. Battalion Operations In the Multinational Force and Observers

LIEUTENANT ROBERT L. BATEMAN

The multinational force and observers (MFO) on the Sinai peninsula grew out of the peace treaty the Arab Republic of Egypt signed at Camp David, Maryland, in March 1979. That treaty established Zones A, B, and C in the Sinai and Zone D in Israel, with specific limitations on the armed forces, armaments, and equipment that are permitted in each (see map and matrix).

The mission of the MFO is to observe, report, and verify all activities and any potential violations of the 1979 Camp David Accords. To accomplish this mission, the MFO force has about 2,100 service personnel from the 11 nations that contribute to it. Most of this strength comes from the three infantry battalions that are stationed throughout Zone C—one each from Colombia, Fiji, and the United States. Seven other nations—Canada, France, the Netherlands, New Zealand, Norway, the United Kingdom, and Uruguay—provide support units and staff personnel to the force. The eleventh nation, Italy, provides the naval contingent, which patrols in the Red Sea and near the Straits of Tiran.

Of the three infantry battalions in Zone C, two operate from North Camp, located near the city of El Gorah, and

one (the U.S. battalion) operates from South Camp, near the city of Sharm-el-Sheik at the southern end of the peninsula. Also based at South Camp is the Italian Navy contingent, which mans the MFO coastal patrol unit in the Sharm-el-Sheik harbor, and the Dutch contingent, which provides the military police unit and the communications center personnel. Finally, the camp includes a detachment from the U.S. aviation company, which supports the MFO, as well as a company from the 1st Support Battalion, which provides medical technicians for the camp dispensary and various materiel support.

From August 1991 to February 1992, the United States battalion in the Sinai was the 4th Battalion, 87th Infantry, from the 25th Infantry Division at Schofield Barracks, Hawaii. The following are some of the lessons the battalion's personnel learned both before and during its deployment.

When a battalion is scheduled to go to the MFO, it may have little or no time to train for its MFO mission. Although the battalion staff may feel that their units should be allowed to train exclusively for their upcoming mission, the higher headquarters may be reluctant to lose up to a third of its combat power to a non-warfighting mission.

Still, there is a period before the battalion goes to exclusive MFO training when it can do some important training for the task force. Here are some ideas for this low-resource training:

Aircraft and Vehicle Recognition. Light infantry units often have a weakness in these areas, because they do not generally train to oppose mechanized or armored forces. With the exception of the NCOs who may have served previously in heavy units, many of the lower ranking enlisted personnel of the battalion may not have had any training on aircraft and vehicle identification since their basic training. This is a skill that the MFO emphasizes, and the training requires almost nothing in material assets.

MFO Recognition Guide. The MFO has its own recognition guide, which has aircraft and vehicles organized by user nation and also includes some MFO-specific items that soldiers must be able to recognize. For the U.S. battalion, key items include the Egyptian Army uniforms, the seven different Egyptian police agencies that may be encountered in the Sinai, and the patrol boats of both Egypt and Israel. The soldiers who are assigned to checkpoints must also become the battalion's experts on Egypt's license

plates. The plates are different colors for military, police, and civilian vehicles, and this is often the only way the soldiers can determine that a vehicle entering Zone C is military and therefore in violation.

Leader Training. Squad leaders should concentrate on leader training, because the entire MFO mission rests upon them; all other elements support the squads out on the remote sites. The squad leaders will be alone and responsible for all activities at a remote site 24 hours a day for 21 days, as well as for the quality of the reports sent to higher headquarters. Although some NCOs may be comfortable with this idea, others may be intimidated by it. This feeling is understandable, because being in an independent command is a great responsibility and not something for which any junior NCO course has prepared them.

The preparation of the site may focus on making the squad leaders the subject area experts when it comes to the task force SOPs (standing operating procedures), training schedules, and the MFO mission in general. The preparation of a site commander's handover book is a good start in this direction. This book details the layout of the squad leader's specific site; how his squad will rotate and train; what each soldier's job will be on the site (TOC NCO, cook, sanitation specialist, site medic/combat lifesaver, generator mechanic); how the squad will execute its red alert and site evacuation plan; and many other details of running his site. Forcing the squad leader to develop this book early may be a great help in preparing him for his first independent command.

Another tool the battalion can use to prepare the site commanders is the command post exercise (CPX). Since each of the 13 remote sites acts as a separate reporting station, each operates its own TOC 24 hours a day. The TOC receives reports from the site towers and sends reports to the appropriate sector control centers. When a sector control center receives a report from a remote site, it must also send the report to higher headquarters while ensuring that the information in it is accurate, timely, and

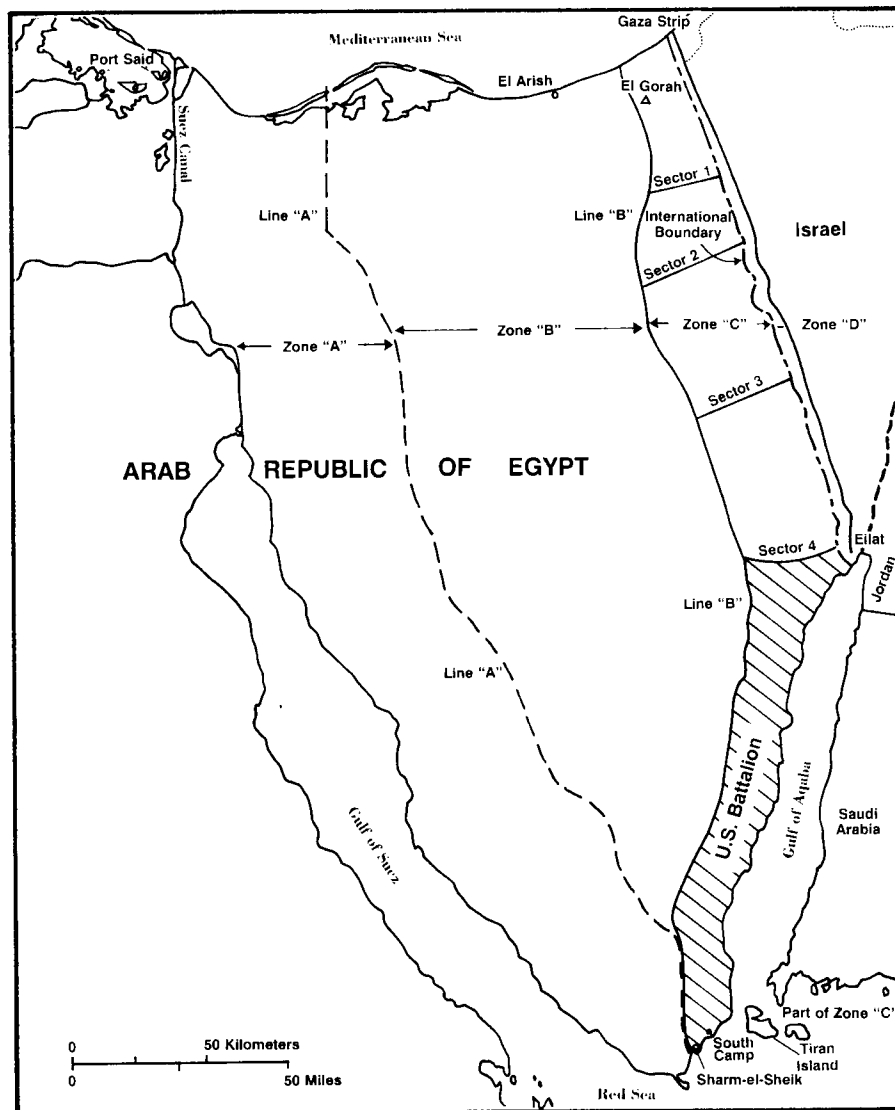
understandable.

A CPX can be run in a single afternoon. The only material resources required are MFO report formats, TA-1s, and enough wire to connect them while placing each "squad" (actually, just the squad leader and his two team leaders for each site) a short distance from each other. Landlines are run from the squads that will occupy remote sites in the MFO to the squads that will run the sector control centers, and from the three centers to the one battalion TOC. Each site is then given a series of 3x5 index cards that describe situations that may occur there and at what time. As each of these cards is "activated," the squad sends its initial report and describes what it is doing in response to the event. The sector control

center then sends its report to the battalion TOC, which may have questions or instructions of its own. (We found it particularly entertaining to role-play the part of the battalion commander at the TOC.)

This CPX then accomplishes two tasks. It familiarizes the site leaders with the appropriate MFO formatted reports of particular events, and it provides a forum for wargaming some of the events that may occur when the battalion assumes its MFO mission. After-action review (AAR) comments from this event proved especially useful when the squad leaders began to train their squads.

Along with these training concerns, the battalion must also consider the



Map of the Sinai

ZONE	TROOPS	TANKS	APCs	VEHICLES	ADA	ARTILLERY	AIRCRAFT	WEAPONS
A	1 MECH DIV; UP TO 22,000 PERSONS	1 BDE UP TO 230 TANKS	UP TO 480 APCs	NOT SPECIFIED	7 ADA BNs UP TO 126 PIECES (237mm)	7 FA BNs UP TO 126 PIECES	COMBAT AIRCRAFT AND RECON FLIGHTS ONLY	NOT SPECIFIED
B	4 BNs (BORDER) UP TO 4,000 PERSONS	NOT ALLOWED	NOT ALLOWED	WHEELED (LIGHT)	NOT ALLOWED	NOT ALLOWED	UP TO 8 UNARMED TRANSPORT AND UNARMED HELICOPTERS	LIGHT WEAPONS
C	ONLY POLICE AND (MFO) FORCES STATIONED IN ZONE	NOT ALLOWED	NOT ALLOWED	LIGHT MFO AND ARE POLICE WHEELED VEHICLES	NOT ALLOWED	NOT ALLOWED	UNARMED POLICE HELICOPTERS	ARE POLICE LT WPNS ONLY
D	UP TO 4 IDF INF BNs; UP TO 4,000 PERSONS	NOT ALLOWED	UP TO 180 APCs	NOT SPECIFIED	NOT ALLOWED	NOT ALLOWED	COMBAT AIRCRAFT AND RECON FLIGHTS ONLY	NOT SPECIFIED

Matrix showing the forces, armaments, and equipment permitted in each area

family support group and the rear detachment. The men of the battalion will be deployed to the Sinai for six months. During this time, babies will be born, family members will be sick (or may die), and there will be various other family crises as well. To meet these needs, the family support group must be strong, and the rear detachment must be more than just a skeleton crew made up of the battalion cast-offs. (See also "Family Support Program," by Lieutenant Colonel Marshall L. Helena, *INFANTRY*, July-August 1990, pages 16-17.)

Information is the key to coping. Our battalion established regular information briefings for the soldiers' families. These briefings were given near the end of the training day, and the soldiers were released early so they could bring their families. Many of the fears the wives had about the deployment could be alleviated by a knowledge of where their husbands would be, what they would be doing, and how they would be living. Additionally, the key speaker at these briefings was the battalion commander, who not only presented most of the information but answered questions himself. His approach helped quell the rumors that invariably crop up before any major deployment.

Army Community Services (ACS) at Schofield Barracks was probably one of the battalion's biggest assets before its deployment. The ACS staff set up and coordinated group counseling for all the soldiers and their families. The counseling covered everything from financial planning and budget-making to the emotional aspects of deployment. It also included special sessions on how the families could help the children deal with the prolonged absence of their fathers. Any battalion should actively support such ACS programs.

In selecting personnel for the rear detachment, a battalion should keep the following in mind: These are the men who will be the primary link between the home station and the deployed battalion 6,000 miles away. They will be in charge of all personnel actions; they will be the ones to whom the families turn when they need help from the unit; and they will be the ones who prepare for the battalion's return. The unit's best personnel action center NCO should be placed in the rear detachment.

When planning training for the MFO mission itself, the incoming battalion should think about three areas in particular:

Frequent Sightings of Possible Violations. As mentioned earlier, the

battalion personnel who occupy checkpoints need to become experts on all aspects of identifying Egypt's vehicles and license plates. Since the 4th Battalion, 87th Infantry, assumed the mission, four confirmed violations of the treaty have dealt with military vehicles entering Zone C in the sector, all of them in the southern portion of the U.S. battalion's sector near two checkpoints on the roads leading into Sharm-el-Sheik from Zone A.

Warship sightings are common in the U.S. sector. Although the actions of warships in the Straits of Tiran do not directly involve either Egypt or Israel, freedom of navigation through the straits is one of the key points of the 1979 treaty. The U.N. fleet activities must therefore be closely observed and tracked, not because they have any direct bearing on the treaty but because one party may claim that the warships of the other are restricting navigation.

The responsibility for observing the fleet falls mainly on the coastal patrol unit run by the Italian contingent. On the other hand, it is not unusual to observe warships of four different nations all enforcing the blockade at the same time, and there is generally only one Italian patrol unit boat on site at any one time.

Aircraft sightings are also relatively common. Both Egypt and Israel have occasionally violated the treaty, either by flying training missions over an MFO site or by landing military aircraft at an airfield in the U.S. battalion sector.

Medical Evacuations. The MFO is committed to conducting medical evacuations of foreign nationals (non-Egyptian) whenever there is a potential loss of life, limb, or eyesight. For all critical cases, these patients are taken to the city of Eilat in Israel, which has the nearest modern facilities. Usually this involves a medical evacuation flight by the aviation detachment; the coordination for and deployment of medical support; coordination for border crossing by an aircraft through the liaison systems of both Israel and Egypt; requesting permission for the flight from Force Operations; monitoring of the flight of the evacuation aircraft; and the actual

contacting and treatment of the patient enroute. All this is for a simple medical evacuation. When actually finding the injured personnel becomes a factor, or when it may be a mass casualty situation, things get even more complex.

The 4th Battalion, 87th Infantry, evacuated people for a variety of reasons—diving, mountain climbing, and automobile accidents, and one explosion. Another common source of injuries is SCUBA-diving and snorkeling in the Red Sea.

The crisis action team must be trained to deal with these cases. The team should consist of the battalion commander, executive officer, S-3, S-5, and TOC crews. When the team arrives, it will also include the aviation unit representative and one of the doctors from the dispensary.

Liaison System. The liaison system for Egypt is the U.S. battalion's key host nation contact. The battalion's

specific point of contact is an Egyptian Army lieutenant colonel who lives in Sharm-el-Sheik, and good relations with him are very important in many ways. For one telling example, South Camp is about 100 miles from the nearest fresh water source, and this man controls the pipes that carry the water.

The keys to success for a multinational force and observer mission are, therefore, planning, preparation, and training. The battalion that follows these will avoid the mistakes that result from hasty, unplanned action, and will execute its critical MFO missions correctly and effectively the first time, every time.

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Combat Identification

EDITOR'S NOTE: This article was prepared by the Infantry School's Directorate of Combat Developments and staffed through other School departments.

During Operation DESERT STORM, the variables that can cloud the battlefield reached an all-time high. Warfare had become so sophisticated and complex that the units involved had a much higher probability of suffering casualties from friendly fire.

The recognition booklets and flash cards once used to teach soldiers silhouette identification shapes were no longer adequate, because specific items of equipment were often common to both friendly and enemy forces. For example, Soviet-designed battle tanks were

used by three members of the coalition force as well as by the Iraqis. Carefully planned and timed ground maneuver of the force, although rehearsed repeatedly, did not reduce the risk of fratricide, when targets were often engaged and destroyed before they could be positively identified.

As a result of the air-to-ground fratricide incidents, a multidiscipline center for fratricide technology was established at the U.S. Army Laboratory Command (LABCOM) Advanced Systems Concept Office (ASCO). At the same time, the Army Materiel Command (AMC) was tasked with developing a plan that would focus on the future effort to reduce fratricide and a plan for organizing and managing research and development for fratricide and identification friend or foe (IFF) on

a permanent basis.

As AMC was beginning work on the reduction of fratricide, a parallel effort was under way at the U.S. Army Training and Doctrine Command (TRADOC). The Army combat identification system (ACIS) concept is the result of that effort. It will attempt to provide the means for positively identifying potential targets as friend, foe, or neutral (noncombatant). Positive identification must be made in real time from any area within a theater of operations, under any condition of terrain and weather, during day or periods of limited visibility (with emphasis on nighttime and dirty battlefields). The ACIS concept covers air-to-air, air-to-ground, ground-to-air, and ground-to-ground combat identification systems. Passive technology will be stressed, with the

overall intent of reducing fratricide.

The Infantry School became involved in fratricide prevention in 1988 when TRADOC established its fratricide action plan. This plan coordinated and directed TRADOC's efforts to resolve recognized shortfalls in doctrine, training, leader development, organization, and materiel products relating to fratricide on the battlefield. A continuing effort to update and refine the document was completed in December 1991.

A series of joint working groups recommended milestones for quick fixes for combat identification, as well as longer term improvements. The recommendations included the technical approaches that might be used to solve the air-to-ground and ground-to-ground fratricide problem.

Under the guidance of the Director of Training and Doctrine, the Infantry School has established a fratricide action board whose function is to recommend to the commandant steps the infantry can take to reduce fratricide. The School is determining the best way to educate the force on methods of reducing the risk of fratricide. Solutions may include a combination of approaches that involve resident and nonresident instruction and materials, scheduled revisions of doctrinal publications, and combat identification techniques and procedures.

The Infantry School's position throughout this process has been to work within existing branch proponentcy (Armor, Aviation, Infantry) in the context of the TRADOC fratricide action plan. In general, the focus has been on reinforcing training and on adhering to existing doctrinal procedures that are designed to bring the full weight of our combat power to bear on the enemy while reducing friendly casualties. As training, doctrine, leader development, and organizational improvements are implemented, the infantry will also look to technological advancements to ensure fratricide prevention in areas not otherwise covered.

No amount of gunner training will completely solve the fratricide problem until our target acquisition systems can positively identify targets at the full

acquisition and killing ranges of our weapons. For that reason, any near-term technological solution must concentrate either on a fail-safe passive means of locating, identifying, and marking friendly vehicles and soldiers, or on a target acquisition system that is equal to the effective range of the weapon it serves.

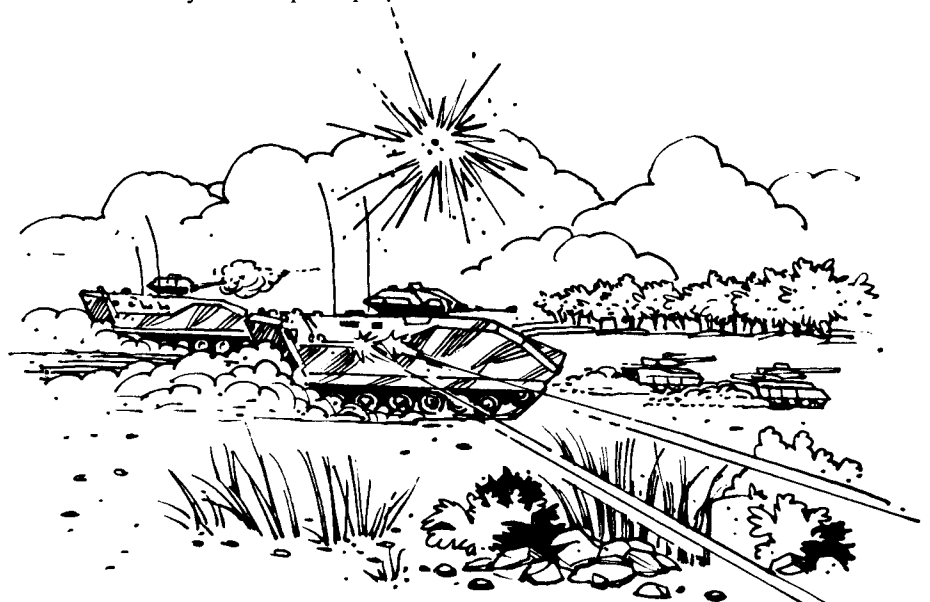
Materiel solutions to an improved combat identification are being incorporated into the documentation of all future systems. The desired improvements to the Bradley fighting vehicle (M2A2+), for example, include modifications to weapons and specific items of command and control that will contribute directly to combat identification. High on the priority list for improvement is the global positioning system (GPS) with a digital compass; a laser range finder; improved optics for increased target acquisition range; and a passive combat identification system. Other desired improvements include the intervehicular information system and a vehicle integrated defense system.

Individual weapon systems, such as the TOW and the Dragon, also need to be modified to include a combat identification capability. During Operations DESERT SHIELD and DESERT STORM, off-the-shelf, quick-fix devices were selected for use on the basis of their immediate availability and their ease of mounting and operation. These devices were the first to be selected in the Army's attempt to pre-

sent a comprehensive plan to prevent fratricide. The Advanced Systems Concepts Office provided several items to the Infantry School for evaluation during October 1991: These included the "Budd light" (a lightweight, low-cost battery-operated, near infrared strobe); the DARPA light (a battery-powered, omnidirectional near-infrared strobe with an adjustable elevation angle); and thermal tape (completely passive, easily applied adhesive backed tape that reflects the atmospheric temperature).

The quick-fix devices were evaluated in two phases: The Infantry School participated in the combat vehicle evaluation of the devices at Fort Knox. The task was to identify procedures for mounting the devices and to determine their capabilities and possible configurations when mounted on the M1, M2, M901, M106, FIST-V, and HMMWV. At the Infantry School, preliminary data was collected during October, and an evaluation was conducted in November 1991 using a Bradley fighting vehicle and dismounted troops. Tactics, techniques, and procedures were developed on the basis of the results of both assessments. The evaluation results and recommendations were forwarded to the Combined Arms Command for incorporation into a user's package to be provided to units training at the Army's National Training Center.

The Soldier Modernization Plan describes the development of the



Soldier System from 1991 to 2006, with the goal of providing improvements in combat effectiveness. Among these improvements will be a fully integrated positive combat identification system designed with the specific intent of reducing fratricide.

A soldier-to-soldier positive combat identification capability is of considerable concern. To date, there is no suitable covert, passive method of positively identifying friendly, threat, and neutral soldiers under all battlefield conditions at ranges greater than those provided by the unaided eye.

Such optical enhancements as rifle scopes and binoculars will allow com-

bat identification range to be extended for short distances during clear daylight operations. Night weapon sights, image intensification and thermal weapon sights are minimally effective in positively identifying dismounted troops. The goal is to give the dismounted soldier a combat identification system compatible with those of other friendly soldiers, vehicles, and aircraft that will provide a 360-degree positive identification. This device must have little or no probability of detection by similarly equipped threat forces.

The Infantry School is dedicated to the prevention of fratricide and is making every effort to evaluate and imple-

ment fratricide prevention techniques as they become available. As technology evolves, the infantry will be able to increase its combat capability with the added benefits of reducing fratricide by using sound doctrine, training, leader development, organization, and materiel solutions. The ultimate goal will be to field the world's finest infantry fighting force and, at the same time, to make fratricide a thing of the past.



A Framework for SOPs

CAPTAIN RANDALL A. SOBOUL

Standing operating procedures (SOPs) provide the glue that binds a unit together. It is not high-speed plans, abundant resources, or the outstanding abilities of key personnel that enable an infantry unit to win in combat. It is small groups of organized soldiers doing routine tasks *routinely*. And routine tasks are executed through established SOPs at levels from battalion down to buddy team. Most of the shooting, moving, and communicating that lead to mission accomplishment are not new at all; in fact, they are routine—they are SOP. And knowing the SOP gives soldiers confidence during periods of uncertainty.

We are often subjected to a time-constrained operations order (OPORD) that gives the guidance, "Per SOP," for many tasks. But what happens when the order is complete and subordinate orders are issued? Do the riflemen have a basic understanding of what is

required, or have they been referred to an SOP which is outdated, obsolete, or—worse—nonexistent?

There are many ways to mold unit SOPs. I would like to share a simple, proven *framework* from which to begin: "Left to right, 1, 2, 3; and front to rear, 1, 2, 3."

An infantry company—whether tactically employed (attacking or defending) or administratively employed (police call)—is arrayed from left to right, 1st Platoon, 2d Platoon, and 3d Platoon. Once the soldiers are trained using this framework, they will move out immediately, or assume attack formation, on the single command, "Per SOP."

The 1st Platoon is always on the left flank of the company; the 2d Platoon is always the center platoon; and the 3d Platoon is always on the right flank of the company. In a reconsolidation during a night attack on a difficult objective, for example, confusion reigns, and

with casualties and enemy prisoners of war to take care of, what happens when a rear security team is recalled by the 3d Platoon leader? The security team leader moves forward, makes contact, exchanges the appropriate challenges and passwords, and upon seeing a soldier from 2d Platoon immediately executes a right face (in relation to the direction of attack) to link up with his platoon. He knows that "per SOP" the 3d Platoon is always to the right of 2d Platoon.

The possibilities are unlimited, and leaders must ensure that they formulate their SOPs and plan missions in accordance with this framework. This does not mean the commander cannot be flexible in maneuvering or that he cannot designate special tasks to particularly proficient platoons. But whenever he does go against his SOP, he must announce to his personnel, "This is not SOP," and say it twice. His subordi-

nates will realize that they are now doing something different that requires their particular attention. The opposite is also true.

Here is a tip for continuity. If a leader requires the 3d Platoon (or 3d Squad) to lead in the order of march, or to attack or defend on the left side, he should reverse the SOP to reflect front to rear, 3, 2, 1 or left to right, 3, 2, 1. When the 2d Platoon is to be the lead element, or when it is to attack or defend on the left, he moves the 1st Platoon to the rear or the right side, arraying his personnel left to right, 2, 3, 1, and front to rear, 2, 3, 1. By adding these few ground rules and adhering to them when planning and executing operations, a leader reinforces and strengthens his SOPs.

Although I never dictated that my platoons adopt this company-level framework at platoon level, they still arrayed themselves left to right, 1st, 2d, and 3d Squads. All the squad leaders positioned their Alpha fire teams on the left and Bravo teams on the right. This meant that the 1st Squad leader habitually conducted flank coordination with the 2d Squad leader (and the unit on our left flank), the 2d Squad leader coordinated with the 1st and 3d Squad leaders, and the 3d Squad leader coordinated with the 1st Squad leader of the 2d Platoon. A habitual relationship was established between fire team leaders of adjoining squads. Thus the company SOP provided structure down to the lowest level of execution.

A commander who is truly committed to making this work strengthens his SOP every time he resists the urge to let his "best" platoon lead during movement or tackle the "sticky" part of an objective. When he deploys his forces "per SOP," everyone knows where to go, and a platoon's mission depends on its placement in relation to the SOP—no "favorites," no singular dependence on one "strong" platoon, only delegating tasks, strengthening confidence, spreading the wealth of responsibility, and thus adding flexibility to the company as a whole. Each platoon remains attentive, knowing that the commander is committed to simplicity and that at

any moment that platoon may be the main effort. When most of the decisions are predetermined, the orders process is greatly reduced.

My company's technique for perimeter defenses or patrol bases was the triangle. Regardless of the preferred technique, we were arrayed in relation to the direction of march in which we had occupied the position—left to right, 1, 2, 3, per SOP. The 1st Platoon was the left shoulder of the triangle, 2d Platoon formed the base, and 3d Platoon was the right shoulder. Once a misoriented soldier (or leader) ran into someone along the perimeter, it was easy for him to move to the proper location. He knew where to go in relation to the platoon or squad he had just contacted, because it



was SOP. By reducing internal movement, this also greatly improved control and noise discipline.

Building on the initial framework, a leader can also assign platoon (or squad) colors in the order red, white, blue—red for 1st Platoon, white for 2d, and blue for 3d. These colors can correspond to numerous activities, from the embossing tape that marks platoon equipment to the sub-objectives for which a platoon has tactical responsibility. Tactical objectives or areas are manned as red for 1st Platoon and in descending order for 2d and 3d Platoons. Objective RED is subdivided for 1st Platoon's squads—RED 1, RED 2, RED 3. At a glance, the leader knows who is where by virtue of the objective name. A company objective (given in the battalion OPORD) is divided from left to right—Objective RED, Objective WHITE, Objective BLUE, per SOP!

This framework, taken still farther, can be applied to specific tasks and sub-tasks; for example, the occupation of a pick-up zone (PZ) in preparation for an airmobile operation. The PZ is organized in relation to the aircraft approach heading, front to rear, 1, 2, 3. Given the heading, 10 UH-60 aircraft, landing in trail with only one serial, and given the unit's field strength, the leader subdivides the aircraft, then cross-loads key personnel and equipment (where this is tactically sound). Generically, chalks 1, 2, and 3 belong to 1st Platoon; chalk 4 to Headquarters; chalks 5, 6, and 7 to 2d Platoon; and chalks 8, 9, and 10 to 3d Platoon.

The leader delegates PZ security responsibility at 1, 5, and 9 o'clock in relation to the aircraft approach heading. This means a 1st Platoon element mans the 1 o'clock position, a 2d Platoon element mans the 9 o'clock position, and a 3d platoon element mans the 5 o'clock position—front to rear, 1, 2, 3, per SOP. The PZ is secure, and the soldiers are ready to be airlifted out in a short time. With this specified task completed quickly, more time is available for equipment checks and back-briefs.

This SOP framework is a simple technique that really pays off. When soldiers know their commander employs them in a certain manner, they prepare for combat instinctively, anticipating his commands. Units that are trained to make their SOPs within this basic framework can react instantly to any situation. Units continually learn (especially at the National Training Center) that windows of opportunity open only for short periods, and units that react instinctively win. Left to right, 1, 2, 3, and front to rear, 1, 2, 3, will get them through these windows.

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Search and Attack

A Doctrinal Perspective

CAPTAIN JOHN L. POTHIN

The doctrine in Field Manual (FM) 100-5 provides commanders with a common approach to wartime operational tasks, and a context in which to view the conduct of operations. Accompanying this doctrine is a series of field manuals that more specifically define procedures and methods for employing units in combat.

These manuals do a good job of covering most combat operations. In training a light infantry rifle company on the movement to contact, however, I had trouble understanding the approach they take in discussing search and attack. I would like to offer a discussion of this issue, along with some practical methods a light infantry leader can use.

Let's first look at the core of the problem. FM 100-5 describes movement to contact as a type of offensive operation:

The purposes of movement to contact are to gain contact with the enemy and to develop the situation. Movements to contact should be conducted in such a manner as to maintain the commander's freedom of action once contact is made.

This is a general description of a type of operation, and one that can be useful in a variety of conditions. At this point, though, FM 100-5 gets very specific in describing a movement to contact: *A corps and its divisions usually organize a covering force, an advance guard, and a main body for movements to contact. The main body normally provides flank and rear security forces.*

Immediately following this passage, the manual describes the organization

and purpose of units that are conducting movement to contact operations. This description raises several questions: Is this general context or common approach useful for the average light infantry division or brigade task force with a contingency mission? Is the operational doctrine too specific? Or is it missing some information?

The answers to these questions are a separate issue worthy of future debate. Yet the results of this kind of doctrine do affect the operational approach to movement to contact that the light infantry field manuals take.

VARIATIONS

FM 7-72, Light Infantry Battalion, offers movement to contact as a type of offensive operation and specifies an operational procedure similar to the description in FM 100-5. Advance guard, main body, and flank and rear security are principal elements of the approach. Variations appear in movement formations—the battalion wedge, battalion vee, and battalion column. This is not the operational approach commonly used in a light infantry battalion when conducting an operation whose purpose is to gain or maintain enemy contact. Enemy tactics and the terrain are rarely suitable for this operational form.

It is in the "technique" section of the manual that a definition of search and attack can be found: *Search and attack is a movement to contact technique*

peculiar to light infantry. This technique is used when the enemy is dispersed throughout an area, when enemy weaknesses cannot be found, or when we want to deny the enemy movement in an area. The manual attempts to focus on the principle "disperse to search and mass to attack." This section also addresses tasks to be accomplished (beyond gaining and maintaining contact), along with control measures and search techniques; employment techniques for the scout, antiarmor, and mortar platoons are also mentioned.

If search and attack is merely a "technique," why does the manual offer more than just search techniques? It also acknowledges the requirement for different control measures and employment considerations for subordinate elements, yet hesitates to call this an operation or to provide a common methodology or approach.

Let's put this operation in context and seek to understand the evolution of search and attack.

The Vietnam War offered a unique operational perspective. The elusive nature of the enemy forced U.S. units to adopt *search and destroy* operations. Units had to find the enemy first, often on his own terms, then systematically destroy him. Maintaining contact with the enemy in the jungle was difficult. Although "search and destroy" was a common operational term, no lasting doctrinal operational changes appeared in print.

Many people recognized this absence of literature, and a few sought to devel-

op a common approach to search and destroy operations. In *The Vietnam Primer, a Critique of U.S. Army Tactics and Command Practices in the Small Combat Unit*, for example, S.L.A. Marshall and David H. Hackworth (then a lieutenant colonel) offered a number of tactical lessons that provided solutions to problems that small unit leaders often faced.

Other situations dictated a different approach to maintaining contact. The term *cordon and search* (coined as a reaction to Viet Cong domination of villages and hamlets) referred to the technique of sealing an area to allow searchers to flush out the enemy. The cordon eliminated the need for pursuit. Enemy soldiers often fled into pre-established American blocking positions and ambush sites.

Some conventional infantry units even restructured their organizations to accommodate changes in their approach to search and destroy operations. For example, in 1969, the 4th Battalion, 39th Infantry, as part of the 9th Infantry Division, created an extremely decentralized organization in response to the enemy threat. The battalion's units operated in widely decentralized formations of platoon size and smaller, normally over a 50-kilometer area of operations. All extraneous equipment was eliminated, and each rifle company was assigned a specific tactical mission.

Operationally, search and destroy proved to be the principal U.S. ground tactic in Vietnam. Although we later changed the name of this operation to *search and attack*, we still refer to it as a *technique* and do not offer leaders a menu of methods to choose from. The quest for a common approach to conducting search and attack operations continues in most infantry companies and platoons.

Meanwhile, the methods outlined below can serve as a useful checklist or they can be added to any infantry tactical notebook or field SOP at platoon and company level. These are methods I learned from my commander, and they have been tested in numerous platoon, company, and task force field training exercises. The overall strength of the

methodology is the grounding in basic tasks that serves as a springboard for future variation and innovation.

The Conventional Method:

- Through an intelligence preparation of the battlefield (IPB), the leader identifies the spots at which he is likely to run into the enemy and ranks these from most likely to least likely.

- He connects the dots and computes an azimuth and a distance from each dot to the next. This becomes his route, and each change of azimuth is a checkpoint (a random route will help confuse the enemy and reduce the likelihood of ambush). Because the leader can quickly identify unit locations, the route and the checkpoints also help prevent casualties from friendly aerial and indirect fire.

- Units move in the traveling, traveling overwatch, or bounding overwatch formations as the terrain and enemy dictate.

USEFUL

The advantages to this method are mass and control. The disadvantages are that the units are slow to clear the entire area of operation; momentum is difficult to maintain with control; and organic mortars are difficult to employ effectively while on the move.

In general, this method is similar to the movement to contact methods advocated in FMs 7-72, 7-71, and 7-70. It is particularly useful in fairly open and rolling terrain where units can take full advantage of the ranges and effects of weapons. It is also useful when opposing an enemy who tends to hold ground instead of withdrawing immediately on contact.

To use this method effectively, a unit must fix, flank, or envelop the enemy to finish him off, and then follow up on any remaining resistance.

The Search and Attack Method:

- The leader uses the same IPB procedure as in the conventional method.

- He then identifies a patrol base location and moves to it. The unit correctly occupies the base and designates a drop-off ambush to secure it.

- The leader sends out two-thirds of his unit to search designated areas and leaves one-third in the patrol base. The dispatched elements go to one or more specified locations that the leader's IPB has identified to see if the enemy is there or has been there. Before leaving the patrol base, each sub-element leader briefs the leader on the exact route he is to take, and both leaders coordinate checkpoints. Upon their return, the leaders debrief each other, the patrol base moves to a new location, and two more sub-elements are sent out to patrol—one of the two that have been on patrol and one that has not.

- Upon contact with the enemy, the patrolling units have two choices: If they can defeat the enemy, they attack him; if they cannot defeat him, they call the leader to report, leave someone to watch the target, and return to the patrol base or their link-up site with the parent unit. The unit then devises a plan and attacks the enemy.

This method has several advantages: It covers a large area quickly, maintains a reserve, improves security by moving patrol bases, and offers rest for one-third of the unit. It has two disadvantages: The patrolling unit is smaller, and the enemy is given more time to mass an attack.

This method is particularly useful when operating independently of parent units—specifically, when areas of operation are large. It builds in rest for extended operations. Additionally, aerial resupply and cache points integrate well around projected patrol base locations.

The Quail Method:

- The IPB process is similar to that of the previous methods.

- The leader identifies the suspected enemy location that he will search. He tries to determine which escape or access routes the enemy soldiers are likely to use and dispatches ambush patrols to cover those routes. (Mutually supporting or area ambushes are best.) The leader then uses the remaining maneuver force to flush the enemy into the ambushes. The procedure is repeated from one location to the next. (Maneuver elements and ambush ele-

ments can even rotate tasks.)

The advantages of this method are that it attacks the enemy twice, it includes maneuver and ambush, and it is easy to mask. The disadvantages are that the unit's movement is slowed and it must have extremely detailed intelligence.

This method is useful when operating in familiar terrain. Additionally, it hinges upon the commander's exploitation of accurate intelligence information from all sources.

Each of these methods emphasizes the importance of the leader's IPB process. When time is critical and the area to be searched is large, the leader must be willing to accept risk. Detailed knowledge of the enemy and the terrain reduces the risk; in fact, the selection of a method must take into account the size of the enemy, the type of terrain, and the amount of time available.

Proper command and control is also a prerequisite for success. Solid intent, clear control measures, link-up plans, and primary and alternate communications are critical to resupply, reinforcement, and casualty evacuation operations. Leaders must carefully plan soldier load combinations for each method. Rucksacks are inappropriate for most of the methods, and all plans must include arrangements for resupply or cache retrieval.

Leaders should vary patrolling methods to avoid predictable patterns. At the company level, the commander can and often should mix methods. He (or a platoon leader) may have his three subordinate elements operating in separate areas using different methods. In this situation, the subordinate leaders need to know their own locations and report them accurately. Accurate reporting facilitates control of current operations and provides the basis for future operations.

Training units to standard in each method is a challenge to leaders. An appropriate training strategy should include at least the following multi-echelon training events:

Commander Chalk Talks (platoon and section leaders). These provide a forum for the review of principles and

involve wargaming solutions to tactical problems.

Commander Tactical Exercises Without Troops (TEWTs) (same audience). Before each field exercise, the company commander walks the ground with the unit's leaders and discusses, in a realistic setting, alternatives to the solutions discussed during the chalk talk.

Platoon Sergeant and Squad Leader Rehearsals. This group reviews movement techniques, patrol base occupation methods, ambush techniques, and other supporting tasks. They accomplish this with multiple iterations of "clump rehearsals." In these



rehearsals, squad leaders and platoon sergeants painstakingly lead their elements through rehearsals using a crawl, walk, and run technique. The basic skills are easy to review in local training areas, or even on parade fields if necessary.

Preparation of the Objective. The company executive officer, the engineer support element, and a detail from each platoon build objectives in a training area. The objectives must be appropriate to the task, condition, and standard specified in the ARTEP Mission Training Plan (MTP). The objectives must represent a unique condition that is appropriate to the particular training task. Variety and imagination are important here.

Situational Training Exercises

(STXs). The first four activities can occur separately to save valuable time. The platoon leaders then take their elements to the field to train on these methods in a realistic, familiar setting. The commander facilitates each exercise by managing resources for each element and rotating platoons and squads through force-on-force multiple-integrated laser engagement system (MILES) validation exercises.

Leaders select tasks on the basis of known training weaknesses. For example, the first platoon, known to be weak in area ambush operations, uses a quail method against the second platoon. The second platoon uses a search and attack method and focuses on weaknesses in hasty attack and link-up operations (force ratio considerations must also play a role in exercise design). Meanwhile, the third platoon works on casualty evacuation techniques while moving on a random route such as that used in the conventional method.

After-Action Reviews. At each level of training, and after each training iteration, comprehensive after-action reviews must be conducted to distill the critical lessons and provide feedback before retraining. Leaders must build retraining time into the training schedule and then must limit their task selection to a reasonable number. This will encourage training to the standard.

Light infantry units are likely to continue playing a vital role in the future, and proficiency in conducting search and attack operations will still be a priority. Small unit commanders, armed with a training methodology or common approach, can take over existing doctrine and train their units to conduct movements to contact under varied scenarios, and thus ensure that the infantry force will retain its ability to close with and destroy the enemy.

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Rifle Platoon Guides Conserving Scout Manpower

CAPTAIN KEVIN J. DOUGHERTY

One of the tasks for scouts (according to ARTEP 7-92-MTP, Infantry Scout Platoon/Squad and Sniper Team) is to provide guides. But ARTEP 7-8-MTP, Infantry Rifle Platoon and Squad, does not list this as a task for rifle platoons. This may be the reason battalion commanders regularly task the scouts to provide guides when, in fact, the needs of the tactical situation would be better served by giving this mission to the rifle platoons.

This problem routinely comes up at the Joint Readiness Training Center (JRTC) during a battalion's deliberate attack. The usual scenario is for the scouts to leave friendly lines early, conduct an area reconnaissance of the objective, meet the rifle companies at designated link-up points, and guide them to their assault positions. This plan gives the scout platoon leader two critical tasks—to reconnoiter the objective and to provide guides. In many cases, the

ensuing developments of METT-T (mission, enemy, terrain, troops, and time), particularly those pertaining to troops and time, will force him to choose between the two. If he reconnoiters the objective thoroughly enough, he may not have time to get back to the link-up points to meet the rifle companies, and if he gets the guides to the link-up points on time, he may not have completed his reconnaissance.

At full strength, a scout platoon leader has just 18 men, organized into three five-man squads. The squad leader, if two of his five men have to go back to the link-up point, has only two men left, and is faced with both a control problem and a manpower problem. These problems are made even more serious if the original five-man strength has been reduced through casualties or any of the other possible causes.

One solution is to attach two soldiers from each of the rifle companies to the

scouts for the purpose of serving as guides. These attached soldiers man the link-up points, make contact with their companies, and guide them to the company assault positions. This frees the scouts to concentrate on their reconnaissance task.

This plan can be implemented in at least two ways. The first is to have the attached riflemen move with the scouts all the way to the objective and provide security during the actual area reconnaissance (see Tactical Technique 2, page A-3, ARTEP 7-92-MTP). This again allows the scouts to concentrate on reconnaissance. It also gives the rifle company guides some first-hand knowledge of the area itself instead of just the location of the link-up point and the assault position. At some point, depending on the time available, the scout platoon leader instructs the riflemen to move to their link-up points and prepare to act as guides. But the scouts will



continue to conduct reconnaissance and maintain surveillance on the objective.

In some cases, however, this scheme of maneuver may not be desirable. Time or distance may prevent the riflemen from moving all the way to the objective and then getting back to the link-up points before their companies arrive. Additionally, the nature of the enemy and the terrain may increase the risk of compromise if additional personnel accompany the scouts to the objective. Finally, since the riflemen have to move to the link-up points alone, there is always some chance they will get lost.

If the commander is not willing to accept these possible disadvantages, he has another option. He can have the scouts drop the riflemen off at the link-up points on their way to the objective and have the scouts continue to the objective alone. Under this plan, the riflemen do not get any personal knowledge of the objective area, but they have plenty of time to familiarize themselves with the link-up site and to reconnoiter the route to the assault position. They are also relatively sure of being in the right place at the right time.

These are just two ways rifle company guides can work with the scouts. The best solution is probably to make the scout platoon leader aware of these and other alternatives during wargaming sessions and then let him decide how he is going to accomplish the mission with the available resources.

Whatever the actual scheme of maneuver, using rifle company guides frees the scouts to focus on their primary task. They can maintain constant surveillance without having to worry about pulling personnel off the objective to man link-up points. They can send SALUTE (size, activity, location, unit, time, and equipment) reports on the opposing force by radio to the battalion, and they can run communication wire from the rifleman guides at the link-up points through the assault positions to the scout squad objective rally points (ORPs). In this way, they can communicate directly with the guides, and eventually the rifle company commanders, and give them timely updates from the immediate vicinity of the



objective. If needed, the communication wire can also be used as a navigation aid to guide the company to the objective.

Using riflemen as guides benefits both the scouts and the rifle companies. Obviously, it prevents the scouts from being overtaxed and allows them to focus on their reconnaissance. But it also helps the rifle companies. Instead of linking up with a couple of scouts the company may not have trained with, the company is now linking up with two of its own soldiers. They have no problem with recognition, uniforms, or standing operating procedures. The company commander is the guides' real-world boss, and the guides have a vested interest in linking up with their own company, so the commander loses no manpower for the assault.

The plan has little chance of succeeding, of course, if the rifle company guides are not properly prepared for this task. Since they will be operating relatively independently, the commander must select soldiers who have the experience, training, and maturity necessary for the job. Each battalion should already be maintaining a pool of soldiers designated to serve as scout

replacements, and these are the obvious candidates for the mission. They also must have such equipment as radio and wire communication, compasses, night vision goggles, and chemlights, VS-17 panels, or whatever other devices the battalion uses as recognition signals. Finally, the guides must be attached early enough to participate in the scouts' troop leading procedures for the mission.

There may be times when the situation requires scouts to be the guides, and the allotment of tasks in the ARTEP MTPs suggests that they should be the experts in this area. But this is not usually the case in such circumstances as the deliberate attack at the JRTC. Using guides from the rifle companies helps both the scouts and the companies. It requires a little extra planning and coordination, but the results are worth the effort.

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Mounted Reconnaissance Patrolling

CAPTAIN WILLIAM J. GODBOUT

In mechanized infantry units, reconnaissance patrolling seems to be a lost art. Although a mounted *combat* patrol is a common task for a mechanized infantry platoon, a mounted *reconnaissance* patrol is less common and a task that is normally assigned to the battalion scout platoon. All infantry platoons must be proficient in reconnaissance patrolling, and must integrate mounted reconnaissance tasks.

A mounted reconnaissance patrol is just another type of patrol whose mission is to gather information on the enemy or the terrain. One difference, though, is that mounted patrols involve moving to or near the objective in a vehicle of some kind. The key to successful mounted reconnaissance patrols is the proper integration of the vehicle with the mission and terrain.

Another difference is that light infantry platoons are equipped and trained to gain detailed information from vantage points close to the enemy, while mechanized platoons are not. Mechanized patrols do have the ability to gain information at greater standoff ranges. Their targeting, sighting, and night vision capability is excellent in open terrain, but when tasked to conduct close reconnaissance, mounted patrols must dismount and work the same way as light infantry patrols, while continuing to integrate the vehicles into their operation. Mounted reconnaissance patrols cannot just drive up to the objective, collect information, and then drive away.

Mounted patrols are bound by the same principles as other types of patrols—planning, reconnaissance, security, and control. During mounted reconnaissance missions, however, leaders must pay particular attention to security and control.

Security for a mounted movement may take the form of flanking vehicles, a point vehicle, the integration of dismounted soldiers with vehicle movement, overwatch, or a combination of these. Speed itself does not usually provide security for a mounted reconnaissance. Although a mounted unit can dash across small danger areas, this is especially dangerous in daylight. A proper dismounted reconnaissance of the danger area will provide a much safer crossing.

A platoon leader should dismount his troops when halted. He should conduct a reconnaissance of the immediate area, looking for all routes into and out of the location, covering them with fire, and immediately designating an escape route.

The leader should shut down his vehicles when halted to reduce the audio and visual signals. He should use a short or long count to shut down and restart all of them at the same time. At these halts, the drivers and the soldiers manning mounted weapons must be prepared to react quickly. The patrol leader and several others should remove their CVC (combat vehicle commander) helmets and listen for the enemy. Vehicle and engine noise may be easy

to detect but difficult to pinpoint.

Controlling a mounted reconnaissance can be much more difficult than controlling a dismounted one, especially during periods of limited visibility. Target identification is more difficult, and the possibility of friendly casualties is greater. Communicating and navigating from a moving vehicle can present difficulties. Communicating clearly may even require short halts. It is better to move slowly and deliberately, and the leader may even have to dismount to check his route, because the terrain may look completely different from that vantage point.

During troop-leading procedures, every vehicle commander should prepare a 3x5 index card showing a strip map of his route, and the patrol leader should check it. This "prep to move" strip map will familiarize everyone with the route and identify key terrain features along it. The map is a handy reference when bouncing around on a moving vehicle. This map does not replace the standard 1:50,000 map with operational and fire support graphics that every vehicle commander must have, but it should provide greater detail than the large-scale map affords.

A mechanized reconnaissance patrol relies heavily on the dismounted infantrymen. The vehicle is a means of moving and sustaining the dismounted soldiers as well as communicating with them and providing direct fire support. Before the actual reconnaissance, the dismounted infantrymen must be

trained in several critical collective tasks. Some of these are the following:

- Prepare for combat.
- Cross danger area.
- Infiltrate and exfiltrate.
- Occupy objective rally point (ORP).
- Perform link-up.
- Move tactically.
- Cross water obstacles.
- Employ fire support.
- Occupy patrol base.
- Dismount and remount.

Although many of these are familiar to mechanized infantry soldiers, several are more common to light infantry soldiers and therefore require more attention from leaders.

The mounted soldiers—driver, vehicle commander, and team leaders—also have critical tasks that they should already know. But most infantrymen have not been trained in the finer points of mounted reconnaissance, and it is wise for the leaders to talk with the battalion scouts before a mounted reconnaissance mission. Any MOS 19D scout can provide good tips on mounted reconnaissance. For example, running silent and invisible is the preferred technique for movement; any light source, even inside a vehicle, will reveal its location; all panel lights and radio call lights should be taped up, radio speakers should be turned off, and in cold weather, heaters should be turned off.

Mechanized infantry units conduct reconnaissance patrols as part of a battalion offense or defense. A mechanized infantry company commander in such operations receives a general or specific mission. A general mission, for example, is to provide local security for a battle position. A specific mission is most likely to be filling gaps in a scout screen or gathering priority intelligence for an offensive mission. These missions can be mounted, dismounted, or both.

In the offense, a mechanized unit can execute an area reconnaissance, a zone reconnaissance, or a surveillance mission in preparation for a battalion or brigade mission. A rifle platoon may also be tasked to conduct a route reconnaissance if the battalion scouts, for some reason, cannot conduct it. For all of these missions, the mechanized lead-

ers must follow basic patrolling principles and tactics while integrating the use of the combat vehicles as they are needed.

For an area reconnaissance, the vehicles can be used to move the patrol toward the objective area. The leader designates mounted rally points, uses dogleg routes, maintains security, and treats the mounted movement as an integral part of the patrol. He calls a halt away from the objective (two terrain features is a good guideline, depending on the terrain and the mission), then sends a dismounted patrol forward to secure an ORP. Once the vehicles are in the ORP, the dismounted patrol moves to conduct the actual reconnaissance of the objective.

The patrol leader uses the basic vantage-point technique with single or multiple reconnaissance teams. (Probing is a lost skill in mechanized units and is used only if vantage points are not available.) If the dismounted patrol runs into a large enemy force, the vehicles can be called forward for suppression and extraction. Commanders should plan for and rehearse such a contingency.

Once the dismounted patrol returns to the vehicle ORP, it disseminates information and returns to its parent unit. This is one of the patrol's most vulnerable moves, and the soldiers must remain on the alert. If the enemy has detected the patrol's movement into the objective area, he will have had time to prepare an ambush, lay mines along the route, or detect the higher unit's location, possibly all of these.

For a zone reconnaissance, the combat missions are used to move the patrol toward or actually into the zone. Depending on the mission and the enemy, dismounted soldiers are used either outside the zone or in the zone itself.

The basic zone reconnaissance techniques of *fan*, *box*, *converging routes*, *successive sectors*, or *multiple routes* are used. *Tracking*, an advanced zone reconnaissance technique, may also be used along with one of the basic techniques or if fresh vehicle tracks (usually tanks) are located. Vehicles may be

used to move dismounted infantry within the zone, to overwatch for dismounted infantry, or to conduct a separate mounted reconnaissance of part of the zone.

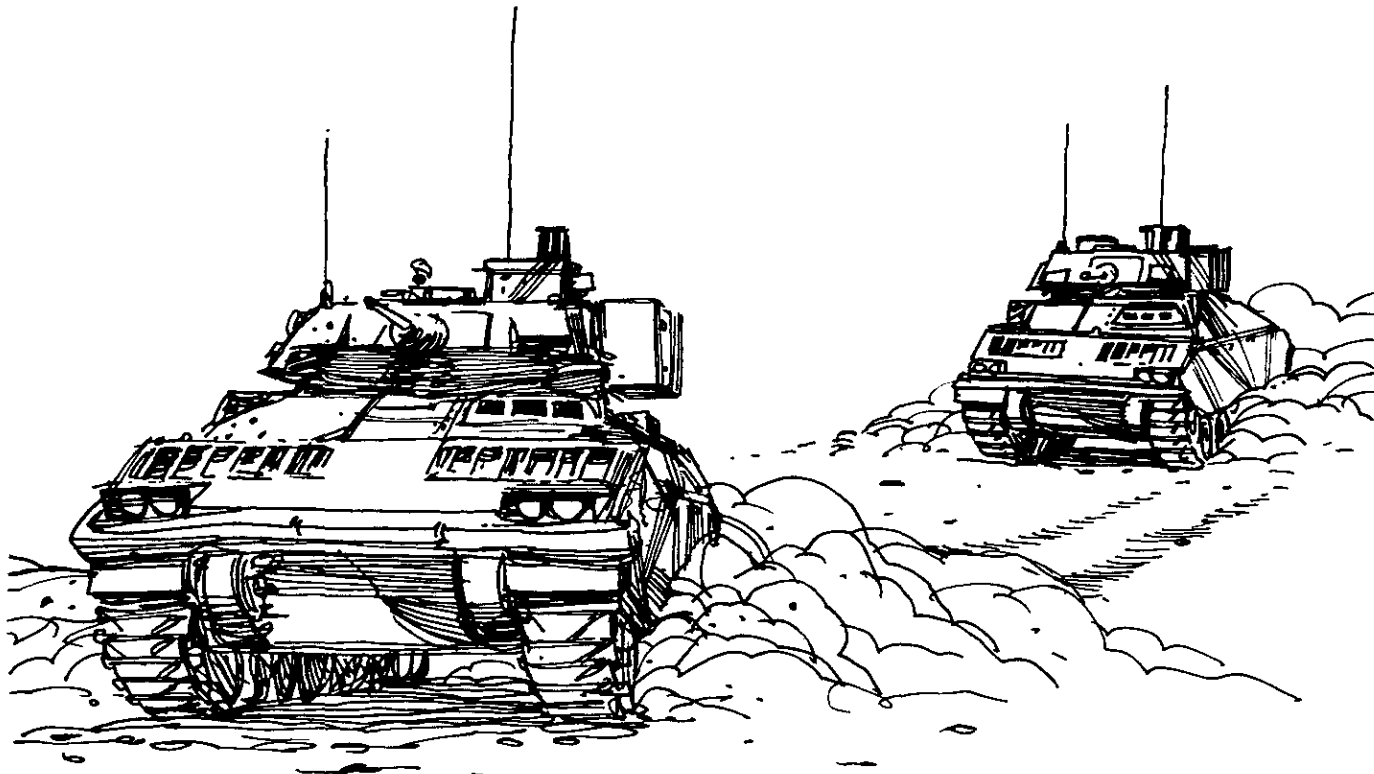
For a surveillance mission, the vehicles are used to move the dismounted patrol toward the surveillance site; then the same techniques are used as in an area reconnaissance. Another technique is to use vehicles in the actual surveillance site to provide greater siting, communication, protection, and sustainment. This is a good technique when the enemy is not known to be in the vicinity of the surveillance site but is expected to move within visual range.

Dismounted infantry soldiers should reconnoiter and secure the site before bringing the vehicles in. The site should provide covered positions and lots of natural camouflage for the vehicles. The camouflage should protect the site from air detection and from ground detection by both mounted and dismounted soldiers.

Security must be provided during the entire surveillance period. The dismounted soldiers can also be sent to close alternate surveillance points. Whenever possible, the patrol leader should use field telephones and wire to communicate with the dismounted troops.

Leaders planning a surveillance should include extra ammunition, rations, batteries, and water so they will be prepared for an extended mission, because surveillance teams are often hard to recall once they are deployed and performing their mission.

In the defense, mechanized units are proficient at providing local security while preparing a battle position. This security usually takes the form of a battalion scout platoon screen and squad-sized dismounted patrols from the rifle companies. A patrol that combines mounted and dismounted soldiers can be used to cover a larger battle position. Combat vehicles can be integrated into the patrolling plan when the terrain and the mission allow. Zone reconnaissance and surveillance techniques can also be used during defensive security patrolling.



Successful patrolling requires sound planning and careful rehearsal, and the integration of combat vehicles intensifies this need. Clear and concise orders should be issued down to the soldier level and must leave junior leaders time to plan and prepare for their mission. The patrol leader should use a checklist for all orders and inspections (the Ranger Handbook is always useful for this), and he should have a fire support plan and know how to use it.

Communications are critical. Any time communication devices stop working, they must be fixed or replaced; otherwise, the reconnaissance is over. When mounted and dismounted ele-

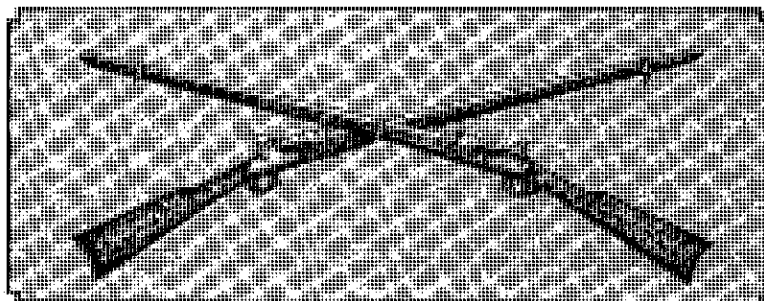
ments are separated, five-point contingency plans should be used in case communications between them break down.

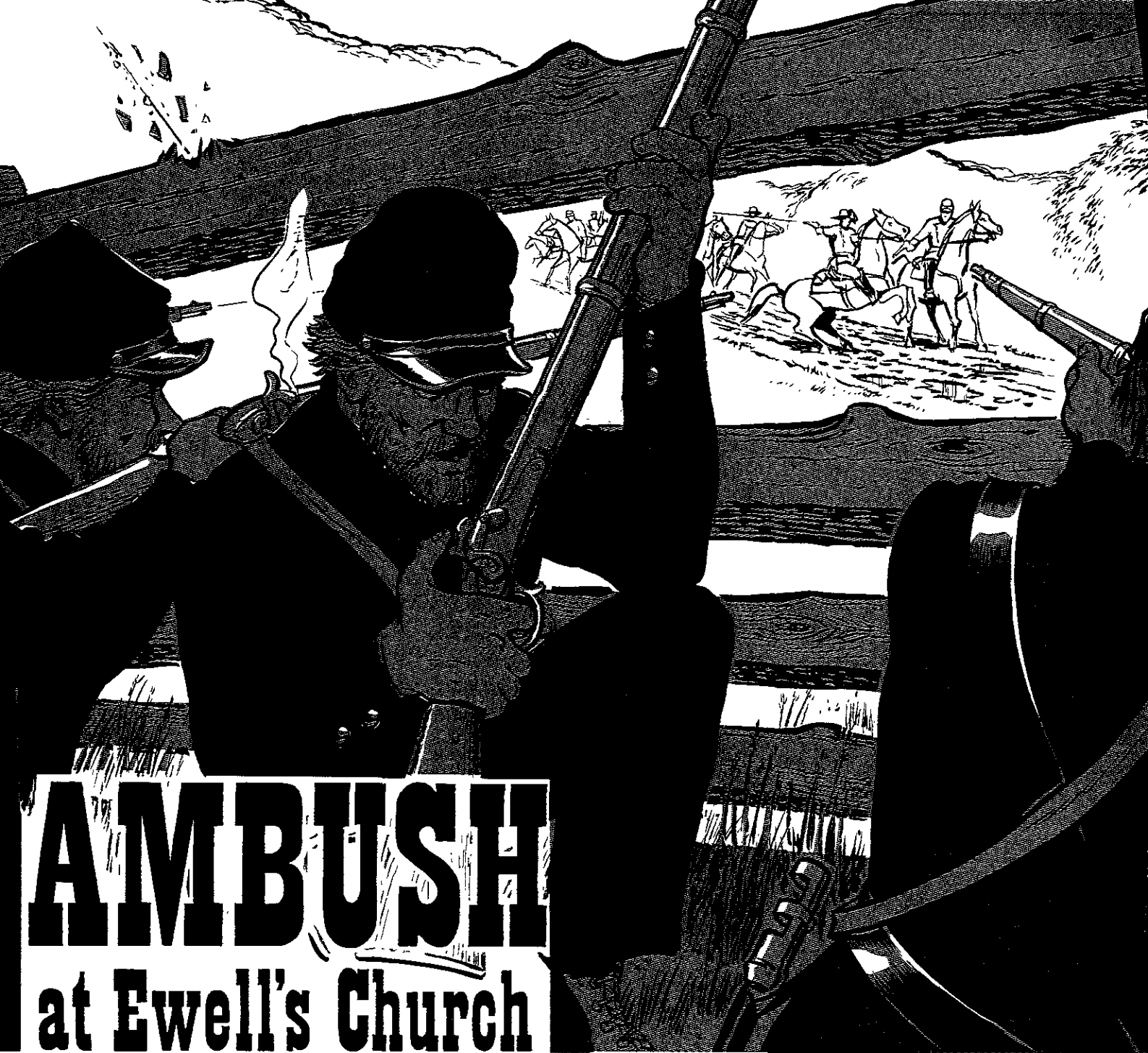
The patrols should relay all information quickly and accurately using SALUTE (size, activity, location, unit, time, and equipment) reports, and whenever possible should draw reconnaissance sketches. Each patrol should get updates from the battalion S-2 section before going out on a mission and should be debriefed upon returning from each mission.

Mechanized infantry leaders must train their junior leaders in reconnaissance patrolling techniques. This train-

ing should begin with the basics, then include the finer points and the integration of combat vehicles. Leaders must use their ingenuity during the planning phase of each operation. They must integrate their dismounted and mounted assets, then employ them using good reconnaissance techniques.

Captain William J. Godbout commanded a mechanized infantry company in the 3d Battalion, 8th Infantry, and has served in other command and staff positions in both light and mechanized infantry units. He is now attending the Defense Language Institute in preparation for a foreign area assignment. He is an ROTC graduate of Providence College.





AMBUSH

at Ewell's Church

CAPTAIN MARK W. JOHNSON

An infantryman studying the operations of the United States' Civil War will find few examples of small-unit actions that resemble today's light infantry combat. The infantry tactics of that era—massed small arms fire and the maneuvering of troops at regiment and brigade levels—did not result in any great need for independent infantry operations at company level. While countless small skirmishes did take place, few were considered important enough to receive more than brief mention in official reports.

An exception to this rule is an operation on 22 June 1863 near the town of Aldie, Virginia, where a team consisting of 100 Regulars of the 14th U.S. Infantry and 30 troopers of the 17th Pennsylvania Cavalry ambushed a detachment of the

43d Battalion, Virginia Cavalry—better known as Mosby's Rangers.

Although the ambush was not successful (from a Union point of view, at least), it offers several lessons for the modern infantryman, including the importance of two of the Army's principles of training: the need to train soldiers as a team, and the need to train them as they will fight.

The story of the 14th Infantry's encounter with the 43d Virginia begins 19 days earlier. On 3 June 1863, the Confederate Army of Virginia, commanded by General Robert E. Lee, left its lines on the Rappahannock River and began moving westward. It was soon moving northward through the Shenandoah Valley (Map 1). The Confederate cavalry

under Major General "Jeb" Stuart screened the movement by occupying the passes of the Blue Ridge Mountains. Lee's second invasion of the North had begun.

The effectiveness of Stuart's screening operation prevented Major General Joe Hooker, commander of the Union's Army of the Potomac, from learning Lee's whereabouts. On 13 June, fearing that Lee might cut his line of supply with Washington, Hooker ordered his army to move from its position near Fredericksburg and concentrate around Centerville, Virginia.

As the Federal Cavalry Corps attempted to penetrate Stuart's screen on the Blue Ridge, the Union infantry moved northward. Late in the evening of 18 June, the V Corps arrived at the small town of Aldie, nestled in a gap of the Bull Run Mountains. Here, the corps waited for the cavalry to the west to report and for Hooker to decide what to do next.

The 2d Division of the V Corps was one of the most famous of the war—named "Sykes' Regulars" for its commander, Major General George H. Sykes. It contained all of the Regular Army infantry regiments serving with the Army of the Potomac. The division had earned a well-deserved reputation for "superiority in discipline and efficiency."

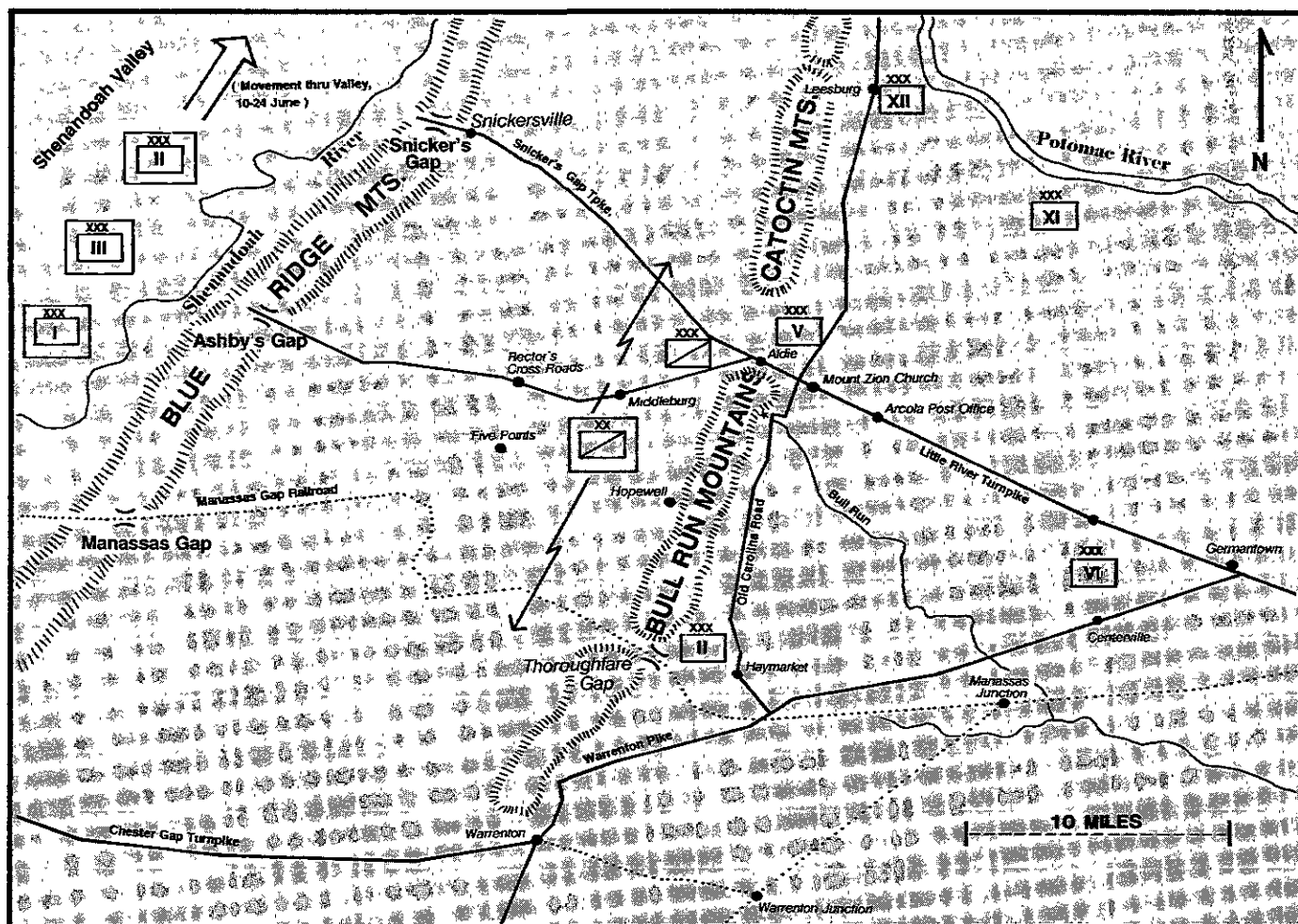
As the V Corps settled into its camp near Aldie, it found itself in the midst of a region known as "Mosby's Confeder-

acy." This was the area of northern Virginia patrolled by Major John S. Mosby and his Rangers. Mosby had begun guerrilla operations in the region in January 1863 with nine other men, and on 10 June organized 70 Rangers into Company A, 43d Battalion, Virginia Cavalry.

Mosby's operations quickly became a thorn in the side of the Federal high command. His elusive Rangers conducted a classic guerrilla campaign against the Union control of northern Virginia, gathering intelligence and raiding Union outposts at every opportunity. Any chance to kill or capture Mosby would not be overlooked.

V Corps got a chance to do just that on the afternoon of 24 June when information obtained from a former slave arrived at corps headquarters. Major General George G. Meade, the corps commander, was informed that the man had been at Ewell's Church, four miles south of Aldie, earlier that day and had overheard a conversation between Mosby and one of his intelligence contacts, Dr. Jesse Ewell. Mosby, after receiving Ewell's report, had said that he would be back the next morning. (At the time, Mosby and his command were scouting for Stuart's Cavalry Division.)

Dr. Ewell, cousin of Confederate Lieutenant General Robert S. Ewell, owned a small farm called "Dunblane" along the Old Carolina Road south of Aldie. A church was also located on his property, as was a little-used trail that ran up



Map 1. North-central Virginia, 1863. The asterisk indicates the location of Ewell's Church. Unit Locations are approximate.

and over the summit of Bull Run Mountain. Ewell's property had suddenly become crucial to Mosby because of the recent movements of Union infantry. With the V Corps in Aldie Gap to the north and with Major General Winfield Scott Hancock's II Corps occupying Thoroughfare and Hopewell Gaps to the south, this was the only route open to him.

Here, then, was a grand opportunity to ambush Mosby and finally put an end to his mischief. To execute such an important mission, Meade turned to the best troops he had—George Sykes and his Regulars.

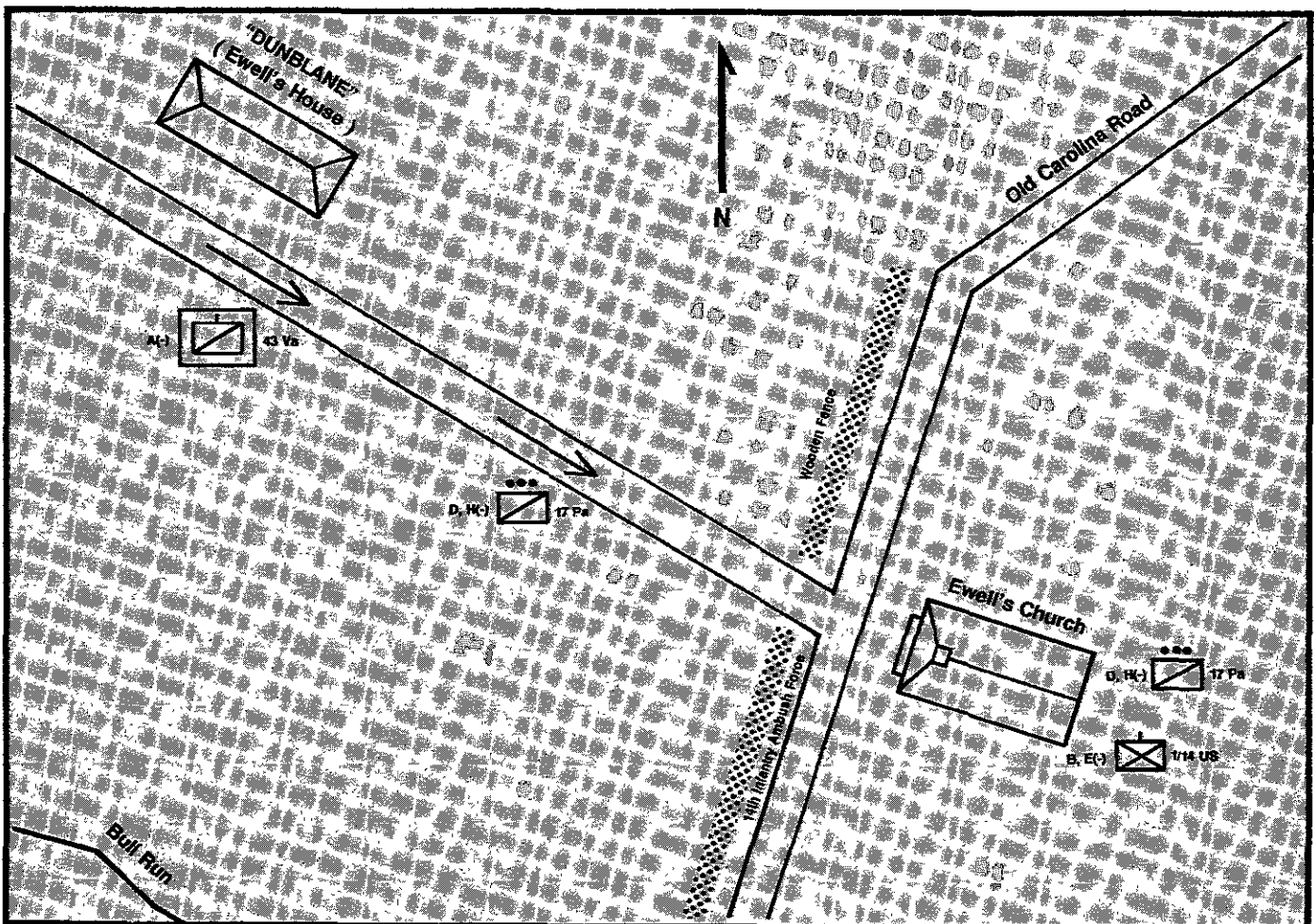
Meade also assigned Union cavalry to the mission. It was common to use horsemen as bait to lure enemy cavalry into an ambush. With the Cavalry Corps busy trying to penetrate Stuart's screen of the Blue Ridge, the only cavalry immediately available were the 40 troopers of the V Corps Headquarters Escort. This was a squadron of the 17th Pennsylvania, Companies D and H under Captain William Thompson.

Along with 30 of his men and two other officers, Captain Thompson reported to the 2d Division Headquarters on the evening of 21 June. There, he learned that Sykes had tasked the 14th Infantry with the mission, a decision that probably had something to do with the size of the regiment and the availability of a commander.

The 14th Infantry was one of the nine infantry regiments added to the Regular Army on 3 May 1861. All of these "new" regiments were organized French-style with three battalions of eight infantry companies each. The existing regiments, the 1st through the 10th Infantry, retained the British-style organization with ten companies in a single battalion. This meant that the 14th Infantry (along with the other new regiments in the division) had a much higher present-for-duty strength than Sykes's "old" regiments) and would be better able to handle the tasking.

Because of the realities of Civil War recruiting, however, all of the Regular regiments were badly understrength. (The Regular recruiters simply could not compete for manpower with their counterparts from volunteer organizations.) None of Sykes's new regiments ever placed more than two battalions in the field. As a result, Sykes's division had undergone a major reorganization in March 1863. Out of the 95 companies the regiment had taken into the Battle of Fredericksburg the previous December, the Regulars had been consolidated into just 59 companies. By June there would be 57.

All of the new regiments lost their multi-battalion organization. This meant that Captain William Harvey Brown, commander of the 1st Battalion, 14th Infantry, was temporarily out



Map 2. Vicinity of Ewell's Church, Virginia. Situation at daybreak 22 June 1863. (Map is not to scale.)

of a job. (Brown had moved up from his command of Company C to command of the battalion in the middle of the Second Battle of Bull Run when his battalion commander, Captain John D. "Paddy" O'Connell, was wounded.)

With the reorganization, the 14th Infantry had been distilled into a single-battalion regiment consisting of six companies of the 1st Battalion and two companies of the 2d. The ranking officer of the regiment in the field, Major Grotius R. Giddings, had assumed command on 3 May 1863, and Brown had become the regiment's "Acting Field Officer," a supernumerary position. Thus, the 14th Infantry now contained a battle-experienced battalion commander waiting for a job. On the afternoon of 21 June, he got one.

Brown received the order to capture Mosby's guerrilla party, and he determined that a force of 100 infantrymen, along with Thompson's cavalry, would be enough to accomplish this mission. For the infantry contingent, Brown chose officers and men who had served under him in the now-disbanded 1st Battalion.

Most of the forces consisted of the regiment's Company E, commanded by Captain Guido Ilges, who had led the company since its first combat at Gaines Mill in July 1862. This Prussian-born officer was one of the most battle-hardened company commanders in the Regular Army. A detachment of Company B rounded out the force. Leading the way on the mission was the company's First Lieutenant, the Virginian in Army Blue, George M. Downey.

Finally, Brown took along Irish-born First Lieutenant Patrick Collins, who had been his First Lieutenant in the now-disbanded Company C and who had moved up to command the company when Brown took over the battalion. He had also served six years with the 2d Cavalry in Texas before the war, rising to the rank of sergeant. Brown no doubt thought that Collins's Indian fighting and cavalry experience would be useful in the attempt to ambush Mosby.

Brown's plan was to travel the four miles to the ambush site and get his men into position well before first light, when Mosby was expected to arrive. He set a departure time of 0100 hours, 22 June. At that time, Thompson's Pennsylvania Cavalrymen moved out southward down the Old Carolina Road, and the infantrymen of the 14th trudged alongside.

The group immediately encountered difficulties. The pickets and sentries stationed around the Union camps had not been forewarned of the movement of Brown's men and, being a favorite target for attack by Mosby's Rangers, did not want to take any chances with any small group of infantry and cavalry traveling at night. The repeated challenges from the sentries cost the force much valuable time.

Adding to Brown's troubles, it had been raining off and on for the past week. Combined with the movement of the thousands of troops through the area, this rain had made the Old Carolina Road a muddy mess. It began raining again shortly after Brown's men set out, and conditions grew steadily worse.

The end result of these delays was that they did not arrive at the ambush site until after daylight. Given that sunrise at that time of year would have been around 0500, it had taken

Brown's force about four hours to move four miles.

Knowing that Mosby could appear at any moment, Brown quickly emplaced his men (Map 2). He put about half of his cavalry and a portion of his infantry in the rear of the church and at the head of a lane leading to Dr. Ewell's house, where Mosby was expected to pass. He left the rest on the left side of the lane facing toward the house. Brown had Captain Thompson place the rest of his horsemen a short distance down the lane leading to the house, with the mission of luring the Rangers into the ambush. Finally, an infantryman was placed in a tree near Brown's position to give early warning of the enemy's approach. They would not have long to wait.

As Mosby's men ascended the rugged path in single file through the rainstorm, a Ranger in the middle of the column lost his hat. As being hatless was a serious blow to a Civil War cavalryman's prestige, he immediately stopped to look for it. The front half of the column, not realizing there had been a break in contact, continued upward; the rear half of the formation, unaware of what was causing the delay, patiently waited. By the time the headgear was retrieved, they had lost all hope of catching up with Mosby and the leading Rangers in the dark and the rain. Then they dispersed to their bivouacs in the area.

Mosby and his remaining force of about 25 Rangers halted near the summit of Bull Run Mountain and made camp. After getting a few hours of rest, the soggy column moved out at first light and made its way down the mountain's eastern slope to Dunblane.

As the Rangers approached Ewell's house, they noticed the small group of blue-clad horsemen in the lane, and Mosby ordered his men to charge. When they did, the Pennsylvanians in the lane spurred their mounts to the rear and the waiting ambush. Brown's lookout in the tree reported their approach; Brown allowed the Virginians to advance "within pistol-shot" and then began firing.

The retreating Pennsylvanians, however, were still in the lane and partially blocked the infantrymen's aim. And much to Captain Brown's horror, only about half of their rifles responded to their trigger pulls. The rain the previous night had dampened the barrels, and the infantrymen had not had time to dry them before loading them.

The Rangers immediately returned fire, wheeled about, and retraced their path. Mosby said, "We fell back to the woods at the foot of the mountain. . . . Not one of my men or horses was killed; three were wounded." Indeed, his losses were light. Charlie Hall, First Sergeant of Company A, took a round in the shoulder; Richard Montjoy, later a company commander in the battalion, had a finger shot off; Ranger John Ballard lost a leg. One account of the ambush claims that Mosby, Hall, and Montjoy were riding side-by-side down the lane, and Mosby must have considered himself lucky.

For Brown and his men, there was nothing to do but return to camp. Pursuing the Rangers in the rugged terrain would have been futile. Their own losses numbered one—Sergeant Martin Aumiller, Company D, 17th Pennsylvania, was killed in the melee.

General Meade wrote in a letter that day, "And thus the prettiest chance in the world to dispose of Mr. Mosby was lost." General Sykes, never one to beat around the bush, wrote the following indorsement to Brown's report of the ambush: "Captain Brown should have had the foresight to see that his infantry were efficient and their arms in firing condition before leaving camp, especially as the rain of the evening might have led him to expect the result he experienced."

Brown blamed the cavalry, "I regret to state that the efficiency of the cavalry did not in all respects answer my expectations." In response, Captain Thompson requested a court of inquiry to investigate the incident. But the immense Battle of Gettysburg occurred less than two weeks later, and the entire affair was soon forgotten.

Nevertheless, the operation points out two lessons that are still valid today. The first is the need to train as a team. As FM 25-100, Training the Force, states, "When committed to battle, each unit must be prepared to execute combined arms and services operations without additional training or lengthy adjustment periods. Combined arms proficiency develops when teams train together."

This concept of combined arms, so commonplace today, was virtually unknown to Civil War commanders below the rank of major general. Small all-arms formations, usually called "legions," were tried early in the war but were soon discarded as impractical. As a result of the combination of tactics and technology in the Civil War, the combat arms branches of the Army were employed separately for maximum effect and ease of maneuver—infantry in corps, cavalry in divisions, and artillery in separate brigades. In addition, the company and field grade officers on both sides, most of whom had so recently been civilians, had a hard enough time becoming proficient in maneuvering their own regiment, battery, or squadron. For most of them, becoming skilled in the employment of a combined arms organization was simply out of the question.

As a result, Captain Brown had never before commanded a company or team of infantry and cavalry. His force was not prepared "to execute combined arms operations without additional training." Some of the confusion during the execution of the ambush was the result. It could be argued that his positioning of the cavalrymen was faulty. Since his intelligence concerning Mosby's route was fairly specific, he probably did not need a force to lure the enemy into the kill zone. And placing the rest of the cavalrymen behind the church did not help the ambush at all.

The second—and perhaps the greatest—lesson to be learned from this small firefight is the need for a unit to train as it will fight. The Army's system of battle-focused training ensures that the tasks a unit will be expected to perform in combat (its mission essential task list, or METL) are the ones it trains on before being committed to battle: "The METL is based on the wartime mission: the unit must train as it plans to fight." While this system ensures that a unit will accomplish its METL tasks well in combat without additional training, it also means that a unit will not be able to do as well a task that is not on its METL. That is what happened to the 14th Infantry in June 1863.

Timothy J. Reese, in his outstanding history of Civil War Regulars, *Sykes' Regular Infantry Division 1861-1864* (Jefferson, NC: McFarland and Company, Inc., 1900), says, "In many respects, the 14th U.S. Infantry can justifiably claim the title of most proficient of all the New Army Regiments. Its record on every field in which the Regulars were engaged has few parallels, although its disproportionate losses [when compared with other Regular Regiments] tell the darker tale of distinction."

In every knock-down, drag-out battle the 14th Infantry fought in the Civil War, and there were many of those, it stood in line-of-battle and exchanged volley after volley of devastating rifle fire with the best the Confederates had to offer. On one rainy night in Virginia, however, the men of the regiment did not execute a basic infantry task—keeping their weapons in firing condition. As they struggled through the mud the previous night, they had probably thought that they would have plenty of time to execute pre-combat checks before going into line of battle.

This problem resulted because the 14th Infantry was asked to perform a battle task for which it had not trained or prepared. The task organization, the night passage of lines, and the mission to kill or capture an elusive partisan were all new to the Regulars. They had been pulled from their normal duties and thrust into the very different world of counter-guerrilla warfare. At Gaines Mill or Gettysburg, a failure to perform a routine pre-combat check may have had little effect on the 14th Infantry's fine performance. But at Ewell's Church, it contributed to the regiment's failure to capture or kill an important Confederate leader.

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COLD REGIONS:

ENVIRONMENTAL INFLUENCES ON MILITARY OPERATIONS, PART 1

BRIGADIER GENERAL PETER W. CLEGG

COLONEL ROBERT H. CLEGG

Cold regions comprise some 45 percent of the earth's land surface. Population is sparse in most of the extremely cold regions. Some major world population centers do exist in the less cold areas, however, and these centers have considerable strategic significance for the United States for both economic and geo-political reasons.

Although fewer conflicts have occurred in cold regions than elsewhere in the world, those few conflicts have been devastating in terms of loss of life and property damage. Napoleon's "Grande Armee," for example, was reduced by 90 percent (more than 500,000 men) in the Russian heartland in 1812, primarily by the effects of weather. In this century,

the Russo-Japanese War, World War I, the Russian Civil War, World War II, and the Korean War accounted for millions of fatalities. The Japanese takeover of Manchuria in 1937 also produced staggering casualties, and the Russo-Finnish War in 1939-1940 alone added 850,000 to the casualty toll.

The U.S. Army, from its very beginning, has experienced the rigors of combat in cold regions. Cold weather affected combat in the Revolutionary War and the War of 1812 on the Canadian frontier. During this century, the Army has engaged in cold region military operations in Iceland and northern Russia in World War I, in the Aleutian Islands in World War II, and in Korea during the Korean War.

Today, the U.S. Army is fully trained to operate in cold regions. Such units as the 6th Infantry Division in Alaska, the 10th Mountain Division in upstate New York, and the U.S. Army Reserve's 187th Infantry Brigade in New England regularly train in freezing temperatures and the snow-covered terrain of Alaska, Canada, Iceland, and the north-eastern United States. The 205th Infantry Brigade at Fort Snelling, Minnesota—the round-out brigade to the 6th Infantry Division—trains in similar conditions.

The Army has two cold-region training centers that produce hundreds of trained arctic warriors each year: The Northern Warfare Training Center at Fort Greeley, Alaska, and the Mountain Warfare School, run by the Vermont Army National Guard.

The Army must continue to train for operations in cold environments, because portions of our own country and other areas of interest lie within cold regions. Leaders must come to appreciate the effects of cold on soldiers, equip-

ment, facilities, support, and combat operations. Before focusing on these effects in Part 2 of this series, it may be useful to look at some of the basics of weather and terrain.

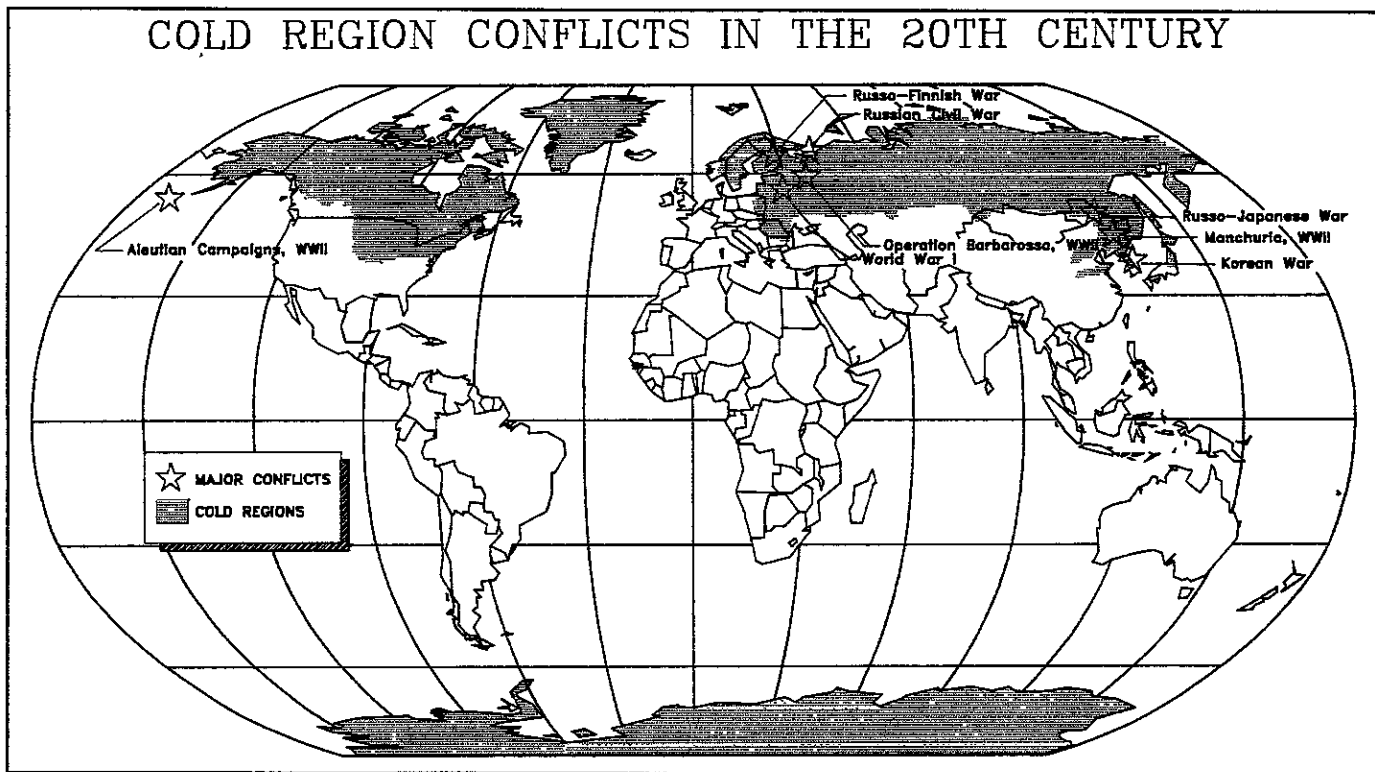
Climatic and Meteorological Conditions

Cold regions are those that are north of 40 degrees latitude in North America and 50 degrees latitude in Eurasia, and in Antarctica, the only cold region in the southern hemisphere. Polar climates consist of the ice cap found in Antarctica and the interior of Greenland, and the tundra found in the coastal regions of Antarctica, Greenland, northern Iceland, and coastal land areas of the Arctic Ocean in North America and Asia.

These regions occur in response to specific climatic controls—latitude, land-water contrast, mountain barriers, ocean currents, and altitude. These controls influence temperature and moisture and therefore atmospheric pressure and wind.

The primary control responsible for cold climates is latitude and its influence on incoming solar radiation, which determines temperature. Temperature is a product of solar intensity and duration. For regions north of latitude 23½ degrees N or south of latitude 23½ degrees S, direct sun rays are not possible because of the earth's curvature and inclination; the rays are therefore less intense. The dark winter period, combined with low solar intensity, creates a thermal deficit that the summer, when solar duration is longer and intensity a bit stronger, cannot balance.

Another factor that is responsible for cold climates is land-water contrast. Because land heats and cools faster than water, coastal areas are more moderate than continental



interiors. The centers of Asia (Siberia) and North America (north of the Great Lakes area) experience bitterly cold conditions. Land-water contrast is made worse by yet another climatic control—the presence or absence of mountain barriers. For example, the northern areas of Siberia are flat, and cold air can penetrate south because nothing blocks its flow; in southern Siberia, mountains block warm air from the south and keep it from moderating temperatures to the north.

Ocean currents also contribute to the creation of cold regions, and Iceland is the prime example. The northern half of Iceland has a tundra climate, while the southern half has a much warmer “marine west coast” climate. The cold Greenland current flows south from the north pole along the coast of Greenland bringing cold conditions to the coastal areas of northern Iceland. The warm Gulf Stream current coming up the east coast of the United States and then across the North Atlantic moderates the climate in the southern half of Iceland. (Actually, the mountain ranges channel some of the warm air north to Akureyri, Iceland’s second largest town, located in the center of the north coast. Its climate is milder than that anywhere else in northern Iceland.)

Temperature, the dominant climatic element, controls moisture and pressure, which in turn determine wind. Temperatures in cold regions can get so low that metals become brittle, liquids become solid, and humans die. Temperatures as low as -100 degrees Fahrenheit have been recorded in the middle of Siberia.

Snow cover reduces temperature in winter. A blanket of snow can insulate and retain energy the ground has absorbed, but it can also reflect solar radiation so that the ground absorbs less than 10 percent of the available winter energy.

Temperature is also responsible for atmospheric moisture, which leads to precipitation. Higher temperatures allow for evaporation and for large quantities of moisture in the air, while lower temperatures inhibit both evaporation and the air’s capacity to hold moisture. Since cold air cannot hold much moisture, even a small amount results in a high percentage; when relative humidity reaches 100 percent, condensation results in dew, fog, and clouds. With further cooling, precipitation occurs in the form of rain, sleet, hail, or snow.

In cold regions, there is little evaporation. Some precipitation does occur, however, along coastal areas and over the Arctic Ocean, and this accounts for the frequent fog and snow in these areas. (Surprisingly, cold regions get nearly the same low amounts of precipitation as hot desert areas, especially polar climates where the average precipitation is less than ten inches a year.)

Terrain

Three dominant types of terrain characterize cold regions—glaciated terrain; wide, flat, marshy plains; and mountains, which can be either spines of Alpine mountain ridges separated by plains, or coastal highlands (characteris-

tically rocky with fiords and cliffs, as opposed to sandy beaches). Vegetation, drainage, and man-made features differ in each of these categories.

Glaciated terrain is terrain that was scoured at some time in the past by sheets of ice, as much as a mile thick in some cases. With warmer conditions these glaciers melted and receded, leaving behind a series of unique landforms of glacial scouring and deposition. The scoured areas allowed for numerous lakes arranged in the direction of the glaciers’ movement. The finger lakes of New York, the Great Lakes, and the many lakes of Minnesota are examples.

Glacial deposits include large linear mounds called moraines, up to 1,000 feet high. Long Island, New York, is a terminal moraine. Serpentine ridges (or *eskers*) and large scattered hills (*kames* and *drumlins*) litter the glacial plains. Many of the lakes have dried into marshes and now cover vast areas. Glaciated terrain is found in New York and New England, across Canada, the upper U.S. midwest, eastern European Russia, Northern Europe, and Scandinavia.

Vast plains also characterize the topography of cold regions. Most of Canada surrounding the Hudson Bay, the U.S. midwest directly below the Great Lakes, and the West Siberian Plain (east of the Ural Mountains) fit this description. The extreme flatness allows for marshy conditions during summer as rivers drain northward, fed by melting snow and ice in the mountains on the periphery of these plains.

Mountainous terrain includes high alpine mountain chains a thousand miles or more long with flat plains between them. In Alaska, the Brooks and Alaska chains extend east to west, bend southward in Canada, and become the Rocky Mountain and coastal Cascade ranges of the continental United States. In central Siberia and the Russian Far East, numerous faulted and folded mountain chains characterize the topography. Within these mountains are glaciers that carve U-shaped valleys. Lesser mountains such as the Appalachians and the southern Urals, which are in more temperate areas, do not have these alpine glaciers, and their valleys tend to be V-shaped from stream cuts.

The vegetation of cold regions is varied and abundant, except in the polar regions. Off the ice cap in the tundra are short tufts of moss, muskeg, and lichens; to the south (but still in the tundra), shrubs and bushes predominate. In warmer areas of the subarctic, the tree line begins with sparse, thin-diameter, needle-leaf trees. Moving south, the trees become denser, more varied in species, and thicker in diameter.

Thick forests of larch, tamarack, fir, and pine trees form the *taiga* or *boreal* forest (a moist subarctic coniferous forest that begins where the tundra ends). Conditions in the southern areas of the taiga allow for deciduous trees (mostly birch, alder, aspen, willows, and cottonwood), and farther south in the warmer humid microthermal climates are mixed forests of evergreen and deciduous growth.

Few man-made features are found in the inhospitable climate of the really cold regions. More than 90 percent of the population is concentrated in urban areas, primarily because of the need for fuel, food, and shelter. Still, some of the

world's largest networks of cities are found in the humid continental warm-summer sub-climate, and man-made features complicate the terrain.

Military Aspects of Terrain

In cold regions, the terrain and weather vary considerably. The constraints that polar climates impose on combat operations are markedly different from those of the more moderate humid microthermal regions.

In the far north, the lack of vegetation allows for almost unrestricted views, and relief is the restrictive element. The wide, flat plains provide ideal fields of fire and observation. The problem in these areas is finding elevations from which to observe. Thick fog also reduces visibility over the coastal tundra, especially in the spring and fall.

Farther from the poles, observation and fields of fire are inhibited only by terrain and atmospheric conditions, and vegetation becomes increasingly significant. Dense shrubs restrict ground observation. Dead space created by stream cuts and glaciated hummocky mounds must be covered by indirect fire. Once across the tree line and into the forests, observation and fields of fire are restricted, and trees may have to be removed. The lack of underbrush in the deep conifer forests helps ground observation. Cleared farmlands in the southern limits of the cold regions provide excellent observation and fields of fire. Since these areas are also urbanized, however, this advantage is often lost.

The clear, dry, stable air of winter allows for unrestricted views, but fog along coastal areas can last for several days and reduce observation to only a few feet. The numerous lakes in glaciated terrain and the marshes of the wide flat plains allow for fog in the spring and fall. At extremely low temperatures, ice fog that forms due to weapon firing and vehicle exhaust limits observation from the ground to altitudes of about 900 meters. Frontal storms throughout the

year and blizzards in the more southern cold regions reduce observation temporarily.

Illumination is determined by the moon phase and the length of the day. In extreme northern areas, summer daylight is almost total, as is winter night. But a full moon reflecting the sun's light on blankets of snow provides good nighttime illumination. Clear, dry atmospheric conditions help in this regard.

Such conditions also improve the efficiency of sensors. Light-intensifying devices work well because of clear stable air, and thermal sensors are especially effective when the background is snow. One problem, though, is that the difference between the temperature of a target and the cold topography can make returns overpowering and identification tricky.

Glare is another problem in cold regions. Again, clear dry air and snow help reflect the sunlight, and glare can cause loss of vision. (Sunglasses help.) When snow blows all around (from helicopters, for example), whiteout becomes a problem. It distorts depth perception and sense of direction and results in deadly accidents for aviators.

In the isolation of the far north, any man-made feature is important and may even be key terrain. Settlements where a logistics base may be established, road junctions, river crossing sites, and airfields are all important because they are so few.

The shelter provided by a village may make it key terrain. The battle for Rzhev during the winter of 1941-1942 on the Russian plain west of Moscow illustrates the importance of shelter in cold environments and how a simple peasant village can give the force that holds it a distinct advantage. A German grenadier and artillery unit occupied the wooden houses of Rzhev. Throughout the day, the Russians surrounded the town and launched repeated attacks, each growing more desperate. As dusk approached, even sheer exhaustion did not reduce the tempo of the assaults. The Russians were less intent on killing Germans than on secur-



Cross-country skiing is a crucial skill in Arctic operations. These soldiers of the 5th Battalion, 9th Infantry, 6th Infantry Division, are being towed rapidly by their small-unit supply vehicle—a process called skijoring.

ing the shelter of the town, but they failed and were doomed to spend the night on the flat windswept treeless plain. Temperatures fell to -63 degrees Fahrenheit, and the winds were strong. The next morning, a German patrol dispatched to search for an escape found most of the Russian soldiers frozen in the snow; those who were alive were comatose. With the patrol's report, the German unit escaped encirclement without a shot being fired.

Mountain passes, river junctions, and dominant high ground can be key terrain, especially in the flat plains. During World War II in the battle for Attu in the Aleutians, the Japanese withdrew to the high ground on the volcanic mountains and allowed U.S. troops to land unopposed. It took the U.S. units 20 days to root them out (instead of the three days they had planned), because the terrain the Japanese held dominated the flat coastal area. Soldiers of the 7th Infantry Division, pinned down in Attu's Massacre Valley, returned the fire of the Japanese snipers dug in on the fog-covered mountains, but to no avail until the battleship *Nevada* opened fire.

In the more moderate cold regions where the population is dense and man-made features abound, key terrain becomes more selective. A bridge, a highway junction, a tall building, a rail yard, an airport, or seaport facilities may be key.

Obstacles

Cold regions have their own unique natural obstacles as well as those common to other regions. Using both natural and man-made obstacles, a defending force can make offensive operations extremely costly.

The terrain channels movement and, when winter weather effects are added, movement can be virtually impossible. Summer creates different but equally effective obstacles. First, in the mountainous terrain where alpine glaciers have cut U-shaped valleys, the slopes are near vertical. Slopes cut by glaciers or streams (obvious obstacles in themselves) are often too steep to negotiate with vehicles or large formations.

In the flat open plains, the wide meandering rivers are also effective obstacles. During Operation Barbarossa in World War II, the Dnieper River in the Ukraine and Russia was an obstacle to resupplying the German 6th Army, which was holding a front from south of Kursk to Kharkov. All the bridges had been blown, isolating the entire army. The German 88th Infantry Division impressed local labor and built an ice bridge over the river with blocks one to three feet thick. These blocks were laid on the already frozen river in temperatures of -29 degrees Fahrenheit. The weight of the additional ice caused cracks, but water that was poured in the cracks froze immediately and acted as a weld. The completed bridge was then hosed over to make it a solid four to six feet thick. When a 130-ton locomotive was driven across it, the ice structure bowed 18 inches, but it held and provided the 6th Army with a lifeline until spring.

Lakes and marshes are natural obstacles in glaciated areas

and on the plains, especially in summer. In winter, however, these features freeze over and make movement easier. Although linear glacial deposits can be obstacles, they are not usually continuous and can be circumvented.

Snow more than a foot deep immobilizes wheeled vehicles, and more than three feet of snow stops tracked vehicles and foot troops. Engineers with front-loaders can create barriers from the snow. The Canadian Army's snow berm (some three meters high and ten meters wide and iced over on the enemy side) acts not only as an obstacle but also as a fortification. One front-loader can construct such a berm 100 meters long in eight hours, with an additional four to eight hours needed to ice over the exterior. Compact snow and ice such as this can offer cover from most direct fire. A double snow berm can stop a tank. (The two berms should be three or four meters apart, and each should be six meters thick and two to three meters high. The berms should have 20 percent slopes for snow and 10 percent slopes for ice.)

Snow avalanches are also hazards that are unique to cold regions. These can occur naturally in 30 percent slopes, or they can be induced at the ideal time (when the enemy is below) by artillery or demolitions.

Minefields are difficult to implace in snow, and their effectiveness is uncertain. If the snow is not compact enough, it may not allow enough support for pressure mines to detonate. The employment of FASCAM (family of scatterable mines) must consider this. Magnetic and tilt-rod mines work better.

Constructing minefields in the snow also takes longer, because the snow must first be compacted, or sandbags and wood bracing must be used. Laying 100 meters of mines, for example, takes two platoon hours. If a tracked vehicle is used to compact the snow, this employment time can be reduced to half a platoon hour. Trip wires may be needed, because enemy soldiers using skis or snowshoes may not put enough pressure on the mines to trigger them. Claymores and bouncing betty mines are the most effective.

Mines should be used with wire entanglements; concertina wire is quite effective in retarding ski troops. When the snow is not deep, the frozen ground is usually hard enough to permit detonation, but in the warmer months, when the ground alternately freezes and thaws, the mines can be swallowed by a quagmire of mud.

The mud itself can serve as an obstacle. During Operation Barbarossa, for example, the German 24th Armored Division was totally incapacitated by mud on the East European Plain. Although thaws normally occur in the spring, in winter (because of the lack of any land barrier), warm air from Western Europe can push the Siberian High east and temporarily thaw the black earth of Russia. Such was the case in January 1944. A three-foot-thick oozing quagmire sucked up guns and soldiers' boots, sank horses to their bellies, and stopped vehicles. Almost 2,000 German vehicles were scattered across the mired route, abandoned, and later captured. The division was then ordered to road-march 200 miles north. At an average speed of one mile per hour, the lead elements finally arrived to engage and destroy three

Soviet reconnaissance vehicles, the sole engagement. Even today, Russian roads can serve as obstacles in wet conditions, because 70 percent of them are still dirt.

Boreal and mixed forests are also obstacles. The close spacing of the trees and the thick stems prevent vehicular movement. Abatis and log barriers are ideal for reinforcing the terrain in wooded areas. In more moderate cold regions where urbanization is widespread, built-up areas become obstacles that can then be reinforced by rubble.

Cover and Concealment

In the tundra, overhead concealment is non-existent, but ground concealment in thick bushes can be quite good. Terrain masking provides concealment in some areas. In the mountains, rocks and ridges provide cover. It was in the mountains on Attu that the Japanese soldiers found hide positions and cover, while U.S. soldiers lay in muskeg pits filled with freezing water.

In the taiga, ground concealment may be limited because of the lack of underbrush, but the thicker trees provide good overhead cover. Farther south, mixed forests offer similar cover and concealment. The underbrush is thicker, providing better ground concealment in the summer. Where deciduous trees predominate, winter concealment is significantly reduced as the leaves fall. In moderate cold regions, much natural concealment has been stripped away for agriculture and urbanization. Urban features, of course, provide ample hide positions for soldiers and vehicles.

Camouflage in cold regions depends upon the season. White outer garments and white-painted vehicles provide outstanding concealment in winter. The Finns used white clothing to advantage in 1939 when their ski patrols surprised and destroyed Russian columns and positions. Without snow, however, this camouflage is counterproductive, and having two sets of camouflage complicates supply and transport.

Snow fortifications can provide both cover and concealment. Compacted snow and ice will stop bullets when it is thick enough. Tests at the Cold Regions Research and Engineering Laboratory have shown that walls two meters thick will stop most small arms fire at ranges as close as 100 meters.

Concealing movement is especially difficult on snow-covered ground. Tracks that are not covered by new or wind-blown snow lead directly to a position and set the scene for an ambush. Tracks also show on soft exposed soil and tundra vegetation, and tank "rooster tails" of exhaust smoke are

readily visible for great distances. Noise and light discipline are also critical in the cold still air.

Avenues of approach are more clearly defined in colder regions. The glaciated and mountainous terrain channels movement, and the wide, marshy plains stop movement because of excess moisture in the summer and deep snow in the winter. Glacial features are linear in arrangement, and the terrain channels the movement of large forces in the direction of the glacial flow. In the scoured areas, lakes and marshes limit access routes. Mountains are usually in chains and bands separated by plains. The rugged, alpine mountains of the north preclude speedy movement. Movement is therefore confined to the plains between mountains, perhaps 100 miles across. Within a mountain chain, significant movements are channeled in the valleys. In glaciated and mountainous areas, it is clear that whoever controls the high ground controls the avenues of approach and makes offensive operations costly.

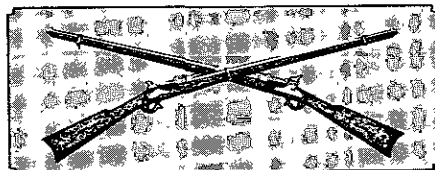
In the flat, open plains of the far north, the best avenues of approach are often frozen rivers. In summer, the rivers may still offer the easiest approach, but movements in any season are difficult to conceal. Hard-top roads are always key terrain.

Deep snow hinders trafficability by covering the terrain and hiding obstacles, ditches, rocks, stumps, and the like. Once the snow is compacted, ice makes movement treacherous. In fact, many U.S. soldiers have lost their lives in training accidents involving ice. The first tank that drives over snow often compresses it to form ice, which endangers the following vehicles. A tank that slides on an embankment can easily overturn.

Wars that have been fought in cold regions have been among the most brutal in history. The force that adapts best to cold regions, knows what to expect from those regions, and uses the various environmental influences to its own advantage will stand a good chance of winning.

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TRAINING NOTES



Desert Driving Tips

MAJOR HAROLD E. RAUGH, JR.

Many of the soldiers who participated in Operations DESERT SHIELD and DESERT STORM were unprepared for the terrain and the driving conditions they encountered. Generally, only those who had trained at the National Training Center (NTC)—or who had served previously in a desert area—had ever practiced desert driving in wheeled vehicles.

Among the soldiers who have served in a desert area are those assigned to the Observer Group Egypt (OGE) of the United Nations Truce Supervision Organization (UNTSO). The OGE, which always has about a dozen officers of the U.S. armed forces assigned to it, mans outposts and conducts numerous one-man, one-vehicle patrols of the western four-fifths of the Sinai Peninsula and one location west of the Suez Canal.

The following desert driving tips, distilled from the experiences of the observer group, may be useful to units that expect to encounter desert conditions and terrain in the future.

Off-road desert driving is a unique experience. Desert terrain, especially in the Sinai, consists of much more than just large, drifting sand dunes. It also includes mountains, cliffs, and deep valleys. In addition, the soil texture varies from soft, fine-grained sand to hard-packed sand, pebbles, gravel, and

rocks up to boulder size, and—in many places—a combination of all of these. (See also "Environmental Influences on Desert Operations," by Colonel Robert H. Clegg, in *INFANTRY*, May-June 1992, pages 28-34.)

Wheeled vehicle drivers and other soldiers assigned in or deployed to the Middle East need to learn about desert terrain and develop a confident attitude about driving in it. To do this, they must be given the correct equipment and realistic and demanding training.

VEHICLE EQUIPMENT

In most situations, driving is done in convoys or other groups of vehicles; rarely does a vehicle travel alone. When one does, however, the vehicle commander must have, in addition to his prescribed uniform and equipment, appropriate maps and sketches, a compass, binoculars, and sunglasses. The driver also should have sunglasses, of course. To insure survival in an emergency, each soldier in the vehicle should have flashlight, watch, water, food, matches or lighter, and knife.

The OGE has also compiled the following list of vehicle equipment (some of which is in addition to organic vehicle equipment). This equipment has proved adequate for any contingency or

situation a crew may encounter while driving in the desert:

- Tool kit.
- First Aid kit.
- Battery jumper cables.
- Jack-stand and pad.
- Towing cable with shackles on each end.
- One five-gallon jerry can of water.
- Two five-gallon jerry cans of fuel.
- Spout for fuel can.
- D-handled shovel.
- Air pump.
- Sandbags.
- Two three-foot sections of PSP (pierced steel planking).
- Second spare tire.

Although the equipment on this list is not authorized by a unit's Table of Organization and Equipment (TOE), it can be procured through supply Class IV and local-purchase requests and through local self service supply centers (SSSCs). At least one vehicle in each convoy should carry these items.

Realistic and demanding driver training needs to be conducted in a large sandy area. If no such area is available, beaches, lake or sea shores, and dry or shallow riverbeds should be considered.

Prospective desert drivers must first be proficient at operating and properly maintaining vehicles with standard transmissions. The first step of their training should be riding with an expe-

TRAINING NOTES

rienced driver, preferably a noncommissioned officer, over soft sand while he explains to them the conditions under which they should accelerate and shift gears. Each soldier should then be given an opportunity to drive on representative desert terrain.

As part of this training, the soldiers should learn and practice the proper methods of extricating a vehicle that is stuck in the sand. If a vehicle is not stuck in sand accidentally, this situation can be created. The stuck vehicle should be jacked up as high as is safely possible (using the vehicle's additional jack stand to provide a platform), and the sand should be dug out from under and around each tire. One section of steel planking should be placed under one of the front tires and the other under the rear tire on the opposite side. Rocks, wood, sandbags, or other hard materials should be placed under the other two tires. All four tires may need to be deflated slightly for better traction. The driver should put the vehicle in Gear Four Low and accelerate according to the existing conditions.

Each driver should be allowed to practice desert driving and vehicle extrication repeatedly until he is competent and confident enough to know that he and his vehicle can overcome all desert terrain, obstacles, and other conditions.

The following key points (as modified from the guidance given to military observers of OGE, UNTSO) can be made about desert driving:

- Sand conditions change rapidly. Learn to read sand colors like a map.

- The "feel of the sand" is never the same, whether in the same vehicle or another vehicle. Experience is the only teacher.

- Getting stuck is normal. Accept it with patience.

- Cross a rippled sand area (if you cannot avoid it) parallel to the ripples and very slowly.

- Low fourth gear in four-wheel drive vehicles is the best overall gear to drive in.

- In soft sand, start the vehicle, accelerate, and (once moving) speed shift to second gear.

- Once you are committed to driving in sand, do not hesitate, slow down, or stop, but continue driving.

- Make all stops slowly and gradually. Plan stops. Never stop on an uphill grade.

- Never back into a position from which you cannot move forward.

- Plan your route from one terrain feature to the next.

- Know your exact location at all times.

- Accept backtracking; sometimes it is necessary.

- Never drive to the top of a dune—or get to a point where you are committed to do so—without first checking to see what is on the other side.

- Before cresting a dune, clear the sand from the vehicle's undercarriage. After cresting, use the low gear to go

straight down. Do not use the brakes.

- Never drive down into a depression among dunes where the sides are too steep to climb out.

- Communicate from high ground if possible.

- When patrolling in pairs, be mutually supporting.

- Vehicle recovery in a dune area is dangerous; repair on site if possible.

- Avoid mined areas, destroyed war equipment, and dunes that terminate in an oasis.

- Take a 15-minute "eye" break when sand blindness occurs.

- Reduce strain and fatigue by changing drivers and taking rest or meal breaks often. Start early and finish early.

- Never leave your vehicle unattended.

- Never attempt to walk out of the desert.

The thought of driving in the desert may intimidate some soldiers. With the proper equipment, realistic training, and opportunities to practice, they will develop a confident attitude and be prepared to accomplish their mission under all desert driving conditions.

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Advice for A Light Infantry Platoon Leader

CAPTAIN JOHN S. ZACHAU

New infantry platoon leaders are energetic and want to excel, but their energies are often unfocused. The

Infantry Officer Basic Course and the Ranger Course are excellent starting places, but they don't really provide

second lieutenants with all of the specific information they will need as platoon leaders.

Many of the things that affect an officer's career happen during those first crucial years when the platoon leader is being molded and prepared for duty as a specialty platoon leader, an executive officer, or a staff officer. His mistakes are often the result of good intentions that fail for lack of experience. Unfortunately, senior officers do not always have the time to give a platoon leader a detailed explanation of his duties. But nowhere in the rank structure is there a leader with so much responsibility and so little experience.

When I assumed the leadership of a platoon, I did not have a set of guidelines that I could use from the first day. But as I learned, saw my mistakes, and grew, I compiled some that I offer now to those of you who are about to assume that position.

There are some very important things you must learn quickly so you can get started. I have divided the platoon leader's jobs and responsibilities into four categories: training, maintenance, administration, and leadership.

Training. Training is what drives a unit in peace and what prepares it for war. Your platoon's level of training, with few exceptions, is a reflection on you. Take the time to ensure that you are expert with all of your platoon's organic weapon systems, and that you know squad, platoon, and company level tactics and instruction.

Field Manual (FM) 7-70, The Light Infantry Platoon, and FM 7-71, The Light Infantry Company, should be your bibles on platoon and company tactics. For training evaluations, ARTEP 7-8 MTP (Mission Training Plan) should be your primary source.

It is hard to lead by example if you can't set the example, but once you do, your platoon will want to meet your standards. Keeping your platoon combat ready is the key to mission accomplishment. To understand training, you should read and become familiar with FM 25-100, Battle Focused Training; this manual will explain how training is standardized and conducted throughout the Army.

Platoon training can be divided into six parts: Maintaining proficiency,

planning and executing training, supervising training, maintaining individual technical and tactical proficiency, using hip-pocket training, and conducting physical training.

In a light unit, a platoon must be trained and ready to deploy with no notice and your job is to make sure your platoon can do it. (Deploying within 18 hours is the standard for all rapid deployment forces.) Conduct telephone alerts to ensure that alert rosters are up to date and that people can be recalled if necessary. You don't want an emergency deployment readiness exercise to be your first test, especially if you can't find everybody.

Your platoon should train to the ARTEP 7-8 MTP standards. After an ARTEP, identify all squad deficiencies and make sure your squad leaders correct them. Personally see that platoon deficiencies are corrected, and continue to monitor shortcomings so that trends can be tracked and any systemic problems corrected.

PERFORMANCE ORIENTED

Conduct platoon training that supports designated light infantry tasks, as shown in ARTEP 7-8 MTP, according to your company's training plan. Training must be performance oriented; it is important to state task, condition, and standard before and during training to let the soldiers know the what and why of the training.

Don't wait for your company commander to direct you to come up with training ideas or plans. Write your platoon's training plan quarterly, and get ideas from the squad leaders and the platoon sergeant. Submit the platoon training plan within five working days after discussing the company training plan. The platoon plan should specify tasks, conditions, and standards, along with reference sources and task numbers. The training plan should also reflect any special training limitations such as lack of resources or training areas.

Rehearse and backbrief the appropriate leader no less than one week before

training, and program this time into the training schedule.

Always evaluate platoon training, and criticize and correct all platoon mistakes during training. Training must be event-and-standard oriented. Repeat unsatisfactory training on the spot, or as soon as possible.

Identify training support requirements one week before the training, and coordinate with your company executive officer (XO) on the items you will need.

Make sure your squad training supports platoon and company training. Have your squad leaders brief you one week before they execute the training. Supervise the squad leaders to make sure they request any support they need.

After-action reviews (AARs) are important. Do them after each major training event, and include time for them in your training plan. Critique your subordinates on the way they conducted their training.

A good technique is to evaluate training by phase. Don't watch one squad for an hour and then move on to another one. Watch an entire mission, planning phase, or actions on the objective. Be critical and teach everyone you work with to be critical, too. Criticism improves our abilities, but criticism that is not based on fact or doctrine is mere opinion.

An AAR discusses training and ways to improve; a critique discusses performance. Always strive for the most realistic training you can provide. Be careful not to belittle people during any critique or AAR. Treat people the way you would want to be treated if you made a mistake—with dignity and respect. If one of your subordinates has made a big blunder, discuss how it can be corrected during the AAR, then get the subordinate alone and discuss it in private.

Make sure every soldier is qualified on his weapon, his weapon is zeroed, and the zero is recorded. A good technique is to put the zero on a piece of tape and place it in the hollow of the hand grip.

Try to integrate cross-training into your platoon as much as possible. Try

to train two Dragon (M47) gunners, two radio telephone operators, and two combat lifesavers per squad. This will give your platoon immediate internal replacements if some of its men are wounded.

Train all your subordinates to handle responsibilities at least one level up, and preferably two. Corporals need to know how to lead their squad, squad leaders must be able to lead the platoon, and you must be able to lead the company. Make sure the squad leaders understand the machinegun team or Dragon team and perform tasks with these weapons.

Individual training should support platoon and company training in accordance with ARTEP 7-8 MTP or 7-10 MTP. If the company training plan says to train on jungle operations, don't let your men train on MOUT (military operations on urban terrain) room entry techniques.

Inspect your individual training records monthly to make sure they are being properly maintained. Either you, the platoon sergeant, or both of you should test the soldiers on selected individual tasks monthly to ensure that individual training is being executed to standard.

Individual training is a noncommissioned officer (NCO) function. Institute a training program with input from your NCOs, let them execute it, and check their progress. If they are not doing the training to the prescribed standard, counsel them, critique their performance, and take steps to ensure that they do it correctly in the future.

Hip-pocket training is prepared training that can be executed on order. All platoon trainers should be prepared to do this critical training on ten minutes' notice. Put priority hip-pocket training on the training schedule in the "remarks" column to support weekly training. Have your NCOs put it on 3x5 cards and brief you so you are familiar with their lesson plans. Conduct it during all extended breaks and during any training delays. Time is a precious asset. You and the other leaders must be careful that you do not waste any of it.

Light infantry platoons conduct physical training (PT) five days a week. Give the soldiers the task, condition, and standard for either strength, abdominal, or endurance training, and execute the training to those standards. Identify people who do not meet the standards, and develop a remedial PT program to help them improve. Make sure all your NCOs can conduct and lead PT to the standard established in FM 21-20, Physical Training. Never use or tolerate profanity or rude or sexist comments during PT or during runs.

After a PT session, a drill and ceremonies cool-down phase is a good idea. You can cool down and also give your troops and leaders some refresher practice in drill and ceremonies.

Vary PT to make it interesting to the soldiers. Some possibilities are sports, swimming, orienteering, sprints, or road marching. Get guidance on this from your company commander.

Maintenance. Without operational equipment, your platoon is not mission capable, and you are failing your men as well as the unit. Never rest until you know the status of a pacing item (an item that can't be deadlined for more than 24 hours at the organizational level), and if it is possible to fix it on your level, don't rest until it is fixed.

Make sure all equipment is serviceable and well cared for. Every piece of equipment should have primary and assigned operators for accountability and to ensure follow-up on maintenance.

- Inspect the soldiers' individual equipment (CTA 50-900) quarterly.

- Schedule and conduct monthly instruction on the care and use of equipment. Use experts such as the company armorer, the NBC (nuclear, biological, and chemical) NCO, or the communications chief.

- Conduct a 100 percent inventory and inspection quarterly to ensure property accountability and serviceability. Understand proper inventory adjustment procedures, and make sure your hand receipt is up to date.

- Know the status of your equipment at all times. Conduct a weekly check of all on-order equipment with the supply

sergeant, as well as equipment in direct support maintenance.

- After return from the field, spot-check maintenance on 100 percent of the crew-served weapons and radios and 20 percent of the individual weapons, night observation devices, NBC equipment, and binoculars.

- Inspect all unassigned platoon equipment monthly.

- Conduct preventive maintenance checks and services (PMCS) in accordance with the appropriate -10 series manuals.

- Schedule the company XO to inspect an area of maintenance in your platoon monthly.

- Personally ensure that any deficiencies found are corrected.

- Know the appropriate technical manuals (TMs) for maintenance, and make sure they are the ones being used for maintenance standards.

Administration. Administration may not seem important at first, but it is critical. You may be doing many good things, but without documentation to prove what you have done, your platoon can have problems. You must supervise platoon administration as follows:

- Make sure a good counseling program is in effect.

- Do not turn in paperwork late.

- Make sure that each Enlisted Evaluation Report (EER) is accurate, that it properly evaluates the individual, and that it contains no spelling or grammatical errors.

- Submit all awards within three days of return from the field, and track the paperwork so you know where it is in the system. Submit all PCS (permanent change of station) awards 120 days before the individuals' PCS dates.

- Monitor the promotion of all your NCOs.

- Maintain high standards in your additional areas of responsibility—energy, crime prevention, safety, key control, and alcohol and drug program. Update SOPs, and have the XO inspect your books or area monthly.

- Payday should be the cutoff for counseling statements to be signed. Don't tie the troops up on payday.

Spread the counseling out over several days before.

- Prepare a platoon notebook. Get a three-ring binder and keep important information on each of your men—name, age, social security number, position, weapon qualification, PT, and family information or problems. This book can also be used to maintain the last ARTEP status, the awards list, and the platoon chain of command. Carry it with you everywhere. When the battalion commander asks you how many of your men qualified on the last range, you can open it to the weapons section and give him the answer. Respect the privacy of the information; keep the book away from those who don't need to see it.

Leadership. Leadership is your reason for being in the U.S. Army. You are an officer, a role model, and you need to act like it. You will make some tough decisions in your career. You must set an example as a professional, disciplined, and intelligent leader. Three of the greatest challenges you will face as a platoon leader are ensuring the safety of your platoon, caring for your men, and having the commitment to be a true leader as opposed to just the person who has the most rank.

Safety is a primary mission during peacetime, so make sure your soldiers do not develop unsafe habits that could lead to accidents. Understand the battalion safety SOP, and execute it faithfully. Safety is everyone's job, but especially a leader's.

Never let your men play with weapons under any circumstances. Always make sure, whenever live ammunition is used, that weapons are constantly checked to make sure they are on "safe" and the chamber is clear, especially during cleaning. Safety overrides training any time. Your goal should be that no soldier in your platoon loses life or limb from a preventable accident. The standard is 100 percent safety at all times, with no exceptions and no excuses.

The general welfare of your men should also be important to you. Caring does not mean being a buddy to them or having them think you're a great guy.



In the field, caring means making sure they have food and water and, most important, that they are taught to standard (safely) so that they will do the job right in combat.

In garrison, be aware of any personal problems your men may be having. A good technique I used was to inspect the living quarters of married personnel with my platoon sergeant. You can

learn a lot about your soldiers and whether they have problems they may not want you to know about (such as a house with no furniture, for example).

You must be committed to having everything done to standard. The men must clean weapons before they sleep, and security must really be in place and checked so that the platoon is never caught off guard. Fighting positions

must be built correctly, and PMCS executed. This is called the "hard right" and, as you will see, tired, cold, and hungry men will always want to take a little break. The break may mean missing a phase line or not making your "not later than" time, and nobody will know but you. If you allow this to happen, you lower your standards. You know what you should be doing, but you're not doing it. Nothing should keep you from doing all that you can every time. Complete every mission,

and execute every order (or implied order) you receive. Commitment is never lowering your standards, or your superiors' standards.

Being a light infantry platoon leader can be one of the greatest assignments an infantry officer can have. It teaches you leadership and hardship, maneuver and terrain evaluation at ground level. The fact that you can actually be in combat in less than 18 hours, in almost any part of the world, should really drive home the importance of the job of

light infantry platoon leader, and the importance of doing that job right.

Captain John S. Zachau served with the 7th Infantry Division and the 1st Cavalry Division and participated in Operations JUST CAUSE and DESERT STORM. He has held the positions of platoon leader, antiarmor platoon leader, and staff officer at battalion, brigade, and division levels. He is now assigned to the 177th Armored Brigade (OPFOR) at the National Training Center.

Tenets of AirLand Battle

If You Understand Football, You're Halfway There

CAPTAIN FRANK A. KREEGER

The increased emphasis on teaching AirLand Battle doctrine to newly commissioned lieutenants in the Infantry Officer Basic Course is an important step toward a more proficient and cohesive officer corps. But teaching this doctrine to lieutenants with less than six months in the Army, or to any other group of soldiers with limited experiences, is also a perplexing problem.

How do you explain doctrine to a soldier who has had no tactical experience that he can relate to it? A teaching technique occurred to me while watching a football game. I realized that the offensive nature of football and our doctrine are very similar. Below is an outline of the examples I have used to explain the tenets of AirLand Battle to newly commissioned lieutenants.

Initiative. A leader preserves the initiative by preventing the enemy from reducing his unit's freedom to act. With the freedom to act, he can dictate the terms of the battle. In football, the quarterback on a team is the offensive leader, and the offensive line protects him so he can retain the freedom to act.

With this freedom he can now dictate the action and execute the play.

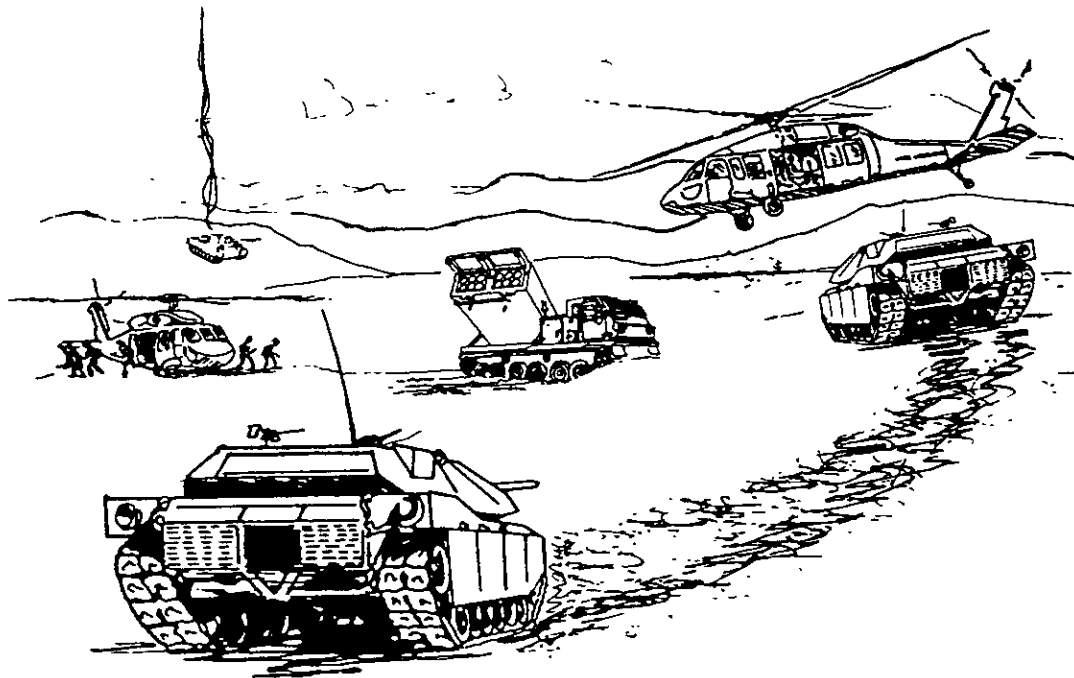
Initiative does not stop with the leader; his subordinates must also use their initiative. The subordinates, if they are to use their initiative properly, must understand the commander's intent. In football, when the quarterback calls a play, the team must understand the purpose (or the intent) of that play.

For example, the quarterback wants to throw a down-and-out pass to his wide receiver to get a first down. The fullback's job on this play is to protect the quarterback by blocking. When the play starts, the fullback misses his block and realizes the quarterback is about to get sacked. The fullback then takes the initiative and runs into position to receive the ball. The quarterback, just before he is hit, throws a pass to the fullback and gets the first down. The fullback's first task was to block, and the purpose of the block was to enable the team to get a first down. If the fullback had not understood the purpose, he would not have been able to take the initiative and go on to get the first down.

Agility. To seize or retain the initiative, a unit must be able to react faster than the enemy it is fighting. This begins with the agility of the leader, which includes his ability to think rapidly through many courses of action (COAs) and likely enemy reactions to them. He must then determine the most effective and least costly course.

The quarterback calls a running play. When he comes to the line, he sees that the defense is prepared to stop the run and immediately realizes that his play (COA) will not work. He decides that the most effective play (COA) is a pass, calls an audible signal, and passes for a long gain. This play works because the team has rehearsed plans (SOPs) that can be carried out in response to a signal from the quarterback. In combat operations, a unit also has well-rehearsed plans and battle drills that enable the soldiers to respond quickly to a signal from their leader.

Depth. Depth is the extension of operations in time, space, and resources. Planning operations in depth results in maintaining the momentum in



the offense and flexibility in the defense.

The coach and the quarterback in football have a game plan. Throughout the game they are constantly planning three or four plays ahead to ensure that they retain the momentum of the attack. In combat operations, leaders also need to plan for future operations. When given the order to continue the attack or to move from the defense to the offense, leaders must already have considered time, space, and resources and must have made a tentative plan so they can quickly seize the initiative or retain the momentum.

Synchronization. Synchronization is the arrangement of battlefield activities in time, space, and purpose to produce maximum combat power at the decisive point.

It's third down and goal to go on the two-yard line. The quarterback wants to throw a pass over the middle to his tight end. It sounds simple, but it isn't. The actions of every player on the field must be perfectly timed and rehearsed. Everyone must understand the purpose of the play—which is for the tight end to catch a pass for a touchdown. Each

player has a different task to perform, but each task contributes to the overall purpose. The line blocks to give the quarterback the freedom to throw the pass. The quarterback fakes the ball to the fullback to pull the linebackers in and open up the middle for the tight end. The wide receivers run out-patterns to pull the defensive backs away from the tight end. Finally the tight end runs his pattern and catches the ball. If everyone does his job and understands why (or the purpose), the play will have a greater chance of succeeding. If not, the play will have a greater chance of failing.

This is true for combat operations as well. The units with the main effort, supporting efforts, artillery, close air support, counterattack force, must all be given tasks that work toward achieving the overall purpose. Everyone must understand his task and purpose. Finally, the operation must be perfectly timed and rehearsed.

In an attempt to validate this teaching technique, I explained the tenets of Air-Land Battle to IOBC students who had read the explanation in FM 100-5 and

had received a formal period of instruction on it. The reaction was favorable. They said the analogy to football had given them a better understanding of the tenets and how to apply them as platoon leaders.

Understanding our doctrine and how it applies requires dedicated study. Teaching doctrine is an even greater challenge.

We should not limit ourselves to military examples, especially when the students have limited military experience. This teaching technique can be included in a formal block of instruction or used as a supplemental handout. Understanding the students' level of experience and structuring the material to fit that level is a critical step in planning military instruction which is both relevant and understood by the target audience.

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Scout Platoon

COMSEC and the Information Process

LIEUTENANT TONY M. MARTIN

Light infantry soldiers have found that they must be smart, aggressive, innovative, and quick-thinking. Leaders must take advantage of their soldiers' innovative ideas, incorporate them into their standing operating procedures, and train to use them in their missions.

Too often, leaders come across good ideas about the time they are ready to leave their units, and nobody benefits from them. I would therefore like to share with other unit leaders some ideas that we used in the 7th Infantry Division (Light) for communications security (COMSEC) and information exchange. Some of these ideas can also be adapted to other types of units.

First, units spend too much time on the radio trying to send intelligence reports to the battalion. Although the platoon headquarters operates with a Vinson device, too much transmission time gives enemy radio direction finders plenty of time to locate the sending unit.

Each battalion should have two KL43C secure devices. The KL43C is a point-to-point, burst message device that encrypts messages that are typed into it and decrypts messages it receives. It can send about four pages in 30 seconds.

The battalion S-2 should get one of the devices and learn how to use it, and the scout platoon should use the other one. The scout platoon headquarters types in the message, then calls the S-2 and tells him to prepare to receive a message in three minutes. This allows the S-2 to make sure the KL43C is hooked up and prepared to receive.

When the platoon headquarters types the message, the device encodes and sends it, and the receiving device receives and decodes it.

Using this piece of equipment accomplishes essentially two things: It cuts down on transmission time, and it provides the written information on a screen.

The second idea provides a safe way to carry the signal operation instructions (SOIs) forward of friendly lines. The system may seem somewhat confusing at first, but a practical exercise will demonstrate how efficient it is:

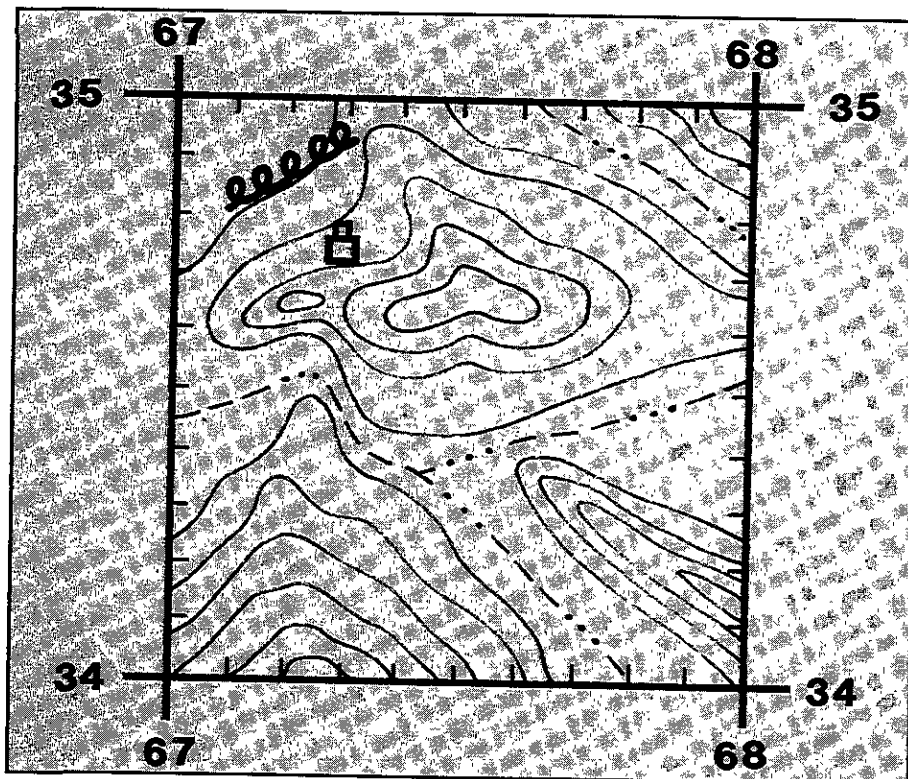
First, choose a pro-word that provides ten different letters; then number the letters from 0 to 9.

Example: OCEAN BIRDS
01234 56789

Use these letters to encode the frequencies and SOI call numbers (suffixes); do not change the SOI call letter (sign). You will also need to change the station identifiers to names that are easy to remember. An example of these changes is shown in the accompanying table. The left side of each column is as read in the SOI; the right side is after encoding using the pro-word.



STATION IDENTIFIER		CALL SIGN		FREQUENCY	
TEAM	ENCODER	TEAM	ENCODER	TEAM	ENCODER
OP 1/OP	CHUCK	HEAVY	MARK	3RD CO	ARMED
OP 2	NAVIGATOR	PLATOON	BRUCE	3RD CO	ARMED
OP 3	THREE	HEAVY	BILL	3RD CO	ARMED
OP 4	GERMANS	HEAVY	ALAN	3RD CO	ARMED
OP 5/OP	JACK	HEAVY	ALAN	3RD CO	ARMED
OP 6/OP	WANDA	HEAVY	ALAN	3RD CO	ARMED
OP 7/OP	FRITZ	HEAVY	ALAN	3RD CO	ARMED
OP 8/OP	MOE	HEAVY	ALAN	3RD CO	ARMED
OP 9/OP	STANLEY	HEAVY	ALAN	3RD CO	ARMED



Before going to the field, the headquarters radio telephone operator (RTO) encrypts the number of pages needed from the SOI and makes copies for each element. This system is easy for the soldiers to use, and even if enemy soldiers obtain the encrypted SOI, they will not understand it.

To encode this information further, instead of numbering the pro-word from 0 to 9 each time, start the numbers on the third letter for day one, then use the fourth letter for day two, and so on.

Example: OCEAN BIRDS
89012 34567

The final idea concerns the intelligence gathering process from the reconnaissance and security (R&S) teams to

the scout platoon and from the platoon to the S-2. When the R&S teams send information about the target on the radio, it is difficult to understand exactly what the objective looks like. This becomes increasingly difficult when information is coming from several teams occupying different vantage points.

To achieve a better picture of the objective, the RTO (or a soldier with drawing abilities) draws the terrain during mission planning to depict the grid squares and terrain where the suspected target is located. The scale of this sketch must be as close to the operational map scale as possible, with the grid squares showing 100-meter marks.

The RTO then makes duplicates (carbon paper is preferred to speed the process) to hand to each R&S team, along with one for the platoon headquarters and one for the S-2. The R&S teams, once in their observation posts (OPs), draw the objective, as they see it, onto the map. Then they call the report in to the platoon headquarters.

While one OP is calling to relay the information to the platoon headquarters, the other OPs transfer the information onto their maps. This process prevents erroneous duplication of equipment and positions on the target area. It also ensures that if the headquarters element is captured or killed, the next person in the chain of command has all the information. The headquarters then draws each item onto its map, including breach points and attack positions, as seen by each OP. The platoon headquarters then sends this information to the S-2, using the KL43C. The S-2 now has a detailed sketch to use for planning. If the scouts are to provide guides when they link up with the line company, the team can give the map to the company commander.

The map sketch should include as much of the surrounding area as necessary. For example, for the map shown here, OP 1 calls in concertina wire starting at 671348 and running to 673349, and the wire is drawn onto all the teams' maps. OP 2 calls in a truck at 673347 facing north, and it is also drawn onto all the maps. This continues until the whole picture is complete.

This process does require a lot of time on the radio from the teams to the platoon headquarters, but the gains outweigh the risks. The ideal solution, of course, would be to provide a KL43C to each team, if enough sets were available.

These ideas are worthy of any unit's consideration and should be welcome additions to their standing operating procedures.

Lieutenant Tony M. Martin was assigned to the 3d battalion, 17th Infantry at Fort Ord when he wrote this article. He had previously served as scout platoon leader and as a line company executive officer and platoon leader. He was commissioned from the officer candidate school in 1988.

Selecting and Training Long Range Surveillance Unit Commanders

CAPTAIN DAVID A. MCBRIDE

The command of a long range surveillance (LRS) unit is a unique and challenging duty assignment. The execution of the LRS mission can be very complex, because it calls for infiltrating teams up to 50 kilometers behind enemy lines, avoiding detection for prolonged periods of time, locating and observing specific targets, transmitting manually encrypted messages over high frequency (HF) burst radio, and extracting teams, all without being detected. Needless to say, it takes an officer with special training and experience to orchestrate training plans and execute operations for such a unit.

On the basis of my experience as an LRS unit commander in a light division and as the senior LRS detachment observer-controller at the Joint Readiness Training Center (JRTC), I feel qualified to comment on the selection and training of LRS commanders. This experience came from direct interaction with and observation of all the light division LRS detachments coming through JRTC, and from the Long-Range Surveillance Leaders Course at Fort Benning, Georgia.

The division LRS unit, although part of a military intelligence battalion or cavalry squadron, is a combination of infantrymen and communicators. LRS detachment command is an infantry position by TOE (tables of organization and equipment), but some divisions have selected cavalry or military intelligence officers instead.

Each division has its own method of selecting LRS detachment commanders. In some divisions, candidates are nominated by the battalion commander, screened by the assistant division commander for support, and finally selected by the division commander. Other

units make their selections at lower levels. The importance placed on selecting the best-qualified captains for the job often determines how willing brigade and battalion commanders are to give up such officers.

Several factors go into the selection



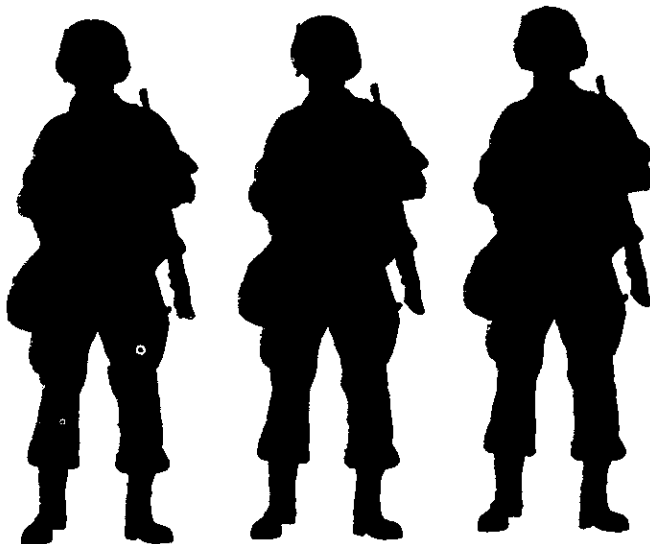
of an LRS detachment commander, including the priority that leaders place on filling the position, the availability of qualified infantry officers within the division, and the availability of qualified military intelligence or cavalry officers from the host battalion. The important thing is to select an officer on the basis of his background, not necessarily his branch.

An LRS commander should have had prior company command, airborne assignments, small unit leadership experience, and such special training as Ranger School, the Special Forces Qualification Course, and the Jumpmaster Course. It is possible, of course, for an LRS detachment commander to learn the necessary skills after he takes command, but one who already has the experience can more effectively plan, coordinate, and execute training for his unit from the beginning. The extent of his responsibilities may not allow him the time he needs to catch up.

In addition to becoming accustomed to an entirely different type of unit in a military intelligence battalion or cavalry squadron, the commander must also become familiar with the command relationships he will have with the G-2 and other members of the division staff.

An LRS unit is under the operational control of the G-2 and is co-located with the division main command post. LRS missions are proposed to the division command group by the G-2, and support is required from a variety of key division staff members, including the G-2, the G-3, the division signal officer, the division aviation liaison officer, and the division headquarters commandant. These command and staff relationships are normally exercised only during division command post exercises (CPXs) and field training exercises (FTXs). The rest of the time, an LRS detachment may support the more frequent brigade or battalion FTXs, each of which is unique in that the LRS commander must deal with different people on the different staffs.

Since an LRS detachment is not designed to be employed as a slice element, the entire detachment headquarters is often employed along with the



LRS teams. This may be why the LRS detachment commander deploys more often and is involved with more external training exercises than any other commander in the division.

In a light division, the LRS detachment is usually the only unit on jump status. This is the reason the LRS commander must have a background that includes airborne operations and jumpmaster qualification. It is also helpful if his background includes leadership positions in airborne, Ranger, special forces, or other types of units that emphasize small unit (squad-size) operations. He must train his LRS team leaders to operate on their own, and he must be able to plan and execute training that supports these independent operations.

Training LRS detachment soldiers is not an easy task. The team leader (a staff sergeant) and the assistant team leader (a sergeant), at the very least, should be graduates of the Airborne, Ranger, and Long-Range Surveillance Leaders Courses. These NCOs must then train their teams to become experts at infiltration techniques, HF communications, vehicle identification, advanced first aid, survival, and a variety of other skills. This means that the commander must be at least as well trained as the noncommissioned officers so that he can make sure the standards are being maintained.

The Long-Range Surveillance Leaders Course (LRSLC) is essential for a

prospective new commander, as well as for a more experienced commander. It concentrates on LRS doctrine, infiltration and exfiltration techniques, HF communications, vehicle identification, order of battle, survival, and patrolling techniques. The course provides an excellent way to round out the new commander's experience and ensure that his unit is up to date on the latest doctrine, techniques, and equipment.

Unfortunately, though, experience at the JRTC has indicated that too few commanders attend this course. In fact, since the LRS detachment observer-controller team was created in November 1989, not one commander rotating through JRTC has been a graduate of the LRSLC. Yet nearly half of the team leaders who rotate through JRTC have attended the course. This inequity creates problems, because unit SOPs often have shortcomings that the commanders do not deal with simply because they lack the necessary knowledge—knowledge that the team leaders (and others who have attended the course) often have.

The greatest effect of failing to attend the course has been on planning and preparing for LRS missions at the JRTC, where poorly planned missions frequently fail. Specifically, mission target folders are inadequately prepared before being issued to team leaders. This is often caused by a poor understanding of the requirements for mission planning and by a failure to com-

TRAINING NOTES

prehend the standards necessary to ensure the survival of the team and the accomplishment of the mission. Attending the LRS course cannot guarantee success for a commander and his unit, but it does offer them a better chance at success.

Commanding an LRS detachment is an exciting and challenging opportunity. The unique mission and the fast pace of such a unit demand that the commander

have a background that enables him to begin immediately to plan, coordinate, and execute training. The commander should have small unit experience and previous company command; he should understand what it takes to be on one of the teams; and he should take the Long-Range Surveillance Leaders Course to round out his experience. The proper selection and training of an LRS detachment commander will ensure that the unit

is well led, well trained, and capable of accomplishing its mission in combat and getting the teams out alive.

Captain David A. McBride served as senior LRS detachment observer-controller at the JRTC, commanded an LRS detachment in the 25th Infantry Division, and completed the Long-Range Surveillance Leaders Course. He is a 1982 graduate of the United States Military Academy and is now assistant S-3, 4th Ranger Training Battalion, at Fort Benning.

SWAP SHOP



THE ROLLOVER PRONE PISTOL FIRING POSITION

The prone pistol firing technique is often neglected during small arms practice and qualification, yet this position provides the smallest silhouette and the most stable firing platform. Still, the position described in Field Manual 23-35 has three disadvantages (Photo 1):

First, the firer's neck muscles are strained when his head is forced back so he can see the target, and this muscle fatigue is compounded by the weight and shape of his helmet. If he moves his head to relax his neck, he takes his eyes off the target. Second, his arms are unsupported, which causes an unstable firing position that leads to inaccurate fire. Third, when he raises his head to see the target, he presents a higher silhouette.

A better way to fire while prone is from the rollover prone position. This position is similar to the one described in the manual in that the firer's body is flat on the ground with both arms straight out toward the direction of fire. Once in this position, though, he rolls onto the shoulder on his strong (shooting) side

and supports his face on his shooting arm (Photo 2). Then he rests his firing hand on the ground, creating a stable base for the weapon. Shooting from this position causes no muscle fatigue and allows the firer to concentrate on the target.

This position can be trained as part of an individual movement technique, following these steps: With the pistol in his strong hand, the soldier drops to both knees from the standing position. He starts to fall forward, using his non-firing hand to break the fall (Photo 3). Then he extends his firing hand forward and rolls over into the correct firing position (Photo 4). A soldier should master this technique with an unloaded weapon before attempting it with ammunition.

I recommend that the rollover prone position be integrated into M9 pistol training, practice fire, and qualification. Since the manual does not prescribe a firing position for qualification, it is also possible to designate several engagements from the prone to add to the realism during pistol qualification.



Photo 1



Photo 2



Photo 3



Photo 4

(Submitted by Captain Thomas E. Beron, who commanded Company E, 2d Battalion, 18th Infantry, at Fort Benning, Georgia.)

ENLISTED CAREER NOTES



VOLUNTEERS NEEDED FOR 82d AIRBORNE DIVISION

The Army is looking for volunteers to serve in the 82d Airborne Division. To be eligible, volunteers must be either airborne qualified or agree to attend airborne training.

The division needs soldiers in the following military occupational specialties (MOSs) and ranks: 11H, Heavy Antiair Weapons Infantryman—private to sergeant first class; 11C, Indirect Fire Infantryman—sergeant through sergeant first class.

Applications should be submitted through installation personnel service companies. Soldiers stationed overseas should submit their applications six to eight months before they are scheduled to return from overseas.

For more information, anyone who is interested may call the U.S. Total Army Personnel Command (PERSCOM), Infantry Branch, DSN 221-5572/8056 or commercial (703) 325-5572/8056.

YOU ASK THE QUESTIONS; AND WE ANSWER THEM

Infantry Branch would like to help soldiers in the field by answering their questions in an open forum. For example, questions might pertain to policy regarding assignments and procedures as well as the career development of today's infantrymen. Questions that are of broad interest to the field will be published in each issue of INFANTRY Magazine. Any questions not selected for publication will be answered by mail.

Questions may be addressed to: Commander, U.S. Total Army Personnel Command, ATTN: TAPC-EPK-I/Mail Talk, 2461 Eisenhower Avenue, Alexandria, VA 22331-0452.

All letters should show the writer's name, rank, and unit address, but names will not be published with the questions.

SPANISH-SPEAKING, RANGER QUALIFIED NCOs

The Special Operations/Civil Military Operations Department, U.S. Army School of the Americas, at Fort Benning, Georgia, is seeking noncommissioned officers in MOSs 11B3V or 11B4V to instruct allied Latin American soldiers in the Commando and Drug Interdiction Courses.

These instructors will have an opportunity to receive additional training such as jumpmaster, pathfinder, special operations, and SERE (survival, escape, resistance, and evasion).

To qualify, an NCO must be airborne and Ranger qualified or willing to volunteer for training in these areas. In addition, they must speak Spanish fluently.

The duty description is as follows: Instructor in a multinational special operations instructional team composed of Army Rangers and Special Forces personnel; conducts specialized instruction on special operational skills with emphasis on commando (Ranger) training in support of counterinsurgency and counternarcotics operations for Latin American personnel; plans, prepares, and presents performance-oriented training in Spanish; develops and revises lesson plans and field training scenarios for the Counternarcotics Operation Course, the Commando Course, and live-fire exercises.

For additional information, anyone

INFANTRY BRANCH POINTS OF CONTACT		
ASSIGNMENT AREA	NAME	EXTENSION
Branch Chief	LTC William Landrus	8055
Branch SGM	Vacant	8055
Senior PDNCO	MSG Roderick Williams	8055
11B PD—PVT-SSG	SFC Lawrence Seuell	9399
—SFC-MSG	SFC David Harden	5567
11C/H PD	SFC Michael Austin	8056
11M PD	SFC John Dean	8056
Drill Sergeant Manager	SFC Patricia Dukes	8070
Schools Manager	SFC Jose Pacheco	9458
Ranger Team Manager	SFC Randy Reynolds	5494
FAX Number		2911
<p>Mailing Address: Commander, PERSCOM ATTN: TAPC-EPK-I 2461 Eisenhower Avenue Alexandria, VA 22331-0452</p>		

ENLISTED CAREER NOTES

who is interested may call Headquarters, Department of the Army, SFC Reynolds, DSN 221-5493; or the U.S. Army School of the Americas, CSM Legoas, DSN 835-1631 or MSG Cruzado, DSN 835-3621.

U.S. MILITARY ACADEMY PREPARATORY SCHOOL

The U.S. Military Academy Preparatory School provides a unique opportunity for enlisted soldiers to gain appointments to the academy and become officers. Unfortunately, the school has not been widely known and does not receive applications from all the deserving candidates.

Any enlisted soldier who would like admission information may consult AR 351-12; write to Commandant, USMAPS, MAPS-ADM, Fort Monmouth, NJ 07703-5000; or call DSN 992-1808/1807, commercial (201) 532-1808/1807.

The application deadline for a class is

usually in April of the year in which the class begins. Interested individuals should apply early, because admission is highly competitive, and only the best-qualified cadet candidates are chosen.

TELEPHONE ACCESS TO ENLISTED RECORDS

NCOs can now request copies of their official files by telephone from the U.S. Army Enlisted Records and Evaluation Center using the Interactive Voice Response System.

Since March 1990, a caller has been able to obtain the date of his latest official photograph and the end-date of his latest evaluation report. The new option allows him to validate information on the documents that are available to Army centralized promotion boards.

A soldier (or a local personnel officer) calls DSN 699-3714 or commercial (317) 542-3714 using a push-button "touch-tone" telephone. The caller is asked to provide a Social Security num-

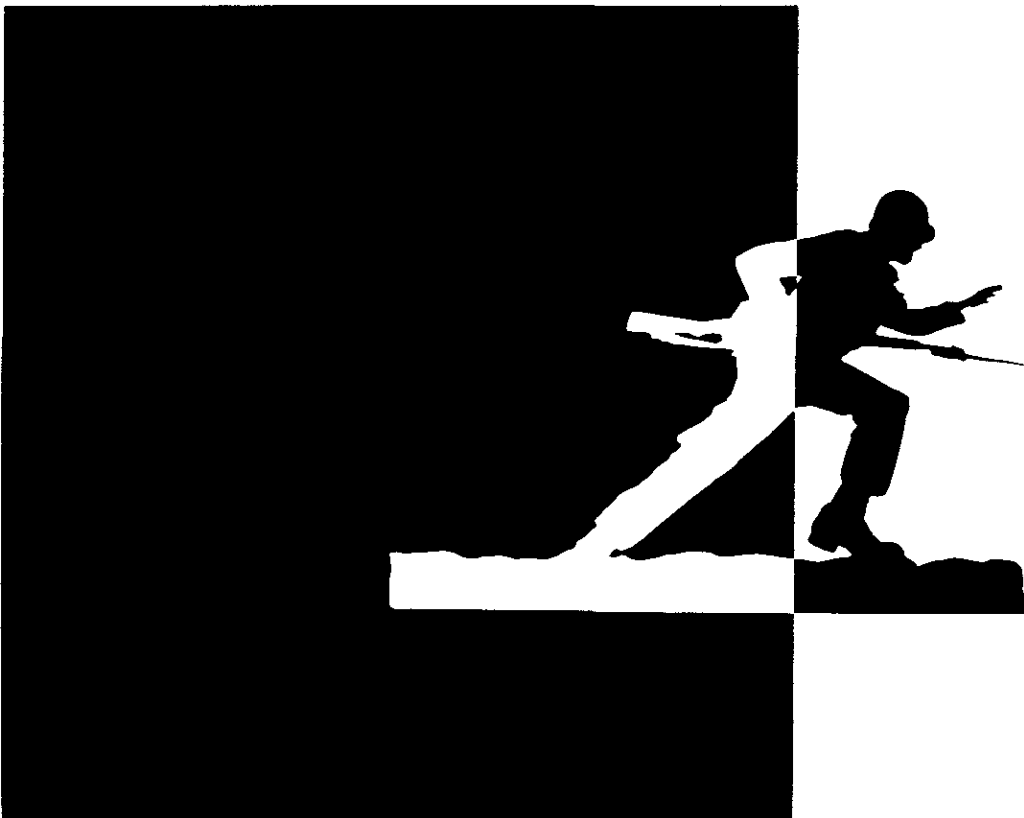
ber (as many as five numbers may be entered during one call).

Four options are then presented:

- For complete board information, press 1, followed by the number symbol (#).
- For photo data only, press 2, followed by #.
- For NCO evaluation report data, press 3, followed by #.
- For official military personnel file (OMPF) request, press 4, followed by #.

The personnel records will be mailed to the caller at his unit mailing address. In the event of a recent transfer, he should allow time for the Enlisted Master File to reflect his new unit of assignment.

As always, an NCO may submit written requests for copies of his official file to Commander, U.S. Army Enlisted Records and Evaluation Center, ATTN: PCRE-RF, Fort Benjamin Harrison, IN 46249-5301.



OFFICERS CAREER NOTES



TIMING IOAC ATTENDANCE

Lieutenants assigned outside the continental United States (OCONUS) should expect to attend an advanced course when they return from overseas. Those in Year Group 1988 who are on long tours and have not been scheduled for a class should contact Infantry Branch at the U.S. Army Personnel Command (PERSCOM) as soon as possible. Officers assigned to CONUS installations can expect to make a permanent change of station to an advanced course school when they have 36 to 42 months time on station.

An officer who already has assignment instructions to an advanced course but wants to defer to another class should contact Infantry Branch to inform his assignment officer of his situation and then send a DA Form 4187 explaining the circumstances. PERSCOM will continue to support the needs of commanders in the field in select situations, but an officer who is within 90 days of reporting to an advanced course class can be deferred only for compassionate reasons. Each officer should do his best to meet his original class date.

IOAC CLASS DATES		
CLASS	START DATE	END DATE
1988-1	01 Mar 92	01 Apr 92
1988-2	01 Mar 92	30 Jul 92
1988-3	01 Apr 92	31 Aug 92
1988-4	01 Jul 92	01 Sep 92
1988-5	30 Aug 92	01 Oct 92

IOAC CLASS DATES		
CLASS	START DATE	END DATE
1989-1	01 Oct 92	31 Dec 92
1989-2	01 Jan 93	31 May 93
1989-3	01 Apr 93	01 Jun 93
1989-4	01 Jun 93	31 Dec 93

The IOAC training objective is to graduate officers who have just pinned on their captain's brass. This allows them the maximum time for both staff duty and company command at the next unit. Subsequently, this timing increases flexibility for advanced civil schooling, functional area experience, and other key duty assignments during the company-grade years.

The accompanying schedule shows IOAC classes through Fiscal Year 1993. Officers scheduled for these classes can expect to receive their follow-on assignments two months before the class begins.

OTHER OFFICER ADVANCED COURSE OPPORTUNITIES

Infantry Branch continues to send five to ten officers to each Armor Officer Advanced Course (AOAC) at Fort Knox and five or six graduates of each IOAC class to a portion of the Field Artillery Officer Advanced Course (FAOAC) at Fort Sill.

Infantry Branch is always looking for qualified infantry officers to send to AOAC. An infantry officer attending AOAC is expected to be a subject matter expert in infantry branch. He is likely to be the only infantry officer in his small group and will add a valuable

INFANTRY BRANCH POINTS OF CONTACT		
		DSN 221-XXXX Commercial (703) 325-XXXX
ASSIGNMENT AREA	NAME	EXTENSION
Branch Chief	LTC Arch Arnold	0445
Branch XO	MAJ Bob Colie	5510
Lieutenant Colonels	MAJ Jim Smith MAJ Curtis Scaparrotti Mrs. Delores Hairston	5510
Majors	MAJ John Baggott MAJ Joe Anderson Mrs. Phyllis Harley	5511
Captains	CPT Rick Smarr CPT Steve Salazar CPT Brian Jones Ms. Kenny Emerson	5518
IOAC/Lieutenants	CPT Malcolm Shorter CPT Wayne Grigsby Mrs. Gwen Hughes Ms. Janice Christophe	5514
Future Readiness Officer	CPT Dave Boslego Ms. Christia Whitten	0207
Colonels	MAJ Steve Hoogland	7866
Mailing Address:	Commander, PERSCOM ATTN: TAPC-OPE-1 200 Stovall Street Alexandria, Va 22332-0414	

combined arms flavor to it.

Any officer who is interested in attending AOAC should call Infantry Branch or send a DA Form 4187 at least nine months in advance of his permanent change of station date.

Infantry officers attend only the 12-week small-group tactics phase of the FAOAC. Officers attending IOAC classes are selected for this training on the basis of their class standing, preference, and the recommendations of their small-group instructors.

RANGER TRAINING FOR BRANCH DETAILED OFFICERS

An important intent of the branch detail program is still to provide unparalleled combat arms leadership experience to combat support (CS) and combat service support (CSS) officers early in their careers.

After the Infantry Officer Basic Course (IOBC), the schools available to branch detail officers are the same ones that all infantrymen are challenged to complete. Infantry Branch has noted recently, however, that many branch detailed officers are choosing not to attend the Ranger Course. These offi-

DA BOARD SCHEDULE		
BOARD	PRIMARY YG	START DATE
LT Retention	1989	20 Oct 92
CPT Promotion	1989	20 Oct 92
MAJ Promotion	1982	11 Aug 92
SSC Selection	—	29 Sep 92
COL Command	—	29 Oct 92

cers often say that they don't believe Ranger training will contribute to their professional development in a CS or CSS career. In fact, nothing could be farther from the truth.

The Ranger course is a leadership school that builds competence and confidence, and the CS and CSS branches consider such schools as important for their detailed officers as Infantry Branch does. It is a critical leadership development school that should be considered an indispensable part of any officer's career development plan.

FUNCTIONAL AREA DESIGNATION

Officers in Year Group 1987 are receiving their designation packets this summer. In order to publish functional area assignments for these officers by January 1993, Infantry Branch needs to receive their preference statements not

later than September 1992.

An officer in Year Group 1987 who has not received his packet by 1 August 1992 should provide the following information directly to Infantry Branch: four functional area preferences (see DA Pamphlet 600-3), college grade-point average and transcripts, and any other information that would help in the designation process, such as Defense Language Aptitude Test (DLAT) scores or language skills not recorded on his office record brief.

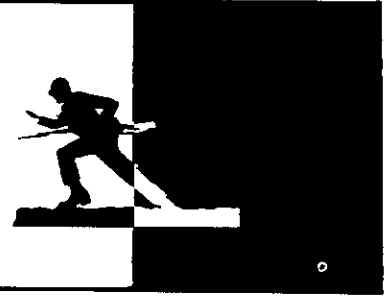
Preferences should be sent to Commander, PERSCOM, ATTN: TAPC-OPE-I (CPT Dave Boslego), 200 Stovall Street, Alexandria, VA 22332-0414.

BRANCH DETAIL PROGRAM

The Branch Detail Program is expanding. Over the next few years, half of the new Infantry lieutenants will be branch detailed. Branch detail officers will now remain infantrymen for 30 months, instead of the previous 24 months, except for Adjutant General and Military Intelligence officers, who will remain infantrymen for four years or until they attend their basic branch officer advanced courses.



BOOK REVIEWS



Once again, we have received a number of interesting publications we think you should know about. One is a recent book from the Army's Center of Military History:

PORTRAIT OF AN ARMY. General Gordon R. Sullivan, Editor; Mary Lou Gjernes, Art Editor. First Printing. Center of Military History, 1991. CMH Pub 70-20. 179 Pages. The Center of Military History, despite the many obstacles that have been placed in its way during the years by Congress or by a lack of command emphasis, has managed to acquire more than 10,000 pieces of art that depict images from almost every conflict in which the Army has participated, plus a number devoted to training activities in the U.S. or abroad.

This well-organized and well-designed book lets the artwork tell the story, with only a minimum of narration. The selections are grouped into three general categories—combat, combat support, and combat service support—although there is some cross-over. Brief biographical sketches of the artists, where they are known, are in an appendix.

Throughout, the focus is on the Army's soldiers. Because this book marks the first time a significant portion of the Army's art collection has been used to show how the Army sees itself, we highly recommend it to both the military and the civilian reader.

We also have four recent publications from the Command and General Staff College's Combat Studies Institute:

STAFF OPERATIONS: THE X CORPS IN KOREA, DECEMBER 1950. By Richard W. Stewart. A CSI Special Study, July 1991. 76 Pages, Softbound. The author concentrates on the X Corps staff's experiences in planning and overseeing the complex operations that led to the corps' withdrawal from North Korea in late December 1950. Although the author finds serious fault with the staff's operations in late November and early December, he finds considerable merit in its work during the evacuation.

JEDBURGH TEAM OPERATIONS IN SUPPORT OF THE 12th ARMY GROUP, AUGUST 1944. By S.J. Lewis. A CSI Special Study, October 1991. 83

Pages, Softbound. The author dissects the operations of 11 Jedburgh teams—each made up of three specially trained volunteers—that were dropped into northern France in August 1944. He is concerned with their results and has arranged his treatment chronologically by the date of each team's insertion. Although he concludes that "the operations of these eleven teams... were only marginally successful," he does believe "their major contributions were indirect and defy quantification: their psychological effect upon occupied France and the German occupation force and their role in providing intelligence data."

DESERT WARFARE: GERMAN EXPERIENCES IN WORLD WAR II. By Major General Alfred Toppe, et. al. A CSI Special Study, August 1991. 103 Pages, Softbound. This is an excerpt (reformatted and edited) from the original two-volume study that first appeared in 1952 as Manuscript P-129 in the Foreign Studies Series of the Historical Division, United States Army Europe, now found in the National Archives. The Institute believes this study requires "the serious consideration of those responsible for preparing the U.S. military for any future conflict in desert terrain."

THE DIRECTED TELESCOPE: A TRADITIONAL ELEMENT OF EFFECTIVE COMMAND. By Gary B. Griffin. A CSI Report, first published in 1985. This edition published in July 1991. 45 Pages, Softbound. The author uses the term "directed telescope"—originated by Martin Van Creveld—to refer to the use of "aides, liaison officers, observers, and other representatives" by commanders during campaigns and battles. It is a basic, bare-bones historical study prepared under the restrictions presented by a broad mandate and a limited amount of time and library resources. It is valuable in that it tackles a subject of considerable importance but one that seldom finds its way into print.

Two reference books are particularly worthy of mention:

JANE'S ARMOUR AND ARTILLERY, 1991-92. 12th Edition. Edited by Christopher F. Foss. Jane's,

1991. 803 Pages. \$210.00. This edition of the now-standard work on the world's armored vehicles and artillery pieces (including coastal artillery guns and missiles) has been somewhat modified from the previous ones. Certain sections that formerly appeared—ammunition details, turrets and cupolas, and the like—can now be found in *Jane's Armoured Fighting Vehicle Retrofit Systems*, a new series.

This particular volume, in two major sections—Armor and Artillery, and Armor and Artillery in Service—has more than 400 new photographs and 50 new entries, while many of the existing entries have been rewritten or expanded to include new developments. This particularly applies to a number of East European systems, as more and more information about them has become available.

An addendum, correct as of 1 September 1991, includes information on several new systems that were disclosed after the main sections of the volume had been completed.

Be sure to read the editor's foreword. He brings out a number of important points regarding Operations DESERT SHIELD and DESERT STORM and offers some warnings for the future.

HOW TO NAVIGATE OVER LAND. Two Volumes. By Noel J. Hotchkiss. Stocker and Yale, 133 Brimbal Avenue, Beverly, MA 01915. 1991. These two volumes are in three-ring binders, apparently for ease in making page changes in the future. The author is an experienced land navigation trainer and researcher who has worked extensively for the Army Research Institute at Fort Benning under contract to produce this "how-to" reference guide on cross-country movement. Unfortunately, budget cuts prevented the project from being completed at Fort Benning, and another agency—the present publisher, who has supplied compasses to the Army for more than 40 years—has produced it in final form.

The first volume, for the beginner, presents an overview of the subject and the fundamentals of land navigation. The second volume, for the advanced navigator, includes such subjects as terrain analysis, map interpretation, and mounted navigation.

This is an informative book that will appeal to the specialist, though possibly not to the general reader. Although the division of the book into geographic chapters is quite artificial (which the author acknowledges), the organization of the material and the way it is presented make it easily readable. The book's major flaw is the redundancy that reflects the lack of a thorough editorial review.

INCURSION: FROM AMERICA'S CHOKEHOLD ON THE NVA LIFELINES TO THE SACKING OF THE CAMBODIAN SANCTUARIES. By J.D. Coleman. St. Martin's Press, 1991. 294 Pages. \$19.95. Reviewed by Dr. Joe P. Dunn, Converse College.

J.D. Coleman served as an information officer with the 1st Air Cavalry Division from April 1969 to April 1970. This volume is the story of the division's operations during this period. (Actually, it begins with fall 1968 and continues through the completion of the Cambodian incursion in June 1970.)

As unit histories go, this is an engaging one full of intimate detail with rousing stories of courage, honor, and achievement, along with personal insights. Coleman's strong convictions about political figures, Vietnam policy, strategy, the news media, and other subjects are clear. The book is a lively, readable account that deals with combat during an important period that has been somewhat neglected in the literature of the war.

Unfortunately, good narrative is not necessarily good history. The book smacks heavily of some of its acknowledged primary sources—the inspirational, public relations newspapers and quarterlies that poured out of the unit information offices during the war. These publications, hard enough to take seriously then, are weak sources for truly coming to grips with the war. Serious historians may therefore be somewhat wary of this volume, but it is still a good book.

THE CUTTING EDGE: MILITARY HISTORY OF ANTIQUITY AND EARLY FEUDAL TIMES. By Paul E. Gavaghan. Peter Lang, 1990. 502 Pages. \$72.95. Reviewed by Leroy Thompson, Manchester, Missouri.

This is a very refreshing book because of its scope, covering as it does much of antiquity, and also because Gavaghan attempts and, for the most part, succeeds in synthesizing information about subjects ranging

from the basis of Alexander's success to the role of cavalry throughout the period. His style is imminently readable, yet he has done his homework, as the extensive bibliography indicates.

Many chapters intrigue with their titles but do not disappoint with their content. "Arthur and the British Resistance," for example, examines the King Arthur legends and sources in an attempt to find their basis. The author concludes that Arthur may have been a leader of Sarmatian heavy cavalrymen, descendants of those who had been transplanted to Britain by Marcus Aurelius as prisoners of war. Keeping an open mind, however, he offers at least three other well-reasoned possibilities for the military basis of the Arthurian legend.

"Well-reasoned" is, in fact, an excellent summary of many parts of this book, since Gavaghan is willing to examine the available data and make reasonable assumptions on the basis of that data. Most readers will disagree with some of his conclusions but will nod their heads at others and think "That makes a lot of sense."

This work is informative, fun to read, and an excellent goad to thought. For people who are not particularly interested in ancient military history, this is excellent one-volume overview that hits on essential issues of both grand strategy and tactics. For those who are ancient military history buffs or scholars it will sometimes cause exclamations of "Outrageous," but more often, "I wish I'd thought of that." I recommend it highly, even though I find its price extremely excessive.

RECENT AND RECOMMENDED
LET US HAVE PEACE: ULYSSES S. GRANT AND THE POLITICS OF WAR AND RECONSTRUCTION, 1861-1868. By Brooks D. Simpson. University of North Carolina Press, 1991. 339 Pages. \$34.95.

THE FALKLANDS/MALVINAS CAMPAIGN: A BIBLIOGRAPHY. By Eugene L. Rasor. *Bibliographies of Battles and Leaders*, Number 6. Greenwood Press, 1991. 216 Pages. \$45.00.

THE GATLING GUN: 19th CENTURY MACHINEGUN TO 21st CENTURY VULCAN. By Joseph Berk. Paladin Press, 1991. 136 Pages. \$29.95.

FORGOTTEN LEGIONS: OBSCURE COMBAT FORMATIONS OF THE WAF-FEN-SS. By Antonio J. Munoz. Paladin Press, 1991. 424 Pages. \$59.95.

FROM SHIELD TO STORM: HIGH-TECH WEAPONS, MILITARY STRATEGY, AND COALITION WARFARE IN THE PERSIAN GULF. By James F. Dunnigan and Austin Bay. William Morrow and Company, 1992. 512 Pages. \$20.00.

THE GREAT INDIAN MUTINY: COLIN CAMPBELL AND THE CAMPAIGN AT LUCKNOW. By Bruce Watson. Praeger Publishers, 1991. 160 Pages. \$35.00.

CAMPFOLLOWING: A HISTORY OF THE MILITARY WIFE. By Betty Sowers Alt and Bonnie Domrose Stone. Praeger Publishers, 1991. 184 Pages. \$13.95.

FLYING TIGERS: CLAIRE CHEN-NAULT AND THE AMERICAN VOLUNTEER GROUP. By Daniel Ford. Smithsonian Institution Press, 1991. 450 Pages. \$24.95.

PATTON'S THIRD ARMY AT WAR. By George Forty. Sterling Publishing Co., Inc., 1991. 192 Pages. \$27.95.

THE GREATEST TUMULT: THE CHINESE CIVIL WAR, 1936-1949. By E.R. Hooton. Brassey's (UK), 1991. 216 Pages. \$19.95.

BRUTE FORCE: ALLIED STRATEGY AND TACTICS IN THE SECOND WORLD WAR. By John Ellis. Viking, 1990. 643 Pages. \$29.95.

THE ANATOMY OF ERROR. By Barry S. Strauss and Josiah Ober. St. Martin's Press, 1990. 272 Pages. \$18.95.

ULTIMATE WEAPONRY. By Paddy Griffith. St. Martin's Press, 1991. 224 Pages. \$29.95.

THE COMING WAR WITH JAPAN. By George Friedman and Meredith LeBard. St. Martin's Press, 1991. 429 Pages. \$24.95.

THE GREAT CRUSADE: A NEW COMPLETE HISTORY OF THE SECOND WORLD WAR. By H.P. Willmott. The Free Press, 1990. 500 Pages. \$24.95.

A QUICK AND DIRTY GUIDE TO WAR. First Quill Edition. By James F. Dunnigan and Austin Bay. William Morrow and Company, 1991. 639 Pages. \$15.00, Softbound.

SHOOTING BLANKS: WAR MAKING THAT DOESN'T WORK. By James F. Dunnigan and Albert A. Nofi. William Morrow and Company, 1991. 513 Pages. \$25.00.

THE BITTER YEARS: MacARTHUR AND SUTHERLAND. By Paul P. Rogers. * Praeger Publishers, 1990. 376 Pages. \$49.95.

ARMY DICTIONARY AND DESK REFERENCE. By Captain Tim Zurick, USAR. Stackpole Books, 1992. 224 Pages. \$12.95, Softbound.

BATTLEFIELDS OF THE CIVIL WAR. By Roger W. Hicks and Frances E. Schultz. Salem House Publishers, 1989. 240 Pages. \$19.95, Softbound.

IKE THE SOLDIER: AS THEY KNEW HIM. By Merle Miller. G.P. Putnam's Sons, 1988. 859 Pages. \$13.95, Softbound.



From the Editor

In recent issues of INFANTRY, you have seen articles on subjects ranging from desert driving tips to the effects of cold regions on military operations, and on military experiences ranging from the U.S. Civil War to the Gulf War. As you have noticed, the authors of these pieces range from a noncommissioned officer and both field-grade and company-grade officers to a general officer.

This diversity in subject matter, in periods of our history, and in contributing authors also typifies the diversity of our readership. INFANTRY is read throughout our own armed forces, the civilian community, and in more than 40 other countries. This variety and the timeliness of information have helped keep INFANTRY in print for more than 70 years.

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