

# **Field Artillery**

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A Joint Magazine for US Field Artillerymen

November-December 2004

## **GWOT & the Future FA**



## **RED BOOK 2004**

# Field Artillery

A Joint Magazine for US Field Artillerymen

November-December 2004

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**Front Cover:** On the right side of the modular cube is Sergeant Becerra of A Battery, 2d Battalion, 11th Field Artillery, 25th Infantry Division (Light), holding a high-explosive round at the ready during a harassment and interdiction fires exercise at Forward Operating Base (FOB) Warrior in Kirkuk, Iraq. A/2-11 FA is in northern Iraq supporting the 1st Infantry Division. (Photo by PFC Elizabeth Erste, June 2004). At the top of the cube is a basic combat training Soldier from the FA Training Center, Fort Sill, on patrol during urban operations training under the new Warrior Ethos program of instruction (POI) in the spring of 2004. (Photo by Fred W. Baker III) On the left is the future Non-Line-of-Sight Cannon (NLOS Cannon) demonstrator firing at Yuma Proving Ground, Arizona, in September 2003. (Photo courtesy of United Defense)

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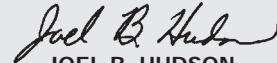
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# 20 04

# State of the Field Artillery

By Major General David P. Valcourt,  
Brigadier General Robert T. Bray, ARNG, and  
Command Sergeant Major Tommy A. Williams

It has been an incredibly challenging year for both the Field Artillery and our joint force. We are fighting a protracted Global War on Terrorism (GWOT) while converting to a modular structure and transforming to meet the demands of evolving national security needs—and we're doing it with an all-volunteer Army. This is the first time we have fought a protracted war with the volunteer force.

We are proud to note that our Army's and joint force's ability to accomplish the world-wide missions is, in large measure, due to the awesome adaptability and professional excellence of our Active Component (AC) and Re-

serve Component (RC) Field Artillery Soldiers and Marines. US Field Artillery units remain the most adaptable and well led of the land formation units, as evidenced by their adeptness in handling a myriad of standard and non-standard tasks in Afghanistan and Iraq.

Never since World War II have Army National Guard (ARNG) Redlegs been mobilized and deployed at greater percentages. They stand side by side their AC counterparts in Iraq and Afghanistan as an Army of One. They perform the same missions—the only distinction between them is the left shoulder patches the Redlegs wear.

**Field Artillery at War.** Along with

the talent and innovativeness of our Soldiers, the Field Artillery's success in GWOT is due to high-quality branch training; an emphasis on joint fires and effects training—the way we are fighting; the development of precision attack capabilities organic to the ground force; and special initiatives, such as the CounterStrike Task Force (CSTF).

*Artilleryman's Standards and Values-Based Training.* If there is one thing that differentiates Army and Marine artillery outfits from others, it is our incredibly high standards. Our tradition of and reverence for maintaining the highest of standards has its roots in the very nature of our business. With the

smallest of errors in the world of indirect fires, our land force can pay a catastrophic price.

Most Soldiers divide a circle in 360 degrees, but that is *not* good enough in our business. Our higher standard is to describe a circle in 6400 mils.

Why is that, you may ask? Because we teach our "young'uns" from day-one that at the ranges FA fires, *one mil* can make the difference between killing the enemy or allowing him to continue his mission to kill us. One mil can be a matter of life or death.

The older or more "seasoned" reader may remember our nuclear surety inspections and the pristine deuce-and-a-halves sheltered in our battery motor pools as our "mission vehicles." Thankfully, those days of nuke surety are gone, but the fact is that artillery's penchant for the highest of standards remains at the core of our Warrior Ethos as a branch.

You can see these standards in action as you visit any post in the Army and pass through the division artillery or FA brigade motor pools. They cannot help but set the standard for readiness and pride for the rest of their posts.

Here at Fort Sill, Oklahoma, our resident courses of instruction enjoy a similar reputation. A good friend once shared that "Gunnery instruction was the intellectual version of Ranger training for the Army." In that regard, the FA traditionally experiences some failures in gunnery instruction—albeit a low rate of failure.

FA Officer Basic Course (OBC) classes historically have a gunnery failure rate of about 10 percent. This low rate should be no surprise as not every lieutenant in FA OBC has a math and science educational background or the motivation to master the foundation skills of becoming an artilleryman. The FA School makes every effort to provide each young officer the coaching and instruction necessary for his success.

But at the end of *our* day, FA OBC graduates who leave Snow Hall *must* meet prescribed standards because they will go into the Army and lead howitzer and rocket platoons. They must join the Army ranks with competence and con-



FA officers attending the Captain's Career Course identify targets in an urban terrain environment using the urban terrain module of the Joint Fires and Effects Training System (JFETS) at Fort Sill. The officers in the class were the first Soldiers to train using JFETS.

fidence in their individual skills, knowledge and abilities.

Along with the expectation that artillery Soldiers master the tasks they will perform, they all are taught that values are the rock every warrior stands on. Each must live the Army's values with his word his bond.

We remain *zero mils* on anything short of growing lieutenants—all Redlegs—to be branch-capable leaders who model Army values. As our Army transforms, we will continue to ensure that high standards and values-based training remain the foundation of our FA training and education system.

It is a fact that we all learn best "by doing." Therefore, we have aggressively built in experiential training in all our programs of instruction (POIs). Again, OBC's POI is an outstanding example. Today's lieutenant has had far more opportunities for hands-on training on tasks he is expected to perform when he arrives in his unit than the lieutenant of yesterday.

We are transforming all FA instruction to meet the requirements of modularity, grow competent and adaptable leaders, and resource the evolving demands of an Army at war. Our POIs are a baseline plan, but we will not allow plans to become our tyrant. We must be ready and willing to routinely "FRAGO" POIs for all our training to reflect lessons learned from operations in Iraq and Afghanistan.

The FA is growing as a branch, increasing the number of FA NCOs and enlisted Soldiers. The growth will lead to more opportunities for promotion

over the next few years. At every grade from E-5 through E-9, we expect to see FA Soldiers promoted faster than at any time in recent history.

The largest increase will be in 13F Fire Support Specialists as we add more across the formation. In FY05, we will train an additional 900-plus fire support team (FIST) personnel to fill shortages in Army and joint organizations.

We also are making a concerted effort to increase the importance of the FA Master Gunner. In terms of his training and certification, he will be the equivalent of both the Abrams and Bra-

dley Master Gunners. We are in the process of establishing an additional skill identifier (ASI)-producing course to ensure FA master gunners have the training and skills to advise battery, battalion and brigade commanders on all certification, range and resource requirements for all levels of gunnery and coordinate for the same.

Our artillery school is a professional, learning institution of high standards and Army values.

*Joint Training.* We are in the process of solidifying the FA's role as the Army's joint fires and effects integrator with a number of initiatives.

- Our Joint Fires and Effects Training System (JFETS) at Fort Sill opened its doors to resident training in September. You may recall from previous articles that JFETS is a state-of-the-art simulator that uses emerging technology to train military members from the US Army, Air Force, Marines and Navy to integrate and deliver joint fires and effects for the joint force. Comparing the new JFETS with its embedded call-for-fire-trainer to the guard-unit armory device, full-crew interactive simulation training (GUARDFIST) first fielded in 1994 is like comparing "apples to oranges."

Feedback from our first Redlegs to train on JFETS was overwhelmingly positive—one officer said, "Just lock the door, and let me stay in here and train all night."

- The 3d Infantry Division (Mechanized) out of Fort Stewart, Georgia; Fort Sill; and the Air Ground Operations School (AGOS) at Nellis AFB,

Nevada, continue to make great progress toward training and certifying Army fire supporters in the application of joint close air support (JCAS). Just recently, the Air Force's Air Combat Command, Langley AFB, Virginia, concurred with the Army G3's request to formalize CAS training being conducted at Nellis AFB.

To date, 19 13Fs from the 3d Division have successfully completed CAS training. Graduates have mastered the skills of providing targeting information and terminal guidance of Types 2 and 3 CAS. (Type 1 CAS is when the risk of fratricide requires the controller visually acquire the attacking aircraft and the target. Type 2 is when visually acquiring the attacking aircraft or the target is not possible. Type 3 CAS is when the attacking aircraft imposes a low risk of fratricide.)

The near-term goal is to formalize the Army's participation in the Air Force CAS training program. Given the Army requirement to terminally control JCAS at the company level, we jointly must determine the JCAS training throughput at AGOS and the appropriate number of Army seats.

We must push our senior 13F NCOs to the "head of the training line" before officers because both initial certification and sustainment training for CAS is time- and resource-intensive. By training 13F NCOs in JCAS, the Army will benefit most by investing in those who make their living in the joint fires business. Trained 13Fs will serve the Army repetitively in their assignments.

As a long-term goal, we look forward to working with our sister services to resolve the critical issues surrounding joint terminal attack controllers' (JTACs') availability and training. We remain committed to training future leaders in the application of all joint fires and effects.

- Fort Sill hosted our first-ever Joint Fires and Effects Course (JFEC) from 27 September to 15 October. This ground-breaking effort is proving to be a monumental step toward training leaders to employ joint fires and effects better.

This first JFEC class consisted of 25 students from all services and was focused on teaching related joint doctrine and tactics,

techniques and procedures (TTPs) for planning, synchronizing and executing joint fires and effects in support of a joint task force (JTF) and joint force commander (JFC).

Based on after-action review (AAR) comments from our first class—most enthusiastically positive—we will adjust the course and offer it quarterly. More to follow on this exciting new initiative.

*Precision Munitions Organic to the Ground Force.* To provide precision fires organic to the ground force to maximize responsiveness, we are developing precision-guided munitions for 155-mm and 105-mm howitzers and the multiple-launch rocket system (MLRS), some with accelerated fielding for GWOT.

- The Excalibur 155-mm unitary precision munition program has made some significant progress. On 16 September, the Vice Chairman of the Joint Chiefs of Staff signed the Joint Requirements Oversight Committee (JROC) memorandum officially granting approval of the Excalibur Unitary Round Operational Requirements Document (ORD). The Excalibur unitary round is projected for fielding in 4th Quarter of FY06 in conjunction with the fielding

of the lightweight 155-mm howitzer (M777A1).

This unitary round has had some technical successes in recent tests. The Guided Series 3b Test conducted on 17 September demonstrated the proper functioning of the inertial measurement unit (IMU), global positioning system (GPS), mission computer and canard covers while exhibiting the stable flight of the projectile. Tentatively scheduled for early FY05, the Guided Gunfire A Test will demonstrate the round's ability to navigate to a point on the ground.

The Excalibur program is important to the Army as it will give our fires battalions precision capabilities in the close support fight, increased range and a steep terminal trajectory that will allow them to attack targets in urban and complex terrain while minimizing collateral damage.

- The Projectile Guidance Kit (PGK) will bring a precision capability to 105-mm and 155-mm howitzers. The PGK is a fuze device with fins that is applied to an existing 105-mm or 155-mm round to improve its accuracy. This will reduce the amount of ammunition required for missions and enhance the current and future forces' indirect fire accuracy. The Army anticipates PGK will achieve initial capability in FY09, with fielding in FY10.

- The future guided-MLRS (GMLRS) rocket is progressing along two axes: the dual-purpose improved conventional munition (DPICM), or GMLRS-D, and the unitary warhead, or GMLRS-U.

GMLRS-D began live-fire operational testing at White Sands Missile Range, New Mexico, in October and continues on into November. The high-mobility artillery rocket system (HIMARS) fired the rockets while also undergoing operational testing. 2d Battalion, 18th Field Artillery from Fort Sill was the crew for the HIMARS testing.

GMLRS-D has a greatly reduced sub-munition dud rate and, with its precision capability, costs significantly less than the M26 free-rocket to attack targets. GMLRS-D will be available in war reserve stockpiles in early 2006.

GMLRS-U has had two highly successful test firings to date in the point-detonating fuze mode. Future testing also will include the proximity and delay fuze



Students in the first Joint Fires and Effects Course (JFEC) work through fires scenarios during the final practical exercise. Pictured L-R are CWO2 Angela Lowe, Counterfire Officer, 75th FA Brigade; Navy PO1 Melvin McAlaster, CTF-76, Okinawa, Japan; (standing) CPT Brian Oberg, C Battery, 3-30 FA, Fort Sill; and Marine CWO2 Sam Haseltine, 10th Marine Regiment, Camp Lejeune, NC.

modes.

Congress has funded and we are working to accelerate limited fielding of GMLRS-U for ongoing war operations, also in FY06, with force-wide fielding in FY08, as currently projected.

GMLRS-U is important to the Army as it allows the rocket battalions of the fires brigades to attack at long range with precision for shaping and counterstrike operations with the added benefit of its unitary warhead's being effective against targets in areas of collateral damage concern.

*Counterstrike Task Force (CSTF).* Enemy indirect fires, primarily rockets and mortars, have become the number one cause of injuries to Soldiers and Marines serving in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OIF). Improvised explosive devices (IEDs) and direct action account for most other hostile action injuries. The insurgent OIF/OEF indirect fires are characterized by low-volume, shoot-and-scoot delivery.

The Training and Doctrine Command (TRADOC) Futures has focused the efforts of the TRADOC schoolhouses, particularly the FA School at Fort Sill and the Air Defense Artillery School at Fort Bliss, Texas, to work with in-theater leaders and the Department of the Army staff to find holistic solutions to defeat the insurgents and protect our Soldiers.

Initial efforts include a wide array of developmental capabilities. These are providing early warning of incoming rounds to individual Soldiers, improving overhead protection at base camps, intercepting the rounds, improving radar acquisitions of indirect fire and improving counterfire response times.

What is clear is that there is no one solution to defeating enemy fires and protecting our servicemen and Coalition Forces. Our strategy must be layered and redundant.

The CSTF is looking for innovative ideas from the FA, Army and the joint services to defeat OIF and OEF enemy indirect fires—I strongly encourage you to share any expertise you might have to help resolve these challenges. A secure Internet protocol routing network (SIPRNET) will give you more information about the CSTF and the ability to contribute solutions at the CSTF's classified website: <https://counterstrike.army.smil.mil>. A nonsecure website that provides background information on the CSTF is <http://sill-www.army.mil/>

counterstrike. If you have questions, you can contact a CSTF representative in the Office of the Deputy Commanding General at the Field Artillery School, Fort Sill, at DSN 639-5830 or commercial 580-442-5830 or email the representative at [atsf-1@sill.army.mil](mailto:atsf-1@sill.army.mil).

#### **Modularity and Transformation**

**Update.** The past three Chief of Field Artillery magazine columns ("Crossed Cannons on Your Collar" in the March-June, July-August and September-October editions) have dealt with modularity and, to some degree, transformation. This Red Book edition includes the article "NLOS Systems for the Modular and Future Forces" by Majors Jack Emerson and Mark Laflamme and Colonel (Retired) Jim Cunningham that provides updates.

But several modularity issues are still outstanding, a couple of which we discuss in this article.

*Number and Locations of Fires Brigades.* A fires brigade allocated for each unit of employment, called a UEx, is required to guarantee a ready fires capability for the Total Army. At press time, we did not have the critical decisions regarding the number and locations of our AC and National Guard fires brigades.

Ideally, each fires brigade would be collocated with its UEx to facilitate training and certification with the fires battalions organic to the UEx's BCTs. However, the infrastructure and training ranges at some UEx locations are limited, requiring that several fires brigades be maintained at Fort Sill. This clearly fits within the logic of expeditionary modularity.

*Battlefield Coordination Detachment (BCD) Commanders.* To better solidify joint fires coordination between the Army and the Air Force, we are proposing to establish and collocate an Army BCD at each of the Air Force's five combined air operations centers (CAOCs). In the initial coordination of this proposal, other Army agencies and the Air Force have been overwhelmingly supportive.

To ensure a highly qualified, fires-experienced Field Artilleryman leads each BCD, we have proposed this position continue to be filled with a 13A colonel and be a command-selected brigade-level position that is designated as joint duty.

We will keep you updated on this initiative.

#### **A Farewell to "Gray Beard" He-**

**roes.** As we close this year, we must acknowledge with heavy hearts the passing of two of our great retired Redlegs who were Field Artillery leaders of the past and who continued to serve the branch, Army and our nation in retirement. These Gray Beard advisors and FA and Army advocates in the Washington, DC, area were Lieutenant General (Retired) David E. Ott and General (Retired) Donald R. Keith.

Eighty-one-year-old General Ott died 21 June at Walter Reed Medical Center in Washington, DC, after a short illness. He was buried in Arlington National Cemetery. General Ott was Chief of Field Artillery and Commanding General of Fort Sill; he went on to command VII Corps in Germany before his retirement in 1978.

General Keith died at the age of 77 at his son's home in Bristow, Virginia, succumbing to brain cancer on 9 September. He was buried at Arlington National Cemetery. He also was a Chief of Field Artillery and Commanding General of Fort Sill. His final assignment before he retired in 1984 was as the Commander of the Army Materiel and Readiness Command in Alexandria, Virginia.

Both of these distinguished Gray Beards were Chairmen of the Board of the US Field Artillery Association and served on many other civic and military boards. May God rest their souls and shine on their beloved Field Artillery, Army and America to which they contributed so much.

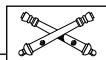
**A Congratulations to Our New Brigadiers.** The new brigadier general's list is out, and we want to send hearty congratulations to our new Redleg flag officers. These distinguished colonels are Rodney O. Anderson, Executive Assistant to the Chairman of the Joint Chiefs of Staff at the Pentagon; Mark A. Graham, Deputy Commanding General and Assistant Commandant of the FA School, Fort Sill; David D. Halverson, Commander of the US Army Operational Test Command, Fort Hood, Texas; and Richard R. McPhee, Assistant Division Commander (Forward) of the 24th Infantry Division (Mechanized) and Deputy Commander (South) of the First US Army at Fort Jackson, South Carolina.

As we begin 2005, we all can share great pride in what we have accomplished as a branch and Army. As we support the continuing war on terrorism, we believe the artillery will con-

tinue to be called upon to provide the Army with traditional joint fires and effects while executing non-traditional missions.

The FA will be able to accomplish these multiple missions as effectively as we are able to grow adaptive, professionally competent junior leaders. The artillery is not an equipment-centric branch. We are about Soldiers and Marines...about people. Leader development will remain our most essential mission task.

*Create the Thunder!*



Major General David P. Valcourt became the 35th Chief of Field Artillery and Commanding General of Fort Sill, Oklahoma, in December 2003. In his previous assignment, he was Director of Strategy, Plans and Policy in the Office of the G3 at the Pentagon. Among other assignments, he served as Assistant Division Commander (Maneuver) of the 2d Infantry Division in Korea and commanded the 4th Infantry Division (Mechanized) Artillery, Fort Hood, Texas, helping to lead its transformation as part of the first digitized division.

Brigadier General Robert T. Bray is the Deputy Commanding General for Army National Guard (ARNG) at the Field Artillery Center, Fort Sill. In his previous assignment, he was the Deputy Assistant Com-

mandant for ARNG in the Field Artillery School. He commanded the 147th FA Brigade, South Dakota ARNG, and two battalions and three batteries, all in the 147th FA Brigade. He holds an MA in Strategic Studies from the Army War College at Carlisle Barracks, Pennsylvania.

Command Sergeant Major (CSM) Tommy A. Williams became the CSM of the FA in January. He served as CSM of the 25th Infantry Division (Light) Artillery, Schofield Barracks, Hawaii, and CSM of two FA battalions, one in the 25th Division and one in the 4th Infantry Division (Mechanized) at Fort Carson, Colorado. He also was a First Sergeant for two batteries. During his 28 years of service, he has held every FA NCO position from Gunner through CSM.

# Redleg Hero: 1st Cav PFC Earns Silver Star

Redleg Private First Class Christopher Fernandez was awarded a Silver Star Medal for Valor on 13 August by 1st Cavalry Division Commander Major General Peter Chiarelli at Camp Ferrin-Huggins in Baghdad. Private Fernandez is a Multiple-Launch Rocket System (MLRS) Crewmember in A Battery, 1st Battalion, 21st Field Artillery (A/1-21 FA), 5th Brigade Combat Team, deployed for Operation Iraqi Freedom.

Private Fernandez, a native of Tucson, Arizona, was awarded the medal for his actions on 5 May. While on patrol in Baghdad's Saidiyah neighborhood, insurgents ambushed his unit. An improvised explosive device (IED) hit the patrol's rear vehicle. Immediately after the explosion, the patrol was hit with a barrage of small-arms fire. The patrol rapidly returned fire with their crew-served weapons, an M-240B machine gun and .50 caliber machine gun.

The IED explosion killed two US Soldiers, wounded five others and rendered their high-mobility multi-purpose wheeled vehicle (HMMWV) inoperable.

Private Fernandez returned fire with



Private First Class Christopher Fernandez, A/1-21 FA, receives his Silver Star.

his M-249 squad automatic weapon. He reloaded his weapon at least once during the short engagement that had a tremendous volume of fire.

In the chaos, Private Fernandez saw that the stricken vehicle's M-240B machine gun was not being fired. He knew

that another weapon would suppress the enemy's fire long enough to evacuate the wounded and leave the area.

He left his vehicle, ran to the disabled HMMWV and recovered the machine gun and ammunition. Private Fernandez then opened fire on the enemy.

As his Battery Commander Captain Thomas Pugley said, "What made all this spectacular is the condition of the recovered weapon." The hand guards covering the machine gun's barrel that prevent the gunner's hands from burning were blown off in the explosion. But Private Fernandez continued to fire, even though his hands were burning.

Almost 10 minutes later, the wounded had been loaded onto Private Fernandez's vehicle and the ambush site abandoned.

Captain Pugley said, "He bought those Soldiers time."

Major General Chiarelli said "PFC Fernandez represents the best of us. He embodies Army Values and Warrior Ethos."

Photo/Story by CPL Bill Putman  
122d Mobile Public Affairs Det.

*This is a condensed version of an article that originally appeared in the Field Artillery Journal, May-June 1984, based on Major General James E. Drummond's remarks at an FA Officer's Basic Course (FAOBC) graduation. At the time, General Drummond was the Commander of the Training and Doctrine Command (TRADOC) Combined Arms Test Activity (now known as Operational Test Command), Fort Hood, Texas. During his career, he also commanded III Corps Artillery, Fort Sill, Oklahoma. He presented his four rules for lieutenants during his FAOBC speech.*

Make no bones about it: this graduation is truly a meaningful milestone, and it marks a point in time when your responsibilities change and from which you view professional responsibility differently. It's a time when the real excitement begins as you move out to join your fires units.

Equally, it's a time henceforth from which the Army looks at you differently and expects bigger and better things from you....Your influence and your ability to help lead the Army and get things done are measurably improved as you carry away from this formation your diploma of course completion.

....I would like to give you Drummond's Four Rules for Basic Course Graduates. Perhaps you can file these rules away in your data bank and maybe one day use one or two of them.

1. My first rule for you graduates is **"You can't expect to hit the jackpot unless you put a few nickels in the machine."** This rule means you will get out of life in the Army only in direct proportion to what you put into it. To get any return at all, you've got to risk a few nickels of yourself. You must have an unselfish willingness to work hard at being a soldier.

A great part of investing of yourself is in learning the business. I believe wholeheartedly that "Professional competence is the mother of leadership." Soldiers respond to and follow only those leaders who know their jobs and are competent. Your soldiers don't expect that you know everything, but they'll demand that you care enough to try to learn.

You must continue to learn, to further

# MG Drummond's Four Rules for Lieutenants

your tactical and technical proficiency and be willing to "put a few nickels of yourself in the slot." The monetary rewards are not much, but that overwhelming feeling of personal satisfaction that comes from commitment to soldiers and a job well done is a bountiful jackpot in itself. So put a few nickels in the machine!

2. Drummond's second rule is also simple: **"Sacred cows make the best hamburger."** When you join that new unit, don't be afraid to question why they do something a certain way and to challenge their validity. One of the people you will be continually meeting in the Army is the "Old Sarge," and he may be a major, colonel or even a general. Old Sarge is the keeper of the sacred cows. He will tell you, "Look lieutenant, we've always done it that way," or "That's the way *they* want it done," never knowing who *they* are. Well, simply because we've always done something a certain way doesn't make it right nor the best way.

One of the best things about the Army education system is that each year Basic Course graduates reenergize the Army. You come into units with a high-energy level [and] the very latest and most up-to-date doctrine, procedures and techniques. You bring fresh new ideas, new approaches, and you can spot better ways of doing things. You are uncontaminated by "We've always done it that way." Challenge our sacred cows, our preconceptions, etc.

3. But a caution is Drummond's third rule: **"There's something wrong if you are always right."** So, despite the fact that you think you are the answer to the Army's prayers, keep an open mind and see the others' viewpoints. Make sure you know what you are talking about

before you move into shifting units around.

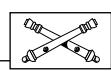
When I spoke a few moments ago about Old Sarge, I spoke of him with reverence, respect and the deepest affection. I don't need to remind you that the great bastion of strength of the US Army is the NCO corps. They want to be *sure* you know what you are doing, and they want you to set high standards.

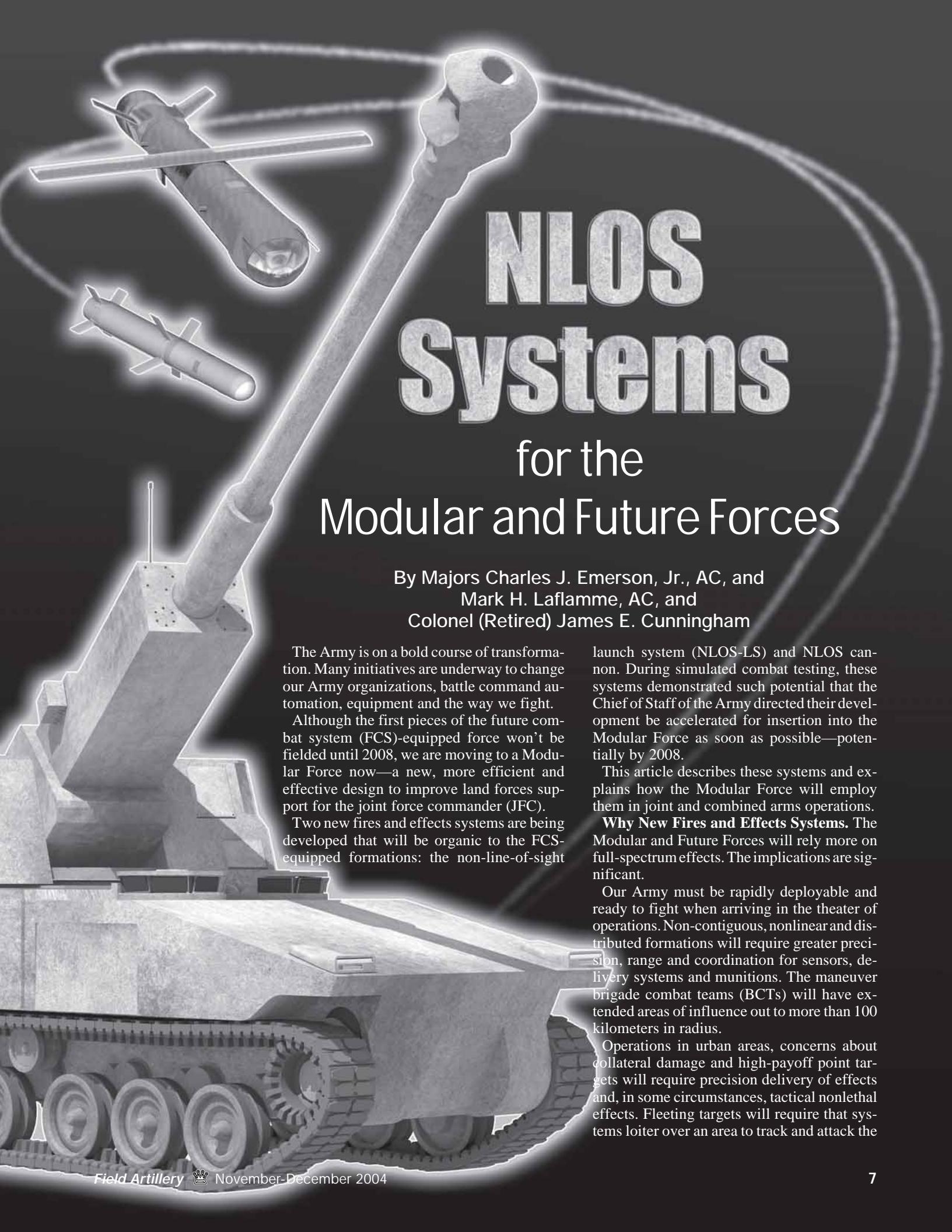
They want you to be successful and what better way than to give you the benefit of *their* experience. Listen to them. Seek out their counsel and advice. Think about what they tell you. When you are right, they'll back you all the way. If, by chance, you're wrong, they'll set you straight. They'll still back you because the NCO corps knows that loyalty, as integrity, is non-negotiable. Sergeants conduct the business of the Army, and if business is good, it's because you have given them the authority and responsibility to do their jobs, and you've taken full advantage of their expertise, competence and hard-earned experience.

4. Drummond's fourth rule is **"If you push on something long enough, it will fall over."** It's all too easy for a young officer joining his first unit to become discouraged. The responsibilities at times appear overwhelming. You'll sign for 10 million dollars' worth of equipment and take on responsibility for the lives of 50 to 100 men. Pretty big burden for a 22-year old, wouldn't you say?

I guarantee you that if you'll try and if you'll give your best shot at things, you will eventually accomplish what you set out to do. Persistence often can achieve the seemingly impossible. Do what you know is right. Stand up for principles, and have the courage of your convictions. If you are convinced of the correctness and integrity of your position, push on and things will fall into place.

You graduate this course at a critical time. You can help to resolve our problems with your energy and talent, your freshly learned professional skills and, above all, your youthful outlook....May you never be disappointed with the Army or with yourselves.





# NLOS Systems

## for the Modular and Future Forces

By Majors Charles J. Emerson, Jr., AC, and  
Mark H. Laflamme, AC, and  
Colonel (Retired) James E. Cunningham

The Army is on a bold course of transformation. Many initiatives are underway to change our Army organizations, battle command automation, equipment and the way we fight.

Although the first pieces of the future combat system (FCS)-equipped force won't be fielded until 2008, we are moving to a Modular Force now—a new, more efficient and effective design to improve land forces support for the joint force commander (JFC).

Two new fires and effects systems are being developed that will be organic to the FCS-equipped formations: the non-line-of-sight

launch system (NLOS-LS) and NLOS canon. During simulated combat testing, these systems demonstrated such potential that the Chief of Staff of the Army directed their development be accelerated for insertion into the Modular Force as soon as possible—potentially by 2008.

This article describes these systems and explains how the Modular Force will employ them in joint and combined arms operations.

**Why New Fires and Effects Systems.** The Modular and Future Forces will rely more on full-spectrum effects. The implications are significant.

Our Army must be rapidly deployable and ready to fight when arriving in the theater of operations. Non-contiguous, nonlinear and distributed formations will require greater precision, range and coordination for sensors, delivery systems and munitions. The maneuver brigade combat teams (BCTs) will have extended areas of influence out to more than 100 kilometers in radius.

Operations in urban areas, concerns about collateral damage and high-payoff point targets will require precision delivery of effects and, in some circumstances, tactical nonlethal effects. Fleeting targets will require that systems loiter over an area to track and attack the

targets when precisely located or on demand. Rapid force tailoring caused by enemy actions or changes in missions demands flexible, easily tailored organizations and a supporting battle command network. Many, if not most, of these challenges have occurred during operations in the Balkans and are occurring in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF).

Fires must enable the Modular and Future Forces to conduct operations without relying on tactical assault to achieve decisive tactical outcomes.

Some argue that precision fires from the air are the best solution for delivering fires and effects in support of the JFC's full-spectrum operations. Although we have the most powerful Air Force in the world, we have seen serious gaps in its ability to deliver timely, effective fires from the air, especially during bad weather.

For example, during Operation Desert Storm (ODS), about 30 percent of the total Iraqi armor and artillery kills occurred during the 44-day air war with about 70 percent of the kills occurring during the 96-hour ground war.<sup>1</sup>

During the 1999 Operation Allied

Force in Kosovo, the allied air forces planned 6,766 sorties, but 3,766 were aborted due to weather. Of the 3,000 sorties actually flown, 990 were adversely affected by weather. More than 14,000 weapons were expended but less than five percent of the Serbian combat systems were destroyed during the 78-day air campaign.<sup>2</sup>

New capabilities being developed for the FCS-equipped force and organizational changes in support of the Modular Force will close the gaps in the joint delivery of fires and effects.

**The Modular Force Concept.** The fires and effects platforms for the Modular Force will be in the fires battalions organic to the BCTs configured as units of action (UAs) and in the fires battalions in the fires brigade assigned to a unit of employment of roughly division size (UEx).

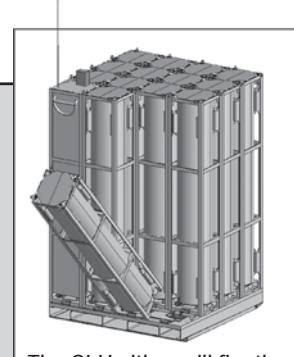
The fires brigade will give the UEx commander a powerful fires and effects headquarters to plan, synchronize and execute counterstrike, shaping operations and reinforcing fires across the UEx. The fires brigade also has the command, control, communications and intelligence (C<sup>3</sup>I) structure to integrate attached ground and air maneuver forces

and function as a maneuver headquarters.

Fires brigades differ from past artillery units in their ability to reconnoiter, detect and attack targets and confirm the effectiveness of their fires with unmanned aerial vehicles (UAVs). They also are characterized by networked intelligence; robust communications systems; fire direction systems that cut sensor-to-shooter times to shorter intervals than ever before; and their ability to control electronic warfare (EW) assets and integrate them closely with fires.

The fires brigade can be a supported or supporting unit, providing and coordinating lethal and nonlethal fires and effects, including information operations (IO). It will be able to augment close fires, conduct shaping operations, provide counterstrike and conduct independent maneuver-based operations.

The fires brigade will have an organic multiple-launch rocket system (MLRS) or high-mobility artillery rocket system (HIMARS) battalion and other cannon and rocket/missile battalions, as required. At some point, perhaps by 2008, the Evaluation Unit of Action will receive the first NLOS-LS and NLOS can-



The CLU either will fire the missiles off of its transportation platform or from the ground.

#### **The NLOS-LS will—**

- Provide networked lethality.
- Have precision navigation to the target area.
- Have extended range and search time.
- Reduce missile launch and flight signatures.
- Perform in adverse weather.
- Provide effects against a wide range of targets.
- Include discriminating sensors.
- Locate moving targets autonomously.
- Have a fire-and-forget capability.
- Be self-contained for remote operations.
- Incorporate human-in-the-loop interaction.
- Have the ability to overcome large target location errors (TLEs).
- Be able to be reprogrammed in flight for new target types.
- Provide images for targeting and battle damage assessment (BDA).
- Reduce manning and logistical requirements.
- Be modular and reconfigurable.
- Be transportable by multiple modes.



NLOS-LS Flexibility and Capability. As shown in the photo, three container launcher unit (CLU) mockups are carried on the bed of a family of medium tactical vehicles.

non platforms and munitions. Eventually, they will be fielded in each BCT's fires battalion as well.

**NLOS-Launch System.** NLOS-LS will launch long-range precision munitions vertically. It will provide networked, extended-range targeting and precision attack of armored, lightly armored and other stationary and moving targets during day, night and adverse weather. The system's primary purpose will be to provide precision attack of high-payoff targets (HPTs) in support of the BCTs in concert with other NLOS, external and joint capabilities.

Command and control ( $C^2$ ) of the NLOS-LS in the FCS-equipped force will be part of a larger net-centric warfare concept, called "networked fires." Networked fires will link sensors and effectors using the FCS battle command system (BCS). Networked fires will rapidly and reliably exchange sensor data, command decisions and weapons allocations.

For the Modular Force, the Army battle command system (ABCs) will provide  $C^2$ , primarily via the advanced FA tactical data system (AFATDS).

The NLOS-LS threshold munitions will include precision and loitering munitions with a "discriminating" capability to locate and engage targets via automatic target recognition (ATR). Mission planning and execution of multiple and simultaneous missions with different munitions will be a function of the Future Force BCS. Munitions will be able to provide images on demand, accept external target designation, be retasked in flight, relay missile data and provide other functions, including non-lethal applications.

The NLOS-LS under development will have a container/launch unit (CLU) for the loiter attack missile (LAM) and precision attack missile (PAM) with a computer and communications system (CCS) module integral to the CLU.

**CLU and CCS.** The NLOS-LS CLU will have 15 sockets for missiles and a 16th socket to hold the CCS. Each CLU will be able to carry 15 of a single missile type or a mix of missiles. The CCS will process missions, contain the communications subsystems, be able to self-locate and self-orient, interface with its weapons, and have its own power supply and protection against tampering. One CCS will be able to control multiple CLUs.

The CLU's primary role will be to act as the shipping container and firing

platform as well as the battle command link for the missiles to the network. On the battlefield, the CLU either will fire the missiles off of its transportation platform or independently from the ground. The CLU will be controlled primarily via wireless link using a secure radio network, thus classifying it as an unattended system.

Both the shorter range PAMs and longer range LAMs housed in the CLU each will weigh about 120 pounds; be about 58 to 60 inches in length and seven inches in diameter; have the global positioning system/inertial navigation system (GPS/INS); and be capable of digital, secure and bi-directional data links.

**PAM.** PAM will be a guided missile effective against moving and stationary heavy armor and soft targets at ranges from 0.5 to 40 kilometers. It will have two flight profiles: a flat trajectory to reduce time-of-flight at shorter ranges (0.5 to 20 kilometers) and a lofted trajectory for attacking targets at extended ranges.

PAM will receive target information before launching and use its guidance system to fly to a target location. The missile will be able to receive target location updates from a battlefield sensor or observer while in flight—essential for locating and attacking moving targets beyond 20 kilometers. The seeker will search the target area during the terminal portion of the flight and make final corrections for PAM to hit the target.

PAM will incorporate an un-cooled infrared seeker with automatic target acquisition (ATA) that will enable precision attack with or without external (laser) designation or anointment of the target. Mission controllers also will be able to direct PAM to fly to a specific grid location and detonate upon impact.

**LAM.** LAM will be a discriminating precision munition to be employed against stationary and moving point targets at extended ranges: from 0.5 to 210 kilometers (distance in a straight line). Ideally, UAV, manned aircraft and other sensor-shooter teams will cue LAM missions and conduct battle damage as-



Precision Attack Missile



Loiter Attack Missile

sessment (BDA). The missile will have a small warhead for attacking HPTs.

LAM will be able to fly to an extended range with a significant search time. A mid-range mission of 70 kilometers will allow 30 minutes of search time in the target area; a precision mission in excess of 200 kilometers will allow little or no search time.

Mission controllers will program mission data into the missile before it is launched and be able to change the data while the missile is in flight as the tactical scenario changes ("dynamic retasking").

LAM will transmit near-real time information in the form of ATR reports of HPTs (text only or images with text) to the BCS. The mission controller will review the images collected by LAM's laser radar (LADAR) seeker to validate targeting and for BDA.

The LAM is currently unfunded for production but is being matured in the science and technology base and will be spiraled back into the Future Force and the current Modular Force as soon as possible.

NLOS-LS performance in simulations and experiments has been extraordinary. The system is effective in urban terrain and key to shaping operations. LAM is more survivable than an armed UAV and, literally, can kill a target 10 seconds after its LADAR seeker acquires it.

NLOS-LS also will greatly reduce the tonnage of munitions and platforms required to achieve success on the battlefield and represents a new era of weapons with unprecedented flexibility and capability. See the figure for NLOS-LS' overall capabilities.

**NLOS Cannon.** The cannon is one of eight FCS-manned ground vehicles. Using a common chassis, it will have interoperability, mobility and survivability characteristics similar to other combat systems in the Future Force BCTs. Like today's indirect fire systems, the NLOS cannon will provide sustained close support fires and destructive fires for tactical standoff engagements.

The NLOS cannon will have a 155-mm, Zone 4, 38-caliber cannon. This cannon will fire the current suite of 155-mm ammunition but will achieve true overmatching when it fires future munitions now under development.

NLOS cannon will have a rate-of-fire of six rounds per minute sustainable for all missions in its typical combat environment. When moving, it will be able to respond to a fire order with the first

round fired within 30 seconds of the vehicle's stopping. The howitzer will carry 24 complete rounds on board. It will receive and compute fire missions from all fielded and developmental target acquisition sources and battle command systems. Each also will be able to compute its own firing data and provide limited tactical fire direction for the rest of the battery, as required.

NLOS cannon will use a projectile tracking system (PTS) to increase its precision. PTS is especially valuable at longer ranges, giving a range and deflection probable error of 33 to 50 percent less than Paladin.<sup>3</sup>

Because the NLOS cannon will have a chassis common to other FCS systems, it will be in the battle with the other FCS combat system—just as deployable, mobile and survivable. With a chassis of just less than 20 tons, it will be more deployable and more mobile within theater.

In terms of survivability, the NLOS cannon's composite armor around the crew is substantially better than the Paladin's. An active protection system (APS) will protect the crew from rocket-propelled grenades (RPGs), anti-armor missiles and tank-fired high-explosive anti-tank (HEAT) rounds. The FCS BCS will alert adjacent FCS platforms to enable cooperative responses to threats in their midst.

Also, the NLOS cannon will have a

crew-served weapon for close combat that will be able to engage stationary or moving targets up to 1,500 meters away. The primary candidate is the objective crew-served weapon (OCSW), but others also are being considered, such as a modified M2 .50 caliber machine gun.

The FCS program uses a holistic approach to minimize exposure to threat system. For example, the NLOS cannon first will use its common operating picture (COP) and employ tactics to try to avoid encountering an overmatching system. Should it encounter enemy forces, it will try to avoid detection and acquisition by managing its thermal, visible and acoustic signature. Should it be attacked, it will try to avoid a hit or penetration through its APS and composite armor. And should it be hit, it will try to avoid being killed through redundant systems and smart placement of critical systems.

FCS vehicles will have a series of sensors for situational awareness and to navigate, detect and engage threats. The sensors will be both passive and active, cover infrared and visible light spectrums and use a multifunctional radome to detect obscured or hidden vehicles and personnel. The crew will be able to use the NLOS cannon sensors for cueing (alert the crew to a potential target) and targeting, determining an enemy's location to within 25 meters. In effect, when the Future Force BCT is deployed,

any FCS platform will be able to locate a threat precisely enough to respond with a variety of precision options as long as the threat is within range of its sensor. Future enhancements will allow FCS vehicles to automatically recognize and categorize targets detected by their sensors and share the information with other FCS vehicles.

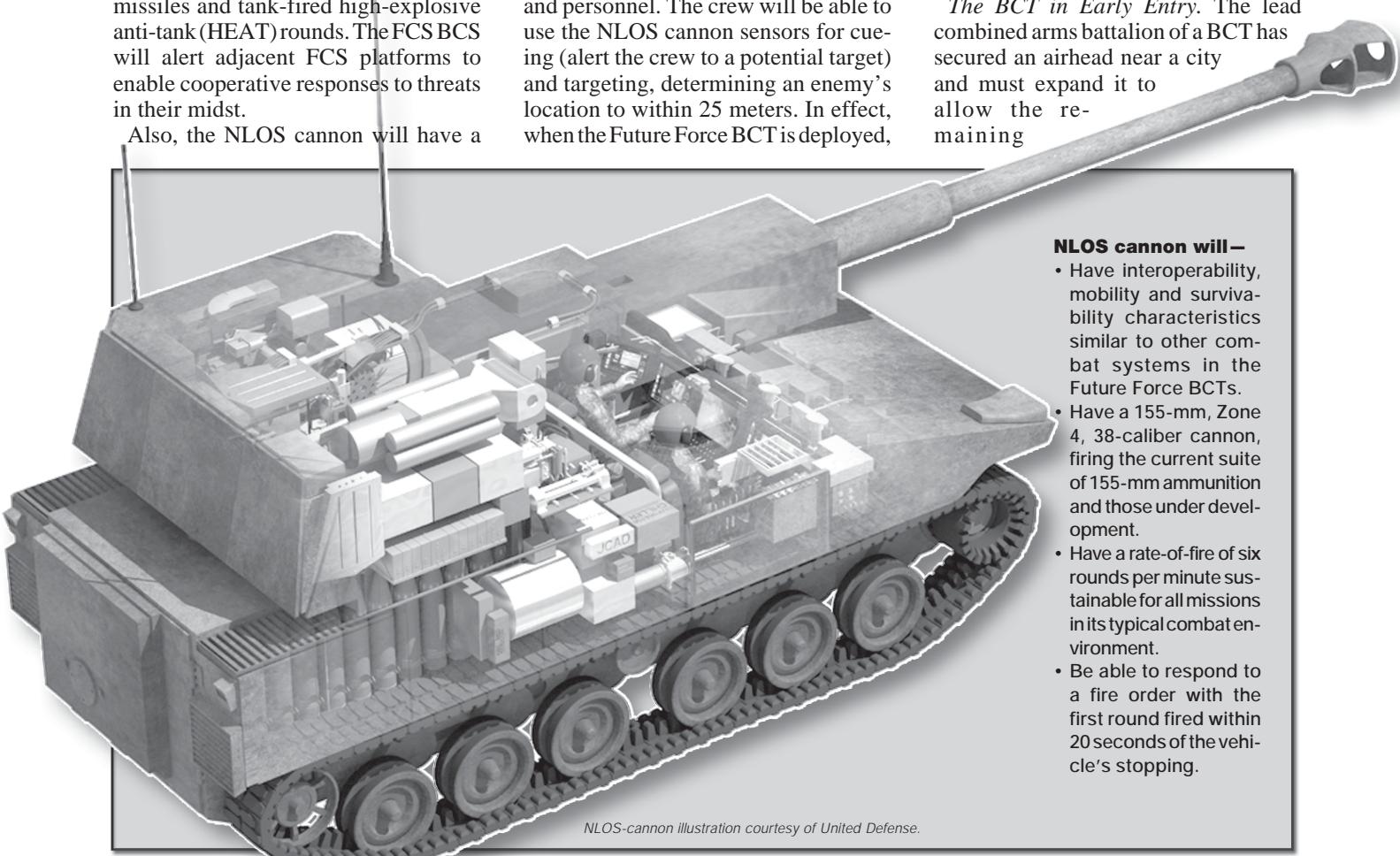
A number of munitions in development will extend the reach and usefulness of all US howitzers. For example, the NLOS cannon will have a range of 35 kilometers firing the precision munition Excalibur. Other special purpose NLOS cannon munitions are being developed to allow commanders to tailor their effects on the battlefield: infrared illumination, multi-spectral obscuration, preformed fragmentation rounds and nonlethal payloads.

**Operational Vignettes.** Tactics, techniques and procedures (TTPs) for the NLOS-LS and NLOS cannon are being developed. The following vignettes show the value of the NLOS systems in various situations across the spectrum of operations with a Modular Force conducting early entry and mid-intensity conflict operations.

*The BCT in Early Entry.* The lead combined arms battalion of a BCT has secured an airhead near a city and must expand it to allow the remaining

#### **NLOS cannon will—**

- Have interoperability, mobility and survivability characteristics similar to other combat systems in the Future Force BCTs.
- Have a 155-mm, Zone 4, 38-caliber cannon, firing the current suite of 155-mm ammunition and those under development.
- Have a rate-of-fire of six rounds per minute sustainable for all missions in its typical combat environment.
- Be able to respond to a fire order with the first round fired within 20 seconds of the vehicle's stopping.



elements of the brigade to deploy into the theater. The mission is to seize and hold several refugee camps outside the city. Rebel forces, both conventional armored forces and guerrillas, are moving to contain the advance.

One of the combined arms companies has established an anti-armor ambush on the main avenue of approach into the city. The company has tactical control of an NLOS-LS CLU loaded with PAMs in a sensor-to-shooter relationship. The company's FCS platforms and its observers communicate directly with the CLUs through the BCS.

A tactical UAV is launched to fly along the route into the city. The UAV detects two tank platoons with accompanying air defense artillery (ADA) vehicles moving toward the combined arms company's position. Enemy fire brings down the UAV.

The company commander asks its BCT for sensor assets. The BCT, in turn, requests targeting support from the brigade fires and effects coordination cell (FECC). A LAM is uploaded onto an NLOS-LS with target templates reflecting the relevant HPT enemy combat systems as well as no-strike templates of friendly systems and is directed to search for and report enemy vehicles along the main route.

The LAM flies along the designated route and detects the enemy formation, sending individual target images through the BCS (with confidence levels equal to or exceeding the commander's attack criteria), making the images available to the unit and its higher, adjacent and subordinate headquarters. Based on the threat, the company sends a digital fire mission for six PAMs with target location and description directly to the NLOS-LS CLU via the BCS. The CLU's CCS processes the request and fires six PAMs into the target area.

The LAM flying over the target area provides updated target locations that are transmitted by the BCS to the PAMs in flight. Before the PAMs impact, each sends an image to the company that is used to validate targeting accuracy.

After the impact, the LAM is retasked to continue flying along the route and send full-frame images to help in the BDA process. The LAM detects vehicles continuing to proceed down the

route toward the ambush site. The PAM and LAM images show that two tanks and a ZSU were destroyed and one tank was damaged.

The ambush destroys the remaining tanks and vehicles in the column. As the LAM nears the end of its fuel supply, rather than allow it to automatically impact in the designated target avoidance zone, it is retasked to attack the tank that only had been damaged by the PAM attack.

*The BCT Conducting Close Support for Decisive Operations.* A BCT is moving into a position of advantage as part of a larger UEx operation against a well equipped and well trained enemy. The lead combined arms company has the advanced guard mission for the brigade with supporting helicopters as well as NLOS cannons and NLOS-LS CLUs from the BCT's organic fires battalion.

The lead elements come under effective fire from three BMPs in a village and from enemy artillery north of the village. The terrain and possible minefields hamper maneuver. An accompanying UAV is diverted to the area and immediately shot down.

The BCT commander directs Army attack helicopters to screen the western flank. The aviation commander requests mortar smoke as an immediate response to help develop the situation.

The multi-mode radar (MMR) detects the enemy artillery and immediately sends the radar acquisition locations to NLOS cannons for engagement. NLOS cannons operating in teams of two about three kilometers behind the engaged lead elements respond to neutralize the enemy artillery. The range-to-target is approximately 18 kilometers, and the NLOS cannons engage them with high-explosive projectiles with course-correcting fuzes to precisely deliver effects on the enemy howitzers.

The UAV destroyed north of the village had been shot down by an undetermined means. LAMs are sent north of the village. Mission controllers use the LAM images to determine the BDA of the previously engaged enemy artillery and identify an undamaged howitzer. The LAMs send the enemy howitzer's location and digital image back through the BCS where the BCT FECC initiates an attack with Excalibur precision artillery projectiles from the NLOS cannons.

Continuing north, the LAMs identify a BMP in a terrain fold on the main avenue of approach north (the probable source of anti-UAV fire). The LAMs send its location and digital image back through the BCS to the BCT FECC, which initiates an attack with PAMs launched from the NLOS platoon of the fires battalion. The LAMs then send images of the target area to the BCT FECC for BDA and continue to search for and attack other targets.

NLOS-LS and NLOS cannon have enormous potential for providing fires and effects to dominate any envisioned threat. The programs are on the fast track to contribute to the warfighter's operational needs beginning as soon as 2008.

As the Army moves from the Modular to the FCS-equipped Future Force, additional enhancements to these systems will make them even more capable of delivering overmatching lethal and non-lethal fires and effects for Army and joint force commanders.



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**Major Mark H. Laflamme, AC,** is the Assistant TRADOC System Manager, Rocket and Missile Systems (TSM RAMS) for the Non-Line-of-Sight Launch System (NLOS-LS) at Fort Sill. He commanded E Company, 2-46 IN at Fort Knox, Kentucky, and served as the Assistant Operations Officer for the 1st Iron Brigade, 2d Infantry Division in Korea.

**Colonel (Retired) James E. Cunningham** is a Senior Military Analyst under contract to support NLOS-LS development for TSM RAMS. Before retiring in 1996, he was the Deputy Director of the Depth and Simultaneous Attack Battle Lab, also at Fort Sill. He commanded the 17th Field Artillery Brigade and 3-9 FA (Pershing), 214th Field Artillery Brigade, both in III Corps Artillery, Fort Sill; and three batteries. He also served as Chief of Staff of the 56th FA Command in Germany.

#### **Endnotes:**

1. "Kosovo Strike Assessment Final Report," Allied Force Munitions Assessment Team and Joint Intelligence Team, 14 October 1999.

2. Ibid.

3. "Achieving a Transformation in Fire Support: Report to the Congress on Indirect-Fire Systems," Office of the Secretary of Defense, June 2002.

# FA School & Fort Sill Directory 2004

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\*These divisions in the new JACI will be stood up in FY05.

## 30th FA Regiment

[http://sill-www.army.mil/30th\\_fa](http://sill-www.army.mil/30th_fa)

Commander/CSM ..... 4704/6424  
Deputy ..... 3995/4704  
Fax ..... 6003

International Student Div ..... 4600/4726  
Fax ..... 5142

PreCommand Course ..... 2929

2-2 FA (Live Fire Support) ..... 2803/3265  
Fax ..... 4744

<b>1-30 FA (WO/Enlisted Instruction)</b>	<i>Modularity</i>	M707 Knight ..... 8764
Commander/CSM ..... 5088/2009	Infantry/Heavy BCT ..... 6520	Dismounted Optics ..... 8764
Fax ..... 7613	Fires Bde ..... 1798	LLDR ..... 6501
AFATDS Command and Staff ..... 0388	UE <sub>x</sub> ..... 5206	Soldier as a System (SaaS) ..... 8764
Fax ..... 7247	UE <sub>y</sub> ..... 5206	M7 BFIST ..... 8760
LTACFIRE/IFSAS/13E ..... 0374	Stryker ..... 6695	Stryker Fire Support Vehicle ..... 8773
Fax ..... 7247		M3A3 BFIST ..... 8760
Fire Direction/13D/ASIF9 ..... 3811		
Fax ..... 7247		
Cannon Fire Direction/13C ..... 4888	<b>FCS</b>	<b>Target Acquisition</b> ..... 3652
Fax ..... 7247	O&O Plan ..... 8410	IPADS ..... 8762
MLRS Fire Direction/13P ..... 6121	NLOS Bn ..... 8410	Profiler ..... 8762
Fax ..... 7247		Met ..... 8762
Survey/13S ..... 2805	<i>Fires &amp; Effects Concepts</i> ..... 1798	MMS ..... 8762
Fax ..... 7247		Q-36/Q-37 Firefinder Radar ..... 3652
Tactical Comms/SINCGARS ..... 2425	<b>Requirements, Force Design and Analysis</b>	LCMR ..... 3652
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WOBC/WOAC/131A ..... 4925	Fax ..... 4300	MMR ..... 3652
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	<b>TRADOC Proponency Office for Sensors</b>	
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	Fax ..... 4300	
	<i>Fire Support Branch</i> ..... 6501	
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	System (FS <sup>3</sup> ) ..... 8784	

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**Future Force Integration and Concepts**  
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**1-22 FA (BCT/OSUT)**  
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Fax ..... 7117

## 1-40 FA (BCT/OSUT)

Commander/CSM ..... 1200/1203  
Fax ..... 7120

## 1-78 FA (Training Committee)

Commander/CSM ..... 2611/5022  
Fax ..... 7907

## 1-79 FA (BCT)

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## 95th AG (Reception)

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**Asst Commandant** ..... 2417/3141  
Fax ..... 8290

Adjutant/S1 ..... 2886/3466

Staff Duty NCO ..... 2417/3141

BNSNOC ..... 1740

PLDC ..... 4241/3562

BNCOC ..... 2097/8480

ANCOC ..... 2619/6970

Camp Eagle PLDC Ops ..... 3468

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sill-www.army.mil/usmc/index.htm

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**SgtMaj** ..... 3873/4204

Fax ..... 5127

Personnel Officer/Adjutant ..... 4204/3979

Training/Education (Courses) ..... 2307

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Btry Cdr/1st Sgt/GySgt ..... 5615/2467

Enlisted Instruction Br ..... 2408/6111

Officer Instruction Br ..... 5819/6192/3000

HIMARS ..... 3654/5573

AFATDS NETT ..... 2501/5811

### Legend:

ABCs = Army Battle Command System  
ACT II = Advanced Concept Technology  
ACTDs = Advanced Concept Technology Demonstrations  
ARDEC = Armament Research, Development and Engineering Center  
ARL = Army Research Lab  
ATTRS = Army Training Requirements and Resource System  
BBS = Brigade/Battalion Battle Simulation  
BOIPs = Basis of Issue Plans  
CATS = Combined Arms Training Strategy  
CECOM = Communications and Electronic Command  
C<sup>4</sup>I = Command, Control, Communications, Computers and Intelligence

FATDS = FA Tactical Data Systems  
FKN = Fires Knowledge Network  
FDU = Force Design Update  
FSV = Fire Support Vehicle  
GLPS = Gun-Laying and Positioning System  
IPADS = Improved Position and Azimuth Determining System  
JFETS = Joint Fires and Effects Training System  
LCMR = Lightweight CounterMortar Radar  
LLDR = Lightweight Laser Designator Rangefinder  
MMR = Multi-Mission Radar  
MMS = Meteorological Measuring System  
NLOS = Non-Line of Sight

O&O = Organization and Operational Document

PEO = Program Executive Officer

QSTAG = Quadripartite Standardization Agreement

RAMS = Rocket and Missile Systems

SINCGARS= Single-Channel Ground and Airborne System

S&T = Science and Technology

STANAG = Standardization Agreement

STO = Science and Technology Objective

STRAC = Standards in Training Commission

TAA = Total Army Analysis

TMD = Theater Missile Defense

TPSO = Theater Precision Strike Office

# BG Bob Bray Appointed DCG-ARNG at Fort Sill

Chief of FA Major General David P. Valcourt appointed Brigadier General Robert T. Bray as the Deputy Commanding General (DCG)-Army National Guard (ARNG) for the Field Artillery Center, Fort Sill, Oklahoma, in a ceremony 29 July 2004.

BG Bray succeeded BG David E. Greer who had held the position for the past three years. BG Greer will continue to serve as the Assistant Adjutant General of the Tennessee Army National Guard.

BG Bray became the DCG after having served as the ARNG Deputy Assistant Commandant (DAC) of the FA School at Fort Sill for the previous 27 months.

He is a member of the South Dakota Army National Guard.

Transforming the ARNG Field Artillery into the modular force, modernization of the ARNG and readiness to perform wartime missions is the focus for the new DCG.

"I will ensure that the Army National Guard FA will be ready and relevant—regardless of the force structure we end up with," said BG Bray.

Approximately 65 percent of the Army's Field Artillery is in the ARNG today.

"Even after the Army National Guard is restructured to be modular, the preponderance of Redlegs will remain in the Army National Guard," Bray said.



# **Field Artillery**

## Digital Photo Shooter's Guide

We, at *Field Artillery*, prefer high-resolution digital photographs that you can email to us (about 500 KBs to 1 MB for each color photo). When shooting digital photos for publication, there are some technical steps you can follow that will save us both a lot of time and trouble.

**1. Shoot the picture.** When taking a photo, set your digital camera on the largest image size and the highest quality resolution the camera will allow. The highest resolution settings usually are called "High," "Super Fine" or "Ultra-High." (Cameras set at "Standard" or "Basic" quality produce images only good enough for websites or PowerPoint presentations. Just because a photo looks good in those formats does not mean it is printable in the magazine.)

Do not shoot a small photo on a low-resolution setting so you can save data space on your camera's storage capacity. Shooting small images at low-resolution would allow you to take more photos per shooting, but we won't be able to publish them.

The higher settings will create larger photos and files. A color photo usually results in a file of 500 KBs to 1 MB. There is no "hard and fast" rule about the image's file size, but, generally, the bigger the size of the digital photo, the better the quality.

If your camera gives you the option, shoot the photo as a tif file. We also accept jpg files. When saving a file as a jpg, choose a "Quality" setting of "Maximum" or "10" and the "Format Option" of "Baseline (Standard)."

One piece of shooter's advice is to get *close* to the subject—the closer, the better. Even if you shoot the photo on a high-resolution setting, if the subject doesn't fill the frame, by the time we crop the photo, we may not be able to use it.

**2. Download the photo in raw data.** When downloading the file from your

camera or its removable storage card to another drive, save the image in raw data. Do not manipulate the data. Do not crop, resize or try to edit the image in any way. This includes adjusting the brightness and contrast.

We know what settings work best according to the specifications of our printer. We also have the latest professional digital image manipulation software. Let us take care of that.

And, please don't try to "beef up" the resolution of the small, low-resolution photo you've shot. For example, shooting a 100-KB image and enlarging the dpi (or ppi) until the file size is 500 KBs will not make the image clearer—it only will make the image larger (bigger dots, not more of them).

*Important:* Do not import the photos into Microsoft PowerPoint or Word and send them to us. They are unusable in those formats.

**3. Send us the digital photo.** By following the first two steps, you'll have a large file for each photo. One way to get your photos to us is to send them on a 100-MB zip disk or a CD. In some cases, a jpg file will fit on a 3.5 floppy disk—but do not resize the jpg photo to make it fit.

Our magazine's email will accept 8 MBs or smaller per message. Do not try to send us larger files via email. You can send us several photos by multiple emails. Be sure to include caption information (who's doing what, when and where) for each photo attached and the associated article/author. Also include the photographer's full name and rank for credit in the magazine.

Mailing electronic photo files larger than 8 MBs is one option. However, we do have an FTP site available for uploading photos. No special software is required to upload your images. Simply send us an email requesting instructions for uploading your photos on our FTP site.



If you have questions about shooting and saving digital photos or how to send them to us, call the Art Director at DSN 639-5121/6806 or Commercial (580) 442-5121/6806; the Fax number is DSN or Commercial 7773. Our email is [famag@sill.army.mil](mailto:famag@sill.army.mil). Our mailing address is *Field Artillery*, P.O. Box 33311, Fort Sill, Oklahoma 73503-0311. If you want to over-night your photos, the street address is Building 758, Room 7, McNair Road, Fort Sill, Oklahoma 73503-5600.

We know the majority of our digital shooters are not professional photographers. You are authors/photographers who are Soldiers and Marines—even better, mostly Field Artillerymen—telling the story of the best branch and best Army and Marine Corps in the world.

Help us do justice to your articles by following these instructions for taking digital photos. *Good Shooting!*

# 17th FAB US Ambassadors in Iraq

## FA Soldiers Restore School

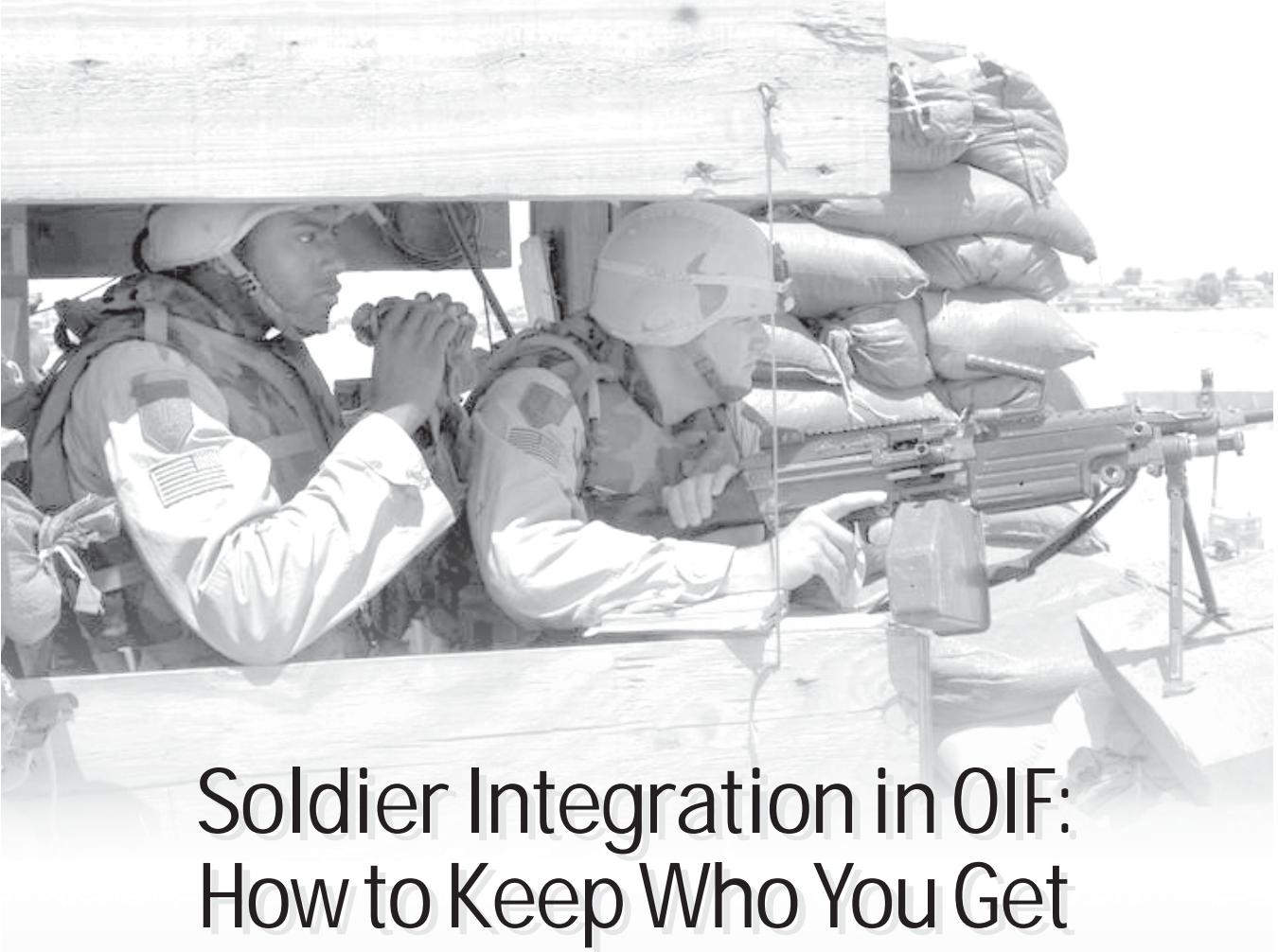
A local Iraqi boy from the Awad Al Hussein Village (right) poses in a US Army helmet at the Al-Dawaya School during Operation Iraqi Freedom in September 2003. The kevlar helmet belongs to Captain Jeffrey J. Hilt, Commander of C Battery, 1st Battalion, 12th Field Artillery in the 17th Field Artillery Brigade (17th FAB) out of Fort Sill, Oklahoma.

While in Iraq, the 17th FAB restored the school. Pictured below, local villagers work with 17th Brigade Redlegs to deliver desks to the school. Classes began in October 2003. (USAF Photos by MSgt James M. Bowman)



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# Soldier Integration in OIF: How to Keep Who You Get

By Major Richard A. McConnell and  
Sergeant Major Leo Adams, Jr.

*However much we may honor the “Unknown Soldier” as the symbol of sacrifice in war, let us not mistake the fact that it is the “Known Soldier” who wins battles.*

*Men Against Fire* by SLA Marshall

The level to which a Soldier is “known” by his unit affects his success and survival in combat. Conversely, the level at which the Soldier knows his unit is also vitally important.

The Army long has emphasized the importance of sponsorship programs of various types to facilitate the integration of newly assigned Soldiers into units. This process spans everything from familiarization with a new area of assignment to licensing on vehicles and equipment and weapons/crew certification.

If this process is less than effective in garrison, the consequences are bad enough. In combat, an improperly integrated Soldier easily can become a casualty in his first few days in theater.

To “keep the Soldiers we got” during Operation Iraqi Freedom (OIF) I, the 1st Battalion, 12th Field Artillery (1-12 FA), *Raiders*, 17th Field Artillery Brigade out of Fort Sill, Oklahoma, designed and implemented a Soldier Certification/Integration Program for all newly assigned Soldiers. Its purpose was to ensure they received training that was relevant to the emerging situation and incorporated essential tasks. Proficiency in these tasks was vital to the Soldiers’ success in the Sunni Triangle, the battalion’s area of operations.

So how did we develop this program and what did it consist of? After occupying Logistical Supply Area Anaconda near Balad, Iraq (about 50 miles north of Baghdad), for about five months, we received our first replacements and established the program outlined in Figure 1 on Page 18.

This certification program was very successful in preparing new Soldiers for the many challenges of service in Iraq. It

helped “level the playing field” for all Soldiers arriving in our battalion, ensuring they had a certain knowledge base before they went out on their first combat mission.

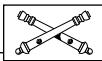
Because our first replacements happened to be officers, the one-day Soldiers Integration Program in Figure 1 actually evolved from a more extensive three-day program designed for officers that culminated with a right-seat-ride. Based on input from these first officers trained, the battalion improved the program and modified it for use for all Soldiers. See the Officer Integration Program outlined in Figure 2 on Page 18.

Although the number of tasks and the level of detail required to be accomplished at battalion level changed when applied to the enlisted ranks, the intent remained the same. It was vital to swiftly integrate new Soldiers into the battalion, teach them the basics of survival in their new situation and verify they had

these skills before they were exposed to combat missions.

This process produced “known Soldiers” out of new Soldiers, thereby enabling the battalion to receive 51 new Soldiers in seven months of combat and keep every one fully mission capable.

Soldier integration is as important today as it was 60 years ago. To keep new Soldiers alive, units must claim them, train them and certify them.



Major Richard A. McConnell recently returned from 12 months in Iraq as the S3 and the Executive Officer of 1st Battalion, 12th Field Artillery (1-12 FA), 17th Field Artillery Brigade, III Corps Artillery, Fort Sill, Oklahoma. Previously, he was the Operations Officer for the Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Training (DCST)-West at Fort Leavenworth, Kansas. He commanded Headquarters and Headquarters Battery (HHB), 41st Field Artillery Brigade, V Corps Artillery in Germany. He was a battery fire direction officer in 1-320 FA, 101st Airborne Division (Air Assault), in the Gulf during Operation Desert Storm.

Sergeant Major Leo Adams, Jr., recently returned from 12 months in Iraq, serving as the Command Sergeant Major of 1-12 FA. Currently, he is a Small Group Instructor in the Sergeants Major Academy, Fort Bliss, Texas. He also was a First Sergeant in three separate batteries: B/25 FA (Target Acquisition), A/33 FA (Multiple-Launch Rocket System) and HHB, all in the 1st Infantry Division (Mechanized) in Germany. As First Sergeant of B/25 FA, he deployed to Bosnia-Herzegovina in 1996 as part of the Implementation Force (IFOR).

- 1. Soldier Read-Ahead Packets.** These consisted of tactics, techniques and procedures (TTPs); weapons-clearing procedures; rules of engagement (ROE); and a journal of battalion key operations since arriving in country.

- 2. Battalion Commander's in briefing included—**

- You are a Soldier first and artilleryman, signalman, cook, etc., second.
- Force protection starts in the motor pool when you ensure your vehicle will make the convoy. Do not put other Soldiers at risk because you failed to conduct preventive maintenance checks and services (PMCS).
- Precombat checks (PCCs)/precombat inspections (PCIs) to standard are a *must*—your life as well as others' lives depend on it.
- The enemy owns the first couple of seconds after an ambush or improvised explosive device (IED) goes off. You and your unit's quick reaction will determine how you and your unit come out of that contact. Be prepared to take the fight to the enemy at all times.
- Never forget that you are getting combat pay for a *reason*.

- 3. Command Sergeant Major's (CSM's) in briefing included—**

*All Soldiers:*

- I won't accept anything less than your best efforts and discipline. This is combat.
- Listen to your NCOs, and have a battle buddy.
- Learn from the good Soldiers around you, and trust your gut

feelings and common sense.

- Basic soldiering skills and standards are key: PMCS, PCCs/PCIs, ROE, weapons, first aid, nine-line call for medical evacuation (MEDEVAC), responsibilities of guard duty and steps in reaction drills. *Always* be prepared to fight at a moment's notice.

- Your individual replacement training (IRT)/replacement integration training (RIT) were important. Now apply this knowledge and build on it.

*Additional Information for NCOs—*

- PCCs, PCCs, PCCs and more PCCs.
- Use good time management to train and inspect your Soldiers, ensuring they are ready to go at a moment's notice.
- Your soldiers require your direct leadership involvement—you cannot inspect and check them too much.
- Maintain situational awareness at all times. You never know when a situation will arise where you will have to lead Soldiers on the battlefield—*be ready*.

- 4. Battalion Executive Officer (XO) Briefing.** He briefed battalion actions to date, theater orientation and the battalion's mission.

- 5. S2 Briefing.** This included the threat, enemy situation, map reconnaissance, enemy trends and lessons learned; he then issued maps.

- 6. S3 Briefing.** He briefed missions, TTPs, search and seizure, immediate action drills (react to incoming fire and react to direct fire), reporting procedures and ROE.

Figure 1: Soldier Integration Training Program Steps. NCO and enlisted training started at the battalion level and was completed at the battery level, resulting in less time spent at battalion, usually less than one day. First Sergeants then reported to battalion when all new Soldiers were certified on clearing their weapons and the ROE. Briefings were conducted by the commander, CSM and primary staff officers whenever the battalion's operational tempo (OPTEMPO) allowed; otherwise, the NCOs-in-charge (NCOICs) of the staff sections briefed the information.

- 7. Platoon Sergeant Training.** The officer met his platoon sergeant who was responsible for teaching him how to use the precision lightweight global positioning system (GPS) receiver (PLGR) navigation techniques, convoy briefing standing operating procedures (SOP) and radio loading procedures.
- 8. Battalion XO Counseling.** A block of time was set aside for the new officers to read their packets and receive counseling from the XO on Leader Book development.
- 9. S1 Briefing.** This included personnel accountability, reports and awards.
- 10. S4 Briefing.** He briefed requisition procedures, supplies available and existing contracts being worked for the officers' Soldiers.

- 11. Weapons Clearing Class.** Each officer had to demonstrate hands-on proficiency in clearing the M16, M249, M2, M9 and MK19.

- 12. Battalion Maintenance Tech Briefing.** He briefed -10/20 standards and PCC/PCIs for convoys.

- 13. Right-Seat-Ride.** An observer controlled by the XO took the officer out on an operation, requiring the officer to—

- Conduct PCCs/PCIs successfully.
- Load a radio.
- Deliver a convoy briefing.
- Demonstrate proficiency in land navigation using a map and PLGR.

Figure 2: Officer Integration Program. This three-day program included all the steps in Figure 1 and those in this figure. The officers remained at the battalion level for this training and certification as part of the XO's officer education/mentorship program.

# 2005 *Field Artillery* Author's Guide

**Readership.** A bimonthly joint magazine, *Field Artillery* is the professional journal for US Army and Marine Corps Redlegs worldwide. Approximately 40 percent of our readership is company-grade, both officer and enlisted, with the remaining 60 percent more senior Army and Marine personnel, Department of Defense (DoD) civilians, retirees, members of other branches and services, allies, corporate executives and our political leaders.

**Subscriptions.** All FA Army and Marine battalions, both Active and Reserve Components, are eligible to receive copies of *Field Artillery* free of charge: 13 per FA battalion and fires battalions and seven per headquarters of a corps artillery, division artillery, FA brigade, fires brigade and USMC FA regiment, or a separate battery. In addition, chiefs of the Army branches, readiness commands, recruiting units, state adjutant generals, military libraries, ROTCs and special units or organizations in other branches or services and other agencies in the US Government working with Army, joint or coalition fires and effects issues, doctrine, organizations or materiel are eligible for free copies. The qualifying unit or agency must request the magazine, provide its complete official address (include the four-digit zip extension) and the name and telephone number of a point of contact.

Those who are not eligible for free distribution or wish to have their magazines mailed to their residences must subscribe through the US Field Artillery Association. Individual rates are \$20 per year (\$38 for two years and \$56 for three) to US or APO/FPO addresses. Foreign or international subscribers should check the Association's home page for subscription rates: [www.fieldartillery.org](http://www.fieldartillery.org).

**Magazine Features.** In addition to articles, we routinely print the Chief of Field Artillery's column ("Crossed Cannons on Your Collar"); letters-to-the editor (Incoming); interviews with Army, joint and combined leaders; and other features.

**Subjects.** Articles may cover the tactical, operational or strategic levels as long as their contents relate to Field Artillery or joint or coalition fires and effects or are of special interest to our readers.

If an author is writing about the past, he should analyze the events and show how they apply to Field Artillerymen today—not just record history. If he's identifying current problems, he must propose solutions. (An author may identify problems without proposing solutions only in a letter-to-the-editor.) In addressing the future, he should clearly explain his points and their implications.

Since the magazine's founding in 1911, one of *Field Artillery*'s objectives has been to serve as a forum for professional discussions among the FA and fires community. Therefore, an author's viewpoint, recommendations or procedures don't have to agree with those of the Branch, Army, Marine Corps or DoD. But his article's contents must be logical and accurate; address disadvantages as well as advantages (as applicable); promote only safe tactics, techniques and procedures (TTPs); and include no classified information.

Articles must be clear and concise with the thesis statement (bottom line) up front and the body of the article systematically contributing to the thesis. When writing, authors must think like the Field Artilleryman in the field:



"What is it?" "What will it do for me?" and "How do I implement it?" (or "When will I get it?").

## Submissions. Include—

- A double-spaced, typed, unpublished manuscript of no more than 5,000 words with footnotes and bibliography, as appropriate. Except in the case of Army-wide "news" items, *authors should not submit a manuscript to Field Artillery while it is being considered elsewhere*.

- A comprehensive biography, highlighting experience, education and training relevant to the article's subject. Include email and mailing addresses and telephone and Fax numbers; please keep this information current with *Field Artillery* for as long as we're considering your manuscript.

- Graphics with captions to illustrate and clarify the article. We accept high-resolution digital images. These can include photographs, drawings, slides, maps, charts, unit crests, etc. (See the "Digital Shooter's Guide" on the next page.)

The *Field Artillery* staff will edit all manuscripts and put them in the magazine's style and format. Authors of articles and interviewees will receive a "check copy" of the edited version before publication.

## Magazine Information

- Call us at DSN 639-5121 or 6806 or commercial (580) 442-5121 or 6806. To Fax, dial the DSN or commercial prefix and 7773. Our email is [famag@sill.army.mil](mailto:famag@sill.army.mil).

- Mail your submission to *Field Artillery*, P.O. Box 33311, Fort Sill, Oklahoma 73503-0311.

- Over-night your submission to us at Building 758, Room 8, McNair Road, Fort Sill, Oklahoma 73503-5600.

- View our home page at [sill-www.army.mil/famag](http://sill-www.army.mil/famag). We have magazines online back to 1959.

## Field Artillery 2005 DEADLINES

Edition	Deadline
Jan-Feb	1 Oct 2004
Mar-Apr	1 Dec
May-Jun	1 Feb 2005
Jul-Aug	1 Feb: History Contest* 1 Apr: Others for Jul-Aug
Sep-Oct	1 Jun
Nov-Dec	1 Aug

\*See our "2005 History Contest Rules" on Page 45 of the July-August edition ("Previous Editions" on [sill-www.army.mil/famag](http://sill-www.army.mil/famag)).

1SG Michael Grinston, C/1-7 FA, 1st ID, inspects an alley during a night patrol of Bayji, Iraq - Photo by PFC Elizabeth Ersley

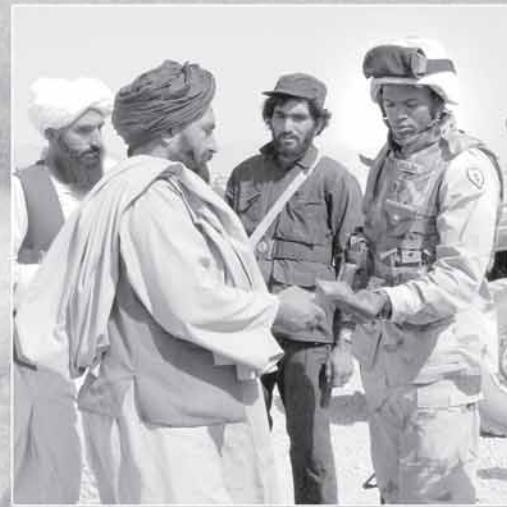
# GWOT

**“It is fatal to enter any war without the will to win it.”**

*General Douglas MacArthur*



1-206 FA, Arkansas Army National Guard, 39th BCT, fires a mission at Camp Cooke, Iraq. Photo by MSG Bob Haskell



3-7 FA, 25th ID, Afghanistan - Photo by SSG Joseph P. Collins, Jr.

C/2-11 FA, 25th ID, Iraq – Photo by PFC Elizabeth Erste



3-29 FAR, 4th ID, Iraq – Photo by SGT Jack Morse



A/1-377 FA, 101st Abn Div, Iraq – Photo by SSG Kevin Wastler

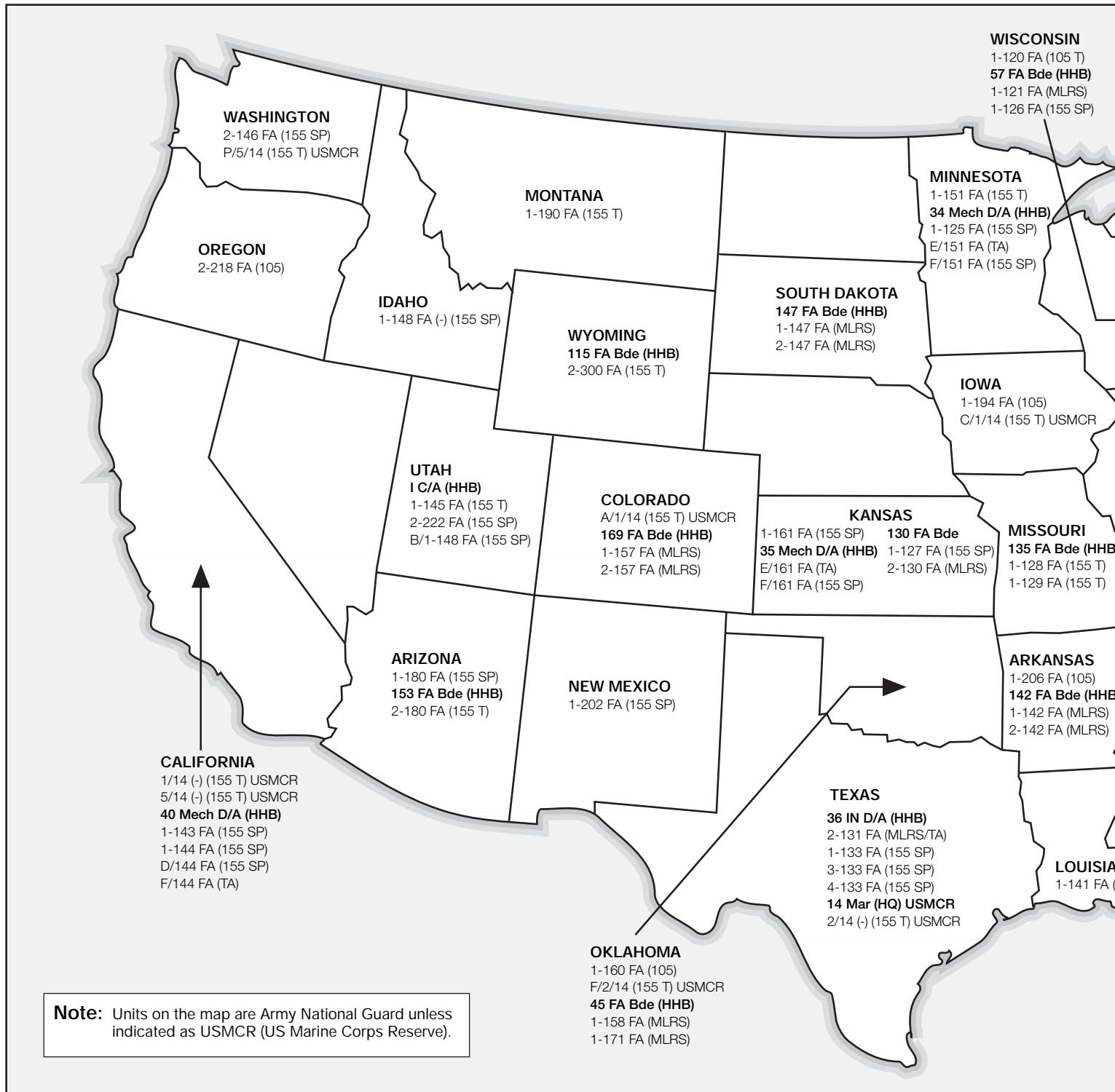


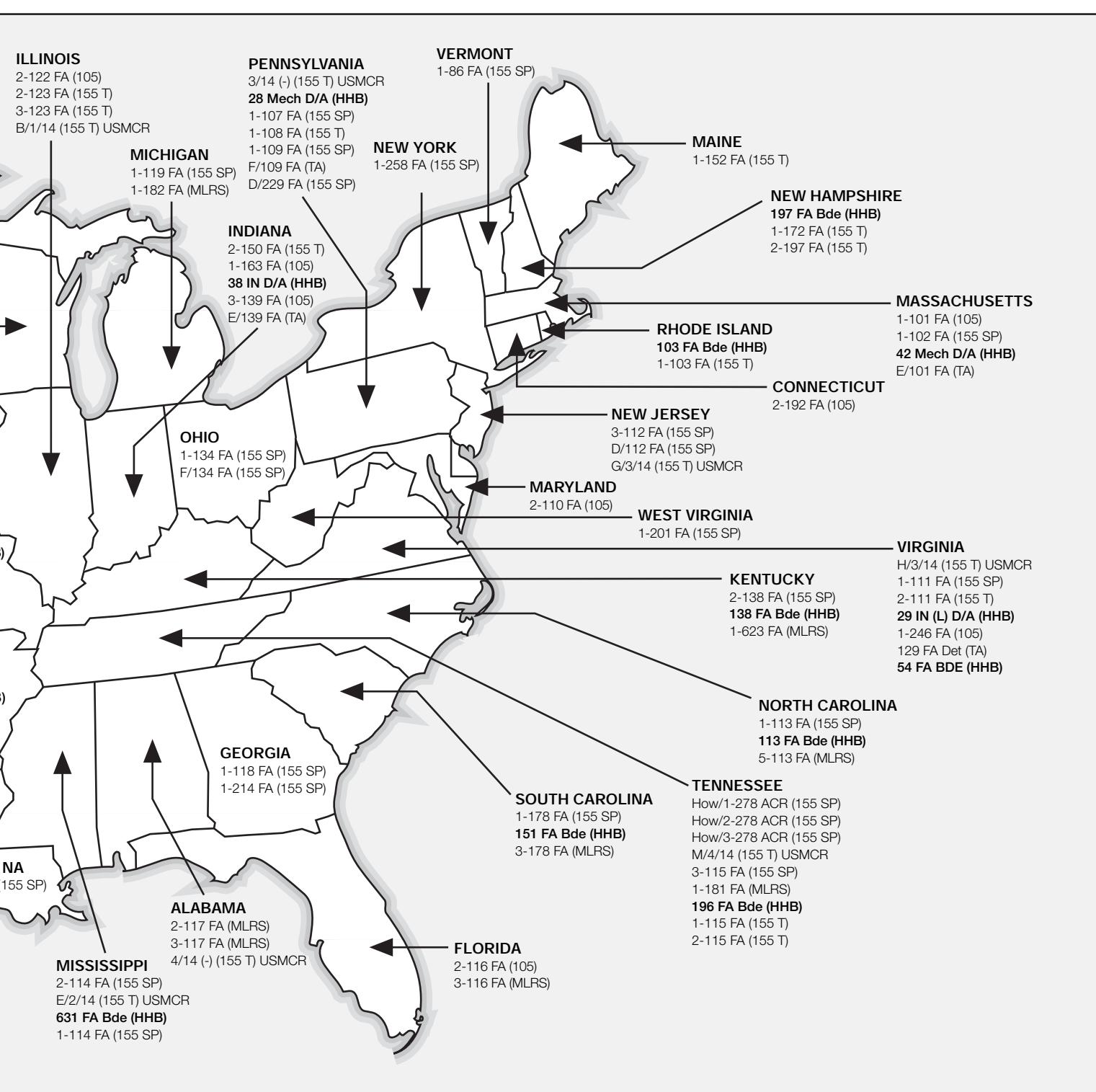
A/111 Marines, Iraq



# Army National Guard and Marine Reserves

As of 1 November 2004

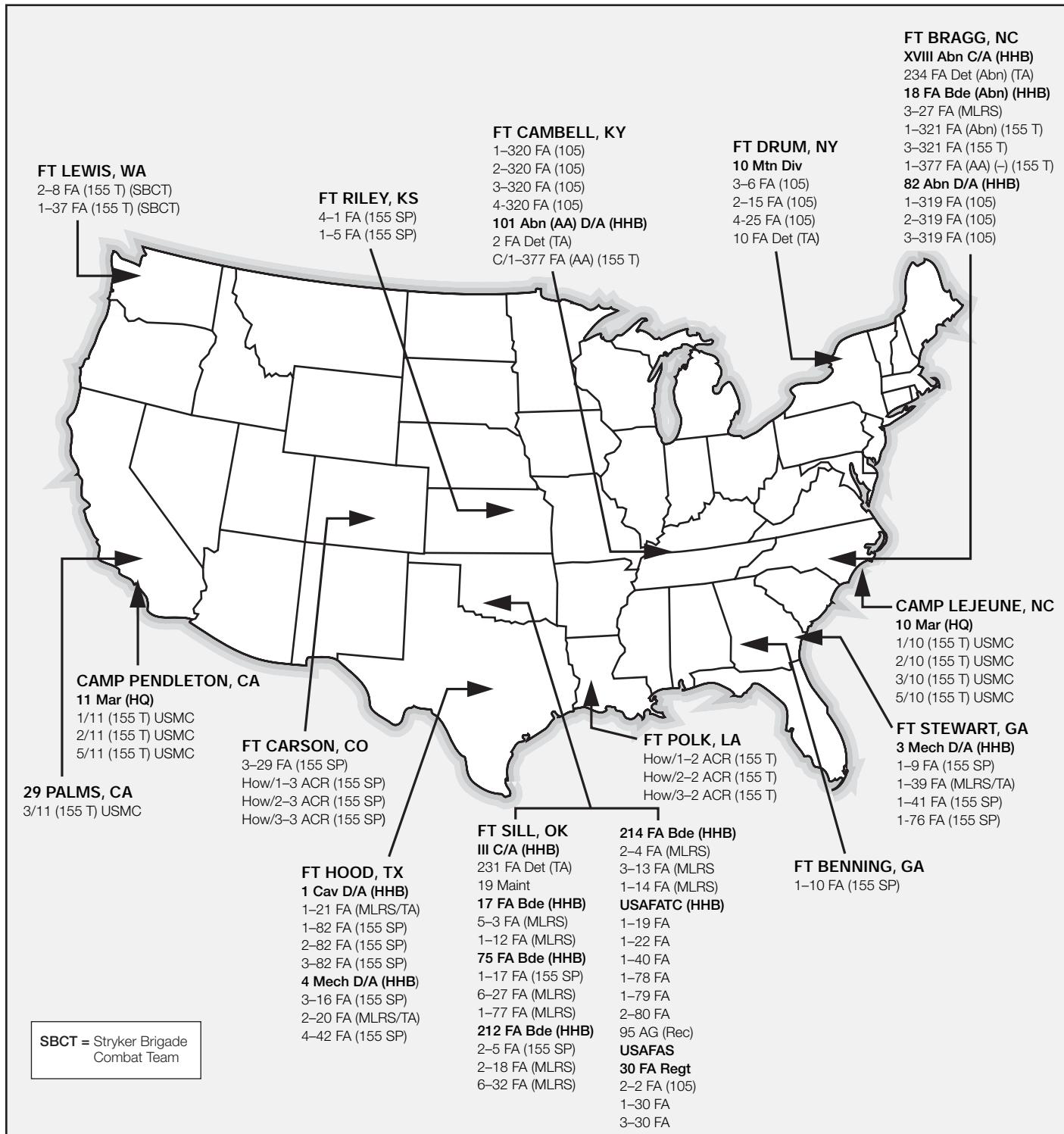






# Active Army and Marine Units in CONUS

As of 1 November 2004

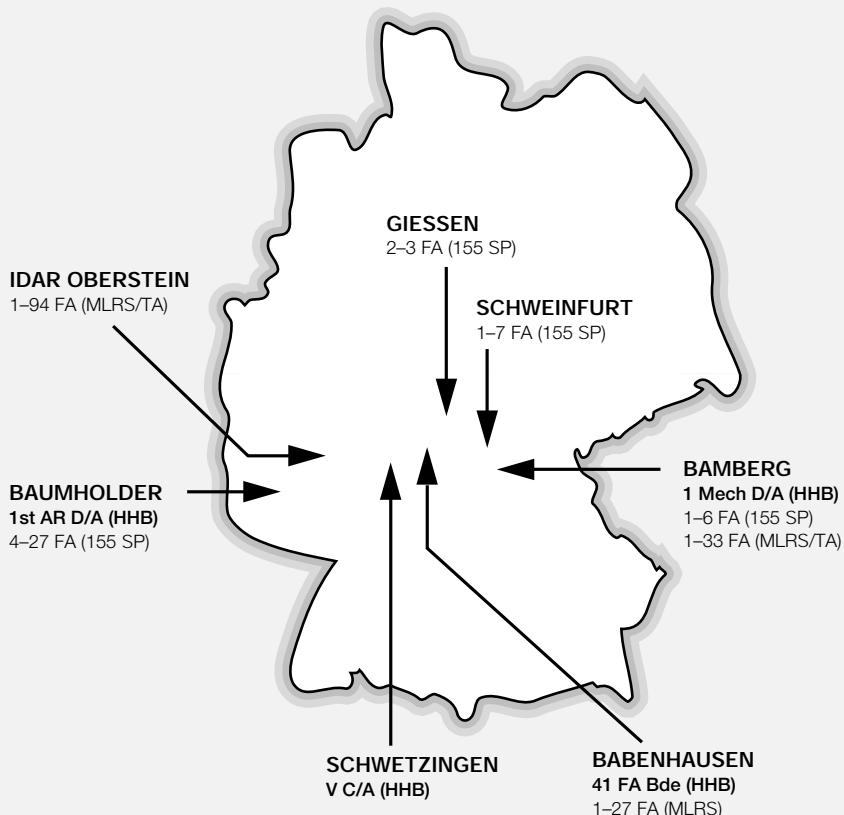




# Active Army and Marine Units in OCONUS

As of 1 November 2004

## Republic of Germany



## Italy



## Okinawa



## Hawaii

KANEOHE BAY  
1/12 (155 T) USMC

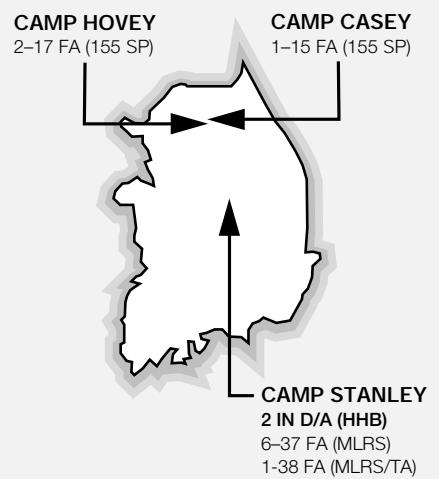
SCHOFIELD BARRACKS  
25 IN (L) D/A (HHB)  
3-7 FA (105)  
2-11 FA (105)  
F/7 FA (155 T)  
25 FA Det (TA)

## Alaska

FT WAINWRIGHT  
4-11 FA (-) (105)

FT RICHARDSON  
C/4-11 FA (105)

## Republic of Korea



# Silhouettes of STEEL

## I Corps Artillery

(US) Corps Artillery, headquartered at Camp Williams, Utah, continues to provide Total Force fires and effects for I Corps-America's Corps. I Corps Artillery remains battle-focused and continues to train for deployment in any contingency, anywhere, anytime as a joint, combined or coalition force.

**Training the Corps Artillery.** With the return of our two in-state battalions from Operation Noble Eagle in Kosovo, I Corps Artillery had the great opportunity to support 2-222 FA and 1-145 FA as they began training in their traditional roles of fire support. We attribute realistic training and excellent leadership to the success of these units in performing missions outside the normal fire support venue. The battalions have returned ready to assume the mission of training our Redleg officers and NCOs at home station and at Fort Sill, Oklahoma, and other institutional training schools.

The I Corps Artillery tactical operations center (TOC) and liaison personnel had the unique opportunity to coordinate with a variety of state and Federal law enforcement agencies conducting homeland security missions and training. Our first-line leaders excelled in their leadership tasks and performed these unique missions with the utmost professionalism.

I Corps Artillery's training plans for the year were based on preparing for the next I Corps Warfighter Exercise (WFX) in 2005. This exercise will take place in Japan during the Yama Sakura exercise. We focused the training to improve our deficiencies, sustain our strengths and prepare for the Warfighter based on the lessons learned from Iraq as well as previous exercises.

In addition to this training, we participated in two major exercises with I Corps. In January, I Corps Artillery deployed to Japan for a successful Yama Sakura exercise. In August, we deployed to Korea for Ulchi Focus Lens. I Corps Artillery used all available deep systems, such as ATACMS, to influence the battles significantly during the exercises; we targeted high-payoff targets (HPTs) deep in the corps and division zones and planned, coordinated and executed all suppression of enemy air defenses (SEAD) and joint SEAD missions in support of corps deep attacks. By employing advanced techniques for fighting the corps deep battle, we were instrumental in defeating the opposing force (OPFOR) overwhelmingly.

In preparation for the I Corps' Warfighter, we participated in several fires and effects coordination cell (FECC) exercises, to include Cascade Cudgel held at Fort Lewis, Washington. The exercise empha-



I Corps Artillery Soldiers coordinate fires with Japanese forces during Yama Sakura.

sized improving timely target analysis and the responsiveness and accuracy of fires and providing the appropriate effects needed on the battlefield in support of I Corps operations.

**Utah ARNG.** As well as its warfighting mission for I Corps, I Corps Artillery assumes an important and active role in the Utah Army National Guard (UTARNG). Serving as a major subordinate command, we provide administrative, logistical, operational and training support for two in-state battalions: 1-145 FA (155-mm towed) in Salt Lake City and 2-222 FA (155-mm self propelled) in Cedar City. We also support the firing battery and fire support team (FIST) of B/1-148 FA (155-mm self propelled) and a detachment, 3/HHB/1-148 FA, which are located in Logan and Salt Lake City, respectively. These elements are part of 1-148 FA, headquartered in Boise, Idaho, that is DS to the 116th Armored Cavalry Brigade. The 116th Brigade recently deployed to Fort Bliss, Texas, in preparation for an OIF III mission.

I Corps Artillery continues to be a leader in providing training assistance, guidance and coordination for a major portion of the Reserve Component Field Artillery brigades. These units and their Field Artillery battalions are located throughout the US. Participation with these brigades during exercises and training conferences continues to be one of the highlights of I Corps Artillery's responsibilities. *America's Corps Artillery* is proud to be associated with these high-quality Soldiers who are committed to the defense of our country.

**I Corps Fire Support Conference.** January 2004 brought the I Corps fire support community together for the 22d Annual Fire Support Conference at Salt Lake City. The I Corps Artillery Commander hosted the conference and presented command guidance and direction

for the corps fire support units. This guidance set the standards for productive mission-oriented training for the upcoming year.

Conference presenters covered a variety of fire support issues and subjects, focusing on "Fires and Effects Beyond the Horizon." They included the Commander of I Corps; the Director of the Army National Guard Bureau; the Chief of Field Artillery and Commanding General of Fort Sill and his Program Managers from the Field Artillery School; the Deputy Commanding General of Fort Sill for Army National Guard; the Commander of the 311th Corps Support Command (COSCOM); the Commanders of the 138th and 45th FA Brigades from the Kentucky and Oklahoma ARNG, respectively; the National Guard Field Artillery Advisory Chairman (FAAC); the Chief of the I Corps Simulation Center out of Fort Lewis, Washington; Training and Doctrine Command System Managers; the I Corps G2 and G3; and the I Corps Artillery Deputy Commander.

In attendance were representatives from a large portion of the Field artillery brigades, division artilleries, our COSCOM and many Field Artillery battalions. The conference continues to provide an excellent opportunity for command interface in I Corps and the fire support community.

The next I Corps Fire Support Conference will be 6 through 8 January 2005 in Salt Lake City.

The changes of transformation, homeland security missions and new equipment fieldings are challenging, but all take a "back seat" to ensuring the nation has a viable fire support team ready to deploy worldwide.

I Corps Artillery is committed to meeting the challenges and fusing the Total Force into one. *America's Thunder!*

# Silhouettes of STEEL

## III Corps Artillery

**H**eadquarters, III Corps Artillery, Fort Sill, Oklahoma, arrived in Iraq in January 2004 and continues as the Force FA Headquarters and Effects Coordination Cell (ECC) for the Multi-National Corps, Iraq (MNC-I).

**17th FA Brigade.** *The Thunderbolt Brigade* deployed, fought and completed its mission in OIF during the last year, demonstrating the agility, flexibility and adaptability of FA Soldiers performing a variety of missions, from building schools and infrastructure to conducting raids and combat patrols.

**5-3 FA (MLRS)** *First Round* completed its battalion EXEVAL and led the brigade's movement into Iraq, establishing a corps ammunition holding area for Baghdad. It also trained former Iraqi soldiers to secure enemy ammunition and provided a QRF along the MSRs from Kuwait to Baghdad.

**1-12 FA (MLRS)** *Raiders* completed its battalion live fire and the brigade's deployment exercise and immediately loaded trains for Iraq. *The Raiders* collected and secured captured enemy ammunition (CEA) around Baghdad, established radio relay sites along the MSR and developed force protection modifications still used in Iraq.

**3-18 FA (Paladin)** *Steel Professionals* led the brigade's deployment to Iraq, identifying, securing and destroying CEA in the Sunni Triangle as well as in all the southern Coalition Force zones. 3-18 FA recently inactivated to provide equipment to stand up a unit of action (UA) fires battalion.

**75th FA Brigade.** *The Diamond Team's* HHB deployed to Iraq as the Army's first Exploitation Task Force in February 2003

to search for weapons of mass destruction. The brigade also deployed its TOC for NTC rotation 09-03 and served as a BCT headquarters and the brigade (-) to White Sands, New Mexico, for the XVIII Airborne Corps Arty's Operation Rolling Steel.

**1-17 FA (Paladin)** *Copperheads* deployed to OIF in late March 2003, initially DS to 1-10 Cav, firing more than 700 rounds before halting at the Iraq-Iran border. From May 2003 to March 2004, it served in the 4th Infantry Division's largest battalion/task force area of operations and recruited, trained and equipped the 1st Battalion, Iraqi Army; an Iraqi Civil Defense Corps (ICDC) battalion; Iraqi police; and city councils.

**1-77 FA (MLRS)** *Falcons* began the year with a battalion FTX and live fire at Fort Sill and then deployed for NTC rotation 09-03. April found the unit at White Sands for battery EXEVALs and Operation Rolling Steel. Next, the *Falcons* deployed to Fort Lewis to help train more than 4,500 ROTC cadets.

**6-27 FA (MLRS)** *Proud Rockets* deployed to OIF in March 2003, conducting humanitarian assistance and cordons and searches. It also cleared Ammo Dump West and 39 bunkers at Taji, moved 127 truckloads of ammo to demolition sites and helped secure more than 14 million rounds of CEA.

**212th FA Brigade.** *The Courage and Command Brigade* contributed greatly to the nation's defense in 2003, deploying battalions for OIF. It also conducted the weeklong Operation Joint Thunder joint close air support (JCAS) exercise at Fort Sill in May.

**2-5 FA (Paladin)** *Rock Hard* deployed to

OIF DS to the 3d ACR in April 2003, conducting operations in Ramadi from May until September. In October, it trained ICDC and provided a "hot" platoon for the area surrounding Hit, redeploying in April.

**2-18 FA (MLRS)** *Mission Ready* deployed to OIF in March 2003, one of few units to participate in the full spectrum of operations—providing lethal ATACMS fires, conducting CEA and force protection missions and standing up an ICDC battalion. 2-18 FA redeployed in November and then successfully executed a battalion EXEVAL.

**6-32 FA (MLRS)** *Proud Americans* contributed to the GWOT and homeland security as it supported deploying and redeploying four different units. It also took part in Ulchi Focus Lens and the 2d Infantry Division's Warfighter in Korea. It concluded training with a battalion EXEVAL in April.

**214th FA Brigade.** *The Leader Brigade* reinforced the 3d Infantry Division in OIF. It redeployed in July 2003 and completed a rigorous six-month regeneration. The brigade supported the ROTC Leader Development and Assessment Course (LDAC) at Fort Lewis, which trained and supported more than 4,500 ROTC cadets and 350 National Guard officer candidates.

**3-13 FA (MLRS)** *Red Dragons* trained in a December EXEVAL and quickly transitioned to execute the Fort Sill Convoy Live-Fire Range, training more than 1,000 National Guard and Reserve Soldiers for OIF II. As part of the Army's newest and most advanced M270A1-equipped MLRS battalion, both A/3-13 FA and B/3-13 FA deployed to OIF III this fall.

**2-4 FA (MLRS)** *Deep Attack* deployed to OIF in February 2003, supporting the 3d Infantry Division attack to Baghdad. It redeployed in July 2003 and provided timely, accurate fires for the 11th Marines at 29 Palms in March in the Desert Fire Exercise at the MCAGCC. The 30-day deployment allowed *Deep Attack* to train all METL tasks.

**1-14 FA (MLRS)** *Steel Warriors* deployed to OIF from March to July 2003, executing a variety of nonstandard missions. It displayed flexibility, excellence and the Brother Warrior spirit by evaluating both sister battalions in EXEVALs while simultaneously preparing for its own evaluation.

**19th Maintenance.** The battalion supported OIF by deploying three companies. After redeploying, the 19th continued to support III Corps Arty while conducting regeneration. It soon will deploy a fourth company to Iraq.

Battle-focused, flexible, III Corps Arty will execute all missions across the spectrum of operations. ***Phantom Thunder!***



Soldiers of 5-3 FA conduct urban operations training.

# Silhouettes of STEEL

## V Corps Artillery

**V** Corps Artillery is ready and relevant. During the past two years, V Corps Artillery, the *Victory Corps Artillery*, Schwetzingen, Germany, has served as the only forward deployed corps artillery. As the thunder behind the V (US) *Victory Corps*, it is a proud member of Freedom's Expeditionary Force, US Army Europe.

Preparations were ongoing to deploy to Southwest Asia as Operation Iraqi Freedom loomed on the horizon. The Soldiers of Headquarters and Headquarters Battery (HHB), V Corps Artillery, began deploying to the Central Command (CENTCOM) area of responsibility to train and prepare for possible hostilities with Iraq. The Soldiers and leaders of HHB, V Corps Artillery, worked tirelessly to create a Field Artillery support plan (FASP) that would meet the objectives of V Corps' Contingency Plan Cobra II.

The corps artillery deployed a robust package for the Combined Forces Land Component Command's (CFLCC's) exercise Lucky Warrior in October 2002 followed by the deployment of the Force FA (FFA) Headquarters and Fires and Effects Coordination Cell (FECC) in late November for CENTCOM's exercise Internal Look. Conducted in the Kuwaiti desert, these exercises were instrumental in honing the critical fire support synchronization skills that proved essential to V Corp's success during Operation Iraqi Freedom.

Throughout all phases of the operation (pre-war planning and training, hostilities, and post-hostility stability and support operations, called SOSO), V Corps Artillery units displayed tremendous flexibility and endurance in both the high operational tempo drive to Baghdad and SOSO's fluid environment that followed high-intensity combat operations.

During combat, V Corps Artillery units fired 414 ATACMS missiles, 857 MLRS rockets and more than 18,500 howitzer projectiles. The FECC conducted 309 targeting boards in support of the V Corps and I Marine Expeditionary Force (IMEF) offensive.

V Corps Artillery fired the first sense and

destroy armor munition (SADARM), ATACMS Block IA and ATACMS unitary rounds in combat with accuracy and effects never achieved before.

During hostilities, the corps artillery commanded and controlled three artillery brigades (41st, 17th and 214th FABs), consisting of 11 battalions and more than 5,000 Soldiers and 1,468 vehicles.

After major hostilities ended, V Corps Artillery pioneered the tactics and techniques for removing millions of pounds of captured enemy ammunition (CEA) from the battlefield as Task Force Bullet.

**41st FAB.** The *Railgunners* arrived in theater on 7 March 2003 and, within seven days, completed reception, staging, onward movement and integration (RSOI) process. On 20 March, approximately 122 Soldiers from HHB, 41st FAB, and more than 400 Soldiers from 1-27 FA, the *Gridsmashers*, opened the artillery phase of the war when they launched 22 ATACMS against Iraqi command and control nodes. Hours later, all three batteries from 1-27 FA executed a fire plan in support of IMEF shaping operations before the launch of ground operations.

On 21 March, the brigade conducted a 350-mile ground assault with the 101st Airborne Division as the corps general support reinforcing (GSR) brigade. Occupying Forward Area Rearm/Refuel Point (FARP) Shell with the 101st, the *Gridsmashers* delivered additional fires in support of the *Screaming Eagles* and the 11th Aviation Regiment. On 8 April 2003, 2-18 FA from the 212th FAB joined the brigade at Objective Bushmaster south of the Karbala Gap, firing several Block 1A missiles during the next several days. By the end of major combat operations, the 41st FAB had fired 194 ATACMS in support of V Corps and IMEF.

As major hostilities were ending, the Soldiers of the 41st FAB were given a new and exciting mission. As part of the overall scheme of operations for Phase IV of Operation Iraqi Freedom, V Corps assigned the brigade the mission of providing command and control for the move-

ment of captured enemy equipment (CEE) and CEA from multiple locations throughout the theater to centralized collection points. The brigade's Task Force Bullet coordinated the consolidation and destruction of more than 56 million pounds of captured Iraqi ammunition.

The brigade's mission continued to expand, and on 25 April 2003, V Corps assigned 1-27 FA the mission of setting up and running the V Corps Joint Visitor's Bureau (JVB). The JVB coordinated the arrival of, hosted and provided security escorts for more than 480 official visitors, including heads of state, members of the US Congress, the Chairman of the Joint Chiefs, the Secretary of Defense and the Secretary of State. It also conducted tours within the area of operations.

On 20 September 2003, the brigade established an Iraqi Civil Defense Corps Academy in support of the MultiNational Division Central South and began training the first of more than 850 local nationals to be integrated with Coalition Forces before transitioning into to a new Iraqi Army.

The 41st FAB redeployed to Germany on 6 March 2004 after successfully completing its mission in the CENTCOM area of operations.

**V Corps Artillery Headquarters.** The headquarters conducted a relief-in-place, culminating in a historic transfer of authority (TOA) from V Corps Artillery to III Corps Artillery on 1 February 2004, concluding a triumphant year in Operation Iraqi Freedom. V Corps Artillery units returned to Germany in February and March 2004.

Since that time, the V Corps Artillery has focused on reconstituting combat power and retraining personnel. The V Corps Artillery's focus now turns toward preparing for future missions with a series of joint exercises planned for the coming months.

Ready when V Corps needs a Victory—*Victory Thunder!*

Soldiers from 1-27 FA, the *Gridsmashers*, fire ATACMS during combat in March 2003.

# Silhouettes of STEEL

## XVIII Airborne Corps Artillery

The XVIII Airborne Corps Artillery at Fort Bragg, North Carolina continues its mission of providing cannon, rocket, missile and radar support to America's Contingency Corps, the XVIII Airborne Corps. 2003 and 2004 were busy years with all corps artillery units involved in the GWOT or homeland defense.

**XVIII Airborne Corps Artillery.** As 2003 began, the corps artillery fires and effects coordination cell (FECC) was deployed in support of OEF. Meanwhile, Fort Bragg focused on assuming responsibility for Operation Guardian Mariner II (OGM), which oversees security for US military shipping overseas. The corps artillery was instrumental in mobilizing the 92d Separate Infantry Brigade (SIB) from the Puerto Rico ARNG (PRARNG) with the mission of planning and executing OGM II.

In 2004, the XVIII Airborne Corps Artillery further honed its skills as a force FA (FFA) headquarters with an intensive Warfighter ramp-up exercise, controlling a theater-level counterfire fight as well as the fires of the 18th FAB (Airborne), 138th FAB (KYARNG), 169th FAB (COARNG), 103d FAB (RIARNG) and 113th FAB (NCARNG).

The corps artillery then deployed to Fort Bliss, Texas, and Yuma Proving Grounds, Arizona, for the Joint Air-Ground Center of Excellence (JAGCE) Proof of Principle virtual and live-fire exercise. In the exercise, the corps artillery's force FA headquarters commanded and controlled a corps-level counterfire fight over extended distances, culminating in the firing of a 17-target live schedule of fires with the 18th FAB, 75th FAB from Fort Sill, Oklahoma, and 196th FAB (TNARNG). Additionally, the 18th FAB live-fired rockets in support of the 229th Attack Aviation Regiment's live cross-FLOT attacks while the 196th FAB live-fired ATACMS Block II under the control of the corps FECC.

Immediately upon redeploying from Fort Bliss, the corps artillery participated in the XVIII Airborne Corps Warfighter. Under the control of the FFA Headquarters, the 18th, 113th, 138th and 169th FABs applied the lessons learned from the JAGCE with devastating effects on the enemy.

In late summer of 2004, Ulchi Focus Lens took center stage as the Airborne Corps Artillery participated in this virtual exercise with our Korean allies. The XVIII Airborne Corps FFA Headquarters delivered timely and overwhelming effects in the Korean peninsula counterfire fight.

Finally, the XVIII Airborne Corps Artillery closed out the year by preparing for its upcoming operational deployment to Southwest Asia with a mission-readiness exercise for OIF III.

**18th FA Brigade (Airborne).** The 1st



Soldiers of 3-321 FA secure a provincial reconstruction team in Afghanistan.

FAD (Airborne) deployed in February 2003 to support Coalition Force Land Component Command (CFLCC) operations and provide radar support to IMEF, tracking more than 1,800 rounds in combat operations. In March and April, 1-377 FA (Air Assault), 234th FAD and 3-27 FA (MLRS) deployed to Iraq for OIF.

Additionally, the High-Mobility Artillery Rocket System Task Force (the HIMARS Platoon, C/3-27 FA, and a command and control element from the 18th FAB) deployed in support of Joint Special Operating Forces (JSOF) in western Iraq.

While the bulk of the brigade was deployed, 1-321 FA (Airborne), already in Hungary, redeployed from its Training Task Force mission where it had helped prepare "Free Iraqis" to fight for the liberation of their country.

In September 2003, 3-321 FA reorganized into six infantry platoons, trained and certified on an infantry METL, and by November 2003, it deployed to Afghanistan to provide security to provincial reconstruction team (PRT) sites located throughout the country. The battalion returned to Fort Bragg safely in July after a successful mission.

The 1st FAD redeployed to Fort Bragg in June 2003, 3-27 FA redeployed in July, 1-377 FA redeployed in January 2004 and 234 FAD redeployed in March. With the majority of the brigade at home station, reconstitution training became the focus, including using JAGCE and the XVIII Corps Warfighter as integral training gates for reconstitution. During the JAGCE, the

brigade headquarters, 3-27 FA and 1-321 FA (-) deployed to Fort Bliss and Yuma Proving Ground. The exercise kicked off with an airborne assault by the brigade headquarters and 1-321 FA into Fort Bliss, dropping two M198 howitzers and 120 paratroopers.

Upon return to Fort Bragg, the brigade immediately occupied a field location to support the XVIII Airborne Corps Warfighter in May.

Concurrently in May, 1-321 FA conducted a two-gun airborne assault into Snow Ridge Drop Zone (DZ) at Fort Sill to kick-off the 212th FAB's joint close air support (JCAS) exercise Operation Joint Thunder with 155-mm fires from the DZ.

Support for the JSOF continued with the HIMARS Platoon deploying to Fort Chaffee, Arkansas, to refine TTPs for working with these agencies. 1-377 FA continues to provide superb support to the M777 lightweight 155-mm howitzer program, deploying Soldiers to 29 Palms, California, to test the system.

Army transformation efforts within the brigade included the deactivation of 1st FAD in May 04. 3-27 FA (MLRS) will become the first HIMARS battalion beginning this winter.

The officers, NCOs and Soldiers of the Dragonfire Artillery stand ready to execute missions in any theater of operations any time to defend our nation's interest at home or abroad—**Dragonfire Steel, Steel Rain, Warriors, Thunderbolts, Gunslingers, Airborne, All the Way!**

# Silhouettes of STEEL

## Field Artillery School

In the past two years, the FA Center and School have merged and the schoolhouse has revised or begun revising every officer, warrant officer and Soldier course taught at the Field Artillery School or FA Training Center. The purpose of it all—to make the FA Center and School better able to support Army transformation and the Field Artillery, Army, Marine Corps and America at war.

**Reorganization of FA School.** Because of resource limitations and the initiation of the Installation Management Activity (IMA), the FA Training Command and the Fort Sill installation staff merged. Most noticeable in the school reorganization is the merging of the Fire Support and Combined Arms Operations Department (FSCAOD), Gunnery Department and 30th FA Regiment into one headquarters. The 30th Regiment now provides the command and school staff structure for all the Soldiers and students assigned to the FA School.

A second result of this reorganization was reestablishing the Directorate of Training and Doctrine (DOTD), which has been merged with the functions of the post G3, and reestablishing the Quality Assurance Office. Also, the Joint and Combined Integration Directorate (JACI) was established to help the Chief of Field Artillery meet his joint fires and effects mission requirements in support of the contemporary operational environment (joint interdependence).

For more information on the FA Center and School reorganization, see the article "Transformation of the FA Center and School" in this edition.

**CounterStrike Task Force (CSTF).** The Office of the Deputy Commanding General/Assistant Commandant recently established the CSTF in support of the TRADOC Counter Rockets, Artillery and Mortars (C-RAM) effort to support our deployed forces and defeat the enemy indirect fire threat. The CSTF is the lead for several areas of this effort, to include: deny, sense, warn and attack. The CSTF also is very involved in integrating all efforts to ensure a holistic approach with a network-centric architecture to protect our forces and defeat the enemy. The task force is working with the Multinational Force I Effects headquarters led by BG Richard Formica, III Corps Arty, and a wide variety of military and civilian organizations in devising means to provide early warning of incoming rounds, improving and integrating multiple sensors and using lethal and nonlethal attack systems.

To contribute ideas or learn more about the task force, go to the secure website <https://counterstrike.army.smil.mil>. Some information also is available on the non-



Photo by Fred W. Baker III

Soldiers learn to patrol as part of the new Warrior Ethos program of instruction (POI) during basic combat training (BCT) at the Field Artillery Training Center.

secure website <http://sill-www.army.mil/> counterstrike. Contact either COL(P) Mark Graham at 580-442-6604 or LTC Mike Borg at 580-442-5830 for additional information.

**FA Training Center.** The FATC helped develop the Warrior Ethos training model currently in use by training centers across TRADOC. This program of instruction (POI) is for both basic combat training (BCT) and one-station unit training (OSUT).

Every initial entry training (IET) course at the FATC now has more realistic and demanding training in urban operations, tactical road marches, check point and security operations and more. Also, III Corps Artillery veterans of OEF or OIF speak to FATC Soldiers, reinforcing the training being conducted.

These and other improvements make the Soldiers trained by the FATC more capable of meeting the challenges of their first unit assignments.

**NCO Academy.** The FA NCOA is committed to training competent, disciplined, physically fit and highly motivated NCOs who have the Warrior Spirit and are firmly grounded in the seven core Army values. The NCOA has increased the relevancy in training by adding lessons learned from OIF and OEF into its courses.

The Primary Leadership Development Course (PLDC) annually trains approximately 1,000 students. The Academy has incorporated training on the contemporary operational environment, such as those in urban areas, for improvised explosive devices (IEDs), in convoys, for air casualty evacuation and for clearing buildings into PLDC FTXs and STX scenarios.

NCOA trains all FA MOS in the basic and advanced NCO courses and the FA distance-learning portion of the NCO educational system (NCOES)—2,483 FA stu-

dents per year. The Academy also teaches the Battle Staff NCO Course and the First Sergeant's Course via distributive learning.

**30th FA Regiment.** The 30th Regiment has three battalions and the International Student Division (ISD) along with a staff to conduct all resident instruction in the FA School. Approximately 8,900 students received training from the 30th Regiment during FY04.

The regiment conducts IET and advanced course training for all FA officers and warrant officers as well as the advanced individual training (AIT) and the AIT portion of OSUT for nine 13 Series MOS and OSUT for two 13 Series MOS.

Initiatives ongoing are revisions to the officer basic and advanced courses POIs, emphasizing Warrior Ethos and lessons learned from OIF and OEF, and the addition of training on Force XXI Battle Command Brigade and Below (FBCB<sup>2</sup>) in both the officer and NCO basic courses and a Stryker Transition Course.

**FA Marine Corps Detachment.** The Marine Corps Det remains an active participant in training Marine and Army artillermen. More than 2,000 Marines are trained annually at Fort Sill. This environment allows each service to benefit from joint functions, such as developing and conducting FA training and developing FA doctrine and material.

The Marine Corps will begin fielding the new jointly developed M777 lightweight 155-mm howitzer during the Second Quarter of FY05 and buying HIMARS for one battalion in the 11th Marines and one in the 14th Marines beginning in FY08.

Ready, relevant and joint Army and Marine Field Artillerymen are our present and future—the FA School makes it happen.

# Silhouettes of STEEL

## 1st Armored Division Artillery

The 1st Armored Division Artillery, Germany, completed a challenging deployment to Iraq throughout 2003 and half of 2004. Preparation and training for this deployment began in November 2002. The Div Arty arrived in Kuwait in early May 2003 and immediately started preparing equipment and forces for the 400-kilometer road march north to Baghdad. 2-3 FA and 4-27 FA were attached to the 1st and 2d Brigades, respectively, and performed missions in the city of Baghdad.

The *Iron Steel* Div Arty began arriving in Baghdad in late May with HHC Div Arty and 1-94 FA occupying the Baghdad International Airport (BIAP). The Div Arty had force protection and administrative responsibility for the entire airport complex. To aid the Div Arty, the 1st Division attached 1-4 AD to the *Iron Steel* Div Arty.

The Soldiers of 1-94 FA spearheaded the success of TF Bullet in hauling and aiding in the destruction of hundreds of tons of captured enemy ammunition (CEA). In addition, 1-94 FA established the BIAP Mayor Cell, monitoring and controlling the quality of life and mission-essential needs of all BIAP residents. In response to the mounting enemy mortar and rocket fires into the BIAP, the Div Arty estab-

lished Fire Base All-American in support of counterfire operations and reduced the number of rocket/mortar attacks significantly.

In January 2004, the Div Arty assumed responsibility for combat operations in the Al-Rasheed District of Baghdad, forming the Div Arty Combat Team (DCT) as a maneuver brigade.

1-1 Cav and 2-504 Parachute Infantry Regiment (PIR) became the

newest members of the DCT. The quick-strike and armored capabilities of 1-1 Cav and the paratrooper ethos of 2-504 PIR added additional lethal combat power to the DCT. With its full spectrum of combat units and support elements, the DCT continually took the fight to the enemy, making Al-Rasheed one of the safest districts



1-94 FA Soldiers befriend local Iraqis during a patrol in the Al Rashid District, Iraq.

in Baghdad. The DCT transferred authority to the 1st Cav Division on 6 April 2004. The DCT relocated to BIAP and became the command and control element for the Division QRF on BIAP until redeploying to Germany in July.

We provide *Iron Steel* for America's *Tank Division*!

## 1st Cavalry Division Artillery

The 1st Cavalry Div Arty Red Team from Fort Hood, Texas, has faced new challenges and exciting changes. The Div Arty Headquarters converted into the 5th BCT Headquarters in 2004 and deployed to Baghdad, Iraq, where it is conducting full-spectrum operations in support of OIF II.

1-82 FA deployed to Fort Knox, Kentucky, in support of mounted maneuver training in early 2003. The *Dragons* deployed to the NTC in October, preparing for deployment to Iraq in April 2004. 1-82 FA's Soldiers are versatile and courageous in Iraq while supporting the 1st BCT with artillery fires and maneuver combat operations and completing more than one million dollars' worth of essential service projects in support of OIF II.

The *Steel Dragons* of 2-82 FA deployed to Montana in August 2003 to help extinguish the nation's largest forest fire. In March 2004, it reconfigured into a maneuver task force and deployed with the 3d Brigade to Iraq for OIF II. 2-82 FA has conducted more than

2,600 security escort missions and driven its gun trucks more than 500,000 miles in combat operations in support of the Coalition Provisional Authority and the US Embassy.

The *Red Dragons* of 3-82 FA prepared for combat operations in June 2003 with an intense five-week train-up at the NTC and then were attached to the 2d BCT and began to train and reorganize for stability and support operations (SOSO). After arriving in Iraq for OIF II, the battalion conducted more than 3,500 combat patrols and missions while maintaining security for high-value sites. The *Red Dragons* also excelled at civil military operations (CMO), completing nearly 200 projects valued at more than ten million dollars.

The *First Strike* Battalion, 1-21 FA, executed two rotations to the NTC in 2003. The battalion then transitioned to a motorized infantry battalion while simultaneously fielding new M270A1 rocket launchers. In March 2004, 1-21 FA deployed to Iraq with the 5th BCT in support of OIF II and has executed more than 2,000 combat missions and many CMO projects in the Al Saidiyah neighborhood of Baghdad.

The Div Arty remains the *First Team, Red Team* for the 1st Cav Division, our Army and our nation.



A 1st Cav Div Arty Soldier provides security in Iraq.

# Silhouettes of STEEL

## 1st Infantry Division (Mechanized) Artillery

The Drumfire 1st Infantry Division (Mechanized) Artillery out of Germany—the Redlegs of the *Big Red One*—are conducting full-spectrum operations in support of the Global War on Terrorism In Iraq. Drumfire Soldiers are performing a myriad of tasks simultaneously within the Sunni-Triangle. They are serving as force FA headquarters, providing fires to the division, conducting counterfire operations across the division area of operations (AO), providing command and control of captured enemy ammunition (CEA) operations and executing AO responsibilities as maneuver units. Drumfire Soldiers are answering our nation's call. *Duty First!*

1-5 FA *Hamilton's Own* is task organized under the 1st BCT as part of I MEF in the vicinity of Fallujah. The battalion is providing the 1st Division joint fires and operating as a maneuver task force.



Soldiers of B/1-6 FA post a sign closing the Mahdi Militia Political Office after bulldozing it with an M1A1 Abrams tank during an uprising in Baqubah, Iraq.

1-6 FA *The Centaurs* transformed from a direct support artillery battalion to a maneuver task force and currently is conducting full-spectrum operations in Baqubah. Task Force 1-6 is a true combined arms outfit as a Field Artillery and maneuver headquarters. Insurgents have tested the task force many times and met with failure. *The Centaurs*—in partnership with the Iraqi Security Forces—continue

forward operating base (FOB) force protection duties.

The 1st Infantry Division Artillery remains engaged in both combat and stability and support operations in Iraq, helping to stabilize a free Iraq and fighting the Global War on Terrorism.

The *Big Red One*'s versatile, flexible and capable Redlegs are getting the job done—*Drumfire!*

## 2d Infantry Division Artillery

The 2d Infantry Div Arty continues to synchronize combined and joint fires, holding the line in defense of the Korean peninsula. The relentless OPTEMPO year began with the Gateway Combined/Joint Counterfire Exercise.

A significant training event this year was the 2d ID's counterfire seminar. Approx-

mately 250 multi-service and Korean leaders identified issues and worked together to devise ways to execute counterfire more efficiently.

A major milestone, first-ever exercise was Blue Warrior. It allowed the Div Arty's Joint Fires Cell to command and control real-world sensors, artillery, Army aviation and air sorties in designated target boxes and simultaneously address Army air-space command and control procedures. The Div Arty supported many division Warpath CPXs, brigade and battalion ARTEPs and the XVIII Airborne Corps Warfighter. The Div Arty also participated in many interoperability training exercises with our Korean allies, such as Foal Eagle and Ulchi Focus Lens.

Battalion, supports the 1st BCT (*Iron*) and executed theater- and division-level CPXs, gunnery and AFATDS NET. It also provided ARTEP support and fielded the Knight and BFIST vehicles.

2-17 FA, the *Steel* Battalion, departed Korea after nine years as part of the Div Arty. It left for OIF II with disciplined, physically and mentally tough troops who were proficient in their warrior tasks as part of the 2d BCT (*Strike Force*).

6-37 FA, the *Rocket* Battalion, demonstrated year-round proficiency in launcher and FDC operations as well as ammunition, maintenance and supply operations as it completed many combined live-fire and interoperability exercises with its newly activated Korean MLRS counterpart.

1-38 FA, the *Steel Behind the Rock* Battalion, maintained the theater's critical Q-36 and Q-37 radars. It served as the "pusher unit" for the 2d BCT to deploy to Iraq, loading over 1,200 pieces of equipment at the railhead, stowing over 1,600 vehicles and containers onto ships and manifesting 4,400 *Strike Force* Soldiers.

The 2d Infantry Div Arty is trained and ready to fight and win decisively if deterrence fails on the Korean peninsula. *Warrior Thunder! Second to None!*



A 2-17 FA Paladin is loaded at the Port of Pusan 21 July 2004 for deployment in support of OIF II.

# Silhouettes of STEEL

## 3d Infantry Division (Mechanized) Artillery

The 3d Infantry Division (Mechanized) Fires Brigade, Fort Stewart and Benning, Georgia, completed OIF reconstitution during FY04. During the year following redeployment from OIF, the division underwent a major transformation. The division changed its task organization to a modular, brigade-based system. The changes have increased the Div Arty's steel on target with coordinated effects, flexibility and lethality.

The Fires Brigade Headquarters is responsible for setting and enforcing fire support standards across the division and for radar operations. It is also at the forefront of the division's effects-based planning, combining lethal and nonlethal effects.

1-39 FA (MLRS), *Speed in Action*, continues to adjust after its reorganization. It sacrificed many to stand up the division's newest Fires Battalion with the 4th BCT, 1-76 FA. 1-39 FA will field the M270A1 in FY05, bringing the latest MLRS firepower



A/1-41 FA fires in support of 1st Brigade combat operations at the National Training Center in June 2004.

to the division's fight. 1-39 FA is training a battery to send to OIF III to provide security for the division main CP.

1-9 FA, the *Battlekings*; 1-10 FA, *Rock's Support*; 1-41 FA, *Glory's Guns*; and 1-76 FA, *Spirit of '76*; were task organized within their respective brigades. In addition to the two-battery, eight-Paladin (2 x

8) battalion reorganization and its organic forward support company (FSC), each Fires Battalion added a Q-36 and Q-37 and an organic Met section. The supplemental Met and counterfire acquisition allows each brigade's indirect fire assets to fire accurate, predicted first round fire-for-effect missions.

The reorganization gives brigade commanders the FA flexibility to support all units on today's nonlinear battlefield.

Also, company FISTers are now organic to maneuver battalions. The division continues to progress toward 100 percent qualified Universal Observers via the Air Force's Joint Firepower Control Course (JFCC).

The 3d ID has the knowledge and fire-power to succeed in *any* environment.

As the division prepares for OIF III, brigade rotations to the JRTC and a division mission rehearsal exercise will ensure *Marne Thunder* Soldiers are ready and able to accomplish every mission. **Marne Thunder!**

## 4th Infantry Division (Mechanized) Artillery

The *Iron Gunners* of the 4th Infantry Division (Mechanized) Artillery, Fort Hood, Texas, wrote a new chapter in their glorious history in 2003, deploying for combat for the first time since the Vietnam War. In January, under orders to deploy through Turkey and invade Iraq from the north, the *Iron Gunners* loaded equipment onto ships in less than 30 days. As the situation shifted, the *Iron Gunners* rapidly adjusted and deployed to Kuwait for a southern approach into Iraq, completing reception, staging, onward movement and integration (RSOI) in less than two weeks, and attacked 500 miles to the north. TF Ironhorse's battlespace in north central Iraq was larger than West Virginia, spanning three provinces with more than 3.5 million Iraqis.

TF Gunner, comprised of 2-20 FA, *Deep Strike*, and HHB Div Arty, *Hard Rock*, conducted a tactical road march into central Iraq and secured the Al Taji Military Complex. TF Gunner developed plans to manage captured enemy ammunition (CEA) for TF Ironhorse, netting 29 million pounds of CEA and 1,200 pieces of captured equipment. In November 2003, *Deep Strike* fired three ATACMS unitary missiles. Upon redeployment, *Deep Strike* planned and executed port and rail op-

erations for the division.

The *Straight Arrows* of 4-42 FA occupied Forward Operating Base (FOB) Arrow in Ad Dawr and conducted combat and stability and support operations (SOSO) in an area in excess of 900 square kilometers. They fired more than 1,500 counterfire and harassing

and interdiction rounds DS to the 1st BCT. In December 2003, the *Straight Arrows* provided the outer cordon for Operation Red Dawn—the capture of Saddam Hussein.

3-16 FA, *Rolling Thunder*, conducted operations from Baqubah to Baghdad and fired more than 2,100 rounds in support of the 2d BCT. In addition to combat operations, *Rolling Thunder* conducted many SOSO missions, forming governing councils, improving the infrastructure, and building and renovating schools.



2-20 FA fires an ATACMs Block II unitary missile in support of combat operations in Iraq.

The *Pacesetters* of 3-29 FA deployed to Iraq with the 3d BCT to an area of more than 750 square kilometers centered on Ad Dulu'iyah in the volatile Sunni Triangle north of Baghdad. The *Pacesetters* fired more than 4,500 rounds, capturing 25 battalion targets and many caches of enemy equipment.

The *Iron Gunners* will establish the Army's first Fires Brigade on 16 December.

Combat tested and ready to provide fires to the world's most lethal and modern division—**Iron Gunners**, Sir!

# Silhouettes of STEEL

## 10th Mountain Division (Light Infantry) Artillery

The 10th Mountain Div Arty, Fort Drum, New York, continued its support of the Global War on Terrorism (GWOT) in the past two years. After completing a division Warfighter in March 2003, Div Arty units deployed in OIF and OEF. *Mountain Thunder* Soldiers have helped establish the government in Kirkuk, and the perimeter security of Bagram Airfield while providing fire support to 10th Division units. The division FSE's role in OEF IV targeting has become the standard for targeting in OEF.

Before the Div Arty inactivated in August, 4-25 FA was activated as the Fires Battalion in the 3d BCT.

The *Allons* Battalion, 2-15 FAR, served in combat with the 173d Airborne Brigade in northern Iraq, a first since the Vietnam War, conducting stability and support operations from March 2003 to February 2004.

Elements of the battalion served vital roles in securing and rebuilding northern Iraq. 2-15 FAR Soldiers not deployed



Soldiers of the HHH Div Arty Metro section prepare to air assault their shelter to a firebase in Afghanistan.

conducted training for the USMA cadets during the summer of 2003. After consolidating and recovering, 2-15 FAR again deployed to support OIF and is in Iraq with the 2d Brigade.

The *Centaurs* of 3-6 FA deployed in support of OEF IV in July 2003, and one battalion FSE deployed in support of OIF. 3-6 FA conducted combat operations

across Afghanistan and Iraq in support of maneuver elements, providing fire support in some of the most restrictive, rugged terrain ever encountered by US forces. It manned both 120-mm mortars and 105-mm howitzers and operated out of 10 firebases. 3-6 FA became Task Force Centaur and was responsible for the second largest city in Afghanistan and the northern Kandahar Province, securing 25,000 square kilometers of territory in Afghanistan.

E/7 FA (155-mm, GS) conducted NTC rotation 03-04 in January 2003. In September 2003, it deployed to Afghanistan as the Perimeter Security Company for Bagram Airfield. After returning from OEF, the

unit began transforming into an M119A2 battery to become B/4-25 FA.

The 10th TAD deployed radar sections in support of OIF and OEF. The TAD supported the Rangers in Iraq and CJTF-180 in Afghanistan.

Although the Div Arty is gone, the legacy will live on in the Redlegs of the 10th Division's *Mountain Thunder*!

## 25th Infantry Division (Light) Artillery

The 25th Div Arty, *Tropic Thunder*, Schofield Barracks, HI, has had a challenging year. It conducted many training events, including a division Warfighter and LFXs at Pohakuloa Training Area, culminating in train-ups to support deployments for OIF and OEF.

In February, the Div Arty established itself as a maneuver brigade headquar-

ters with three infantry battalions and eight provincial reconstruction teams (PRTs) to cover 16 provinces in one of the most volatile regions of Afghanistan. In June, the unit was redesignated Combined Task Force (CTF) Thunder after completing a relief-in-place with the 6th Marine Regiment. CTF Thunder will redeploy in spring 2005.

Fort Benning, GA. In March, the battery began supporting units throughout Afghanistan: mortar fires, patrols in the Kandahar Province, village assessments and vehicle checkpoints. In August, the *Big Guns* received their M198 howitzers and began providing fires along the Afghanistan-Pakistan border.

2-11 FAR is deployed in OIF II, augmented by two Q-37 radars and a Q-36 section. The *On Time* battalion is task organized to the 2d BCT and provides DS fires and conducts stability and support operations, including establishing Iraqi government institutions and security forces and laying the groundwork for successful national elections. 2-11 FAR has fired 4,000 rounds in support of maneuver as well as base defense. It has completed 220 civil military projects for more than five million dollars. When the battalion redeploys, it will become part of the Stryker Brigade.

The Div Arty's deployments in support of the Global War on Terrorism mark a historical benchmark in diversity and accomplishment in full-spectrum operations and command and control of maneuver formations. The 25th Div Arty has upheld the proud heritage of the King of Battle. *Tropic Thunder*!



Redlegs from 2-11 FAR conduct a raid in the village of Hiteen outside the city of Kirkuk. During the raid, they captured five of the 2d BCT's top 10 high-value targets (HVTs).

3-7 FA recently deployed in support of OEF V. The first Steel Soldiers set foot in Afghanistan in March 2004. In addition to providing fire support, TF Steel conducts civil military operations in the Kandahar Province. Soldiers of TF Steel continue with the proverbial "fire in their eye" attitude. *Never Broken!*

F/7 FA began the year by learning the skills of MOS 11C Mortarmen on the M120 mortar at

# Silhouettes of STEEL

## 28th Infantry Division (Mechanized) Artillery

The 28th Infantry Division (Mechanized) Artillery (Div Arty), Pennsylvania ARNG, has seen modernization and transformation and varied missions since the last Red Book update in November-December of 2002. The Div Arty headquarters deployed by almost one-third to Kosovo as part of the Headquarters for the MultiNational Brigade East in the first National Guard-led Kosovo Force (KFOR) rotation.

F/109 FA (Target Acquisition) also supported two missions for the Program Manager (PM) of Firefinder at Aberdeen Proving Ground, Maryland. The PM missions were to validate new soft-

ware developed in response to unique challenges posed in Operation Iraqi Freedom.

In addition, all elements of the Div Arty manned state active duty missions in support of the war on terrorism, performing both presence patrols and securing the state's nuclear power plants.



A 1-107 FA Paladin section sends a round down range at Fort Pickett, Virginia, during the battalion's training assessment model (TAM) evaluation in AT-03.

D/229 FA redeployed to Pennsylvania from its Operation Enduring Freedom mission in Europe as part of Task Force Keystone in February 2003. The unit currently is looking ahead to Paladin new equipment training (NET) in the next training year.

In December 2003, the 1-107 FA mobi-

lized its three batteries to perform a Military Police mission in support of Operation Iraqi Freedom, becoming one of the first FA battalions to assume this challenging mission—along with 1-109 FA, which mobilized two batteries. In May 2004 1-109 FA lost the first Soldier killed in action in the 28th Infantry Division since World War II: Specialist Sherwood Baker. Unfortunately, 1-107 FA also lost two Soldiers killed in action during an improvised explosive device (IED) attack in May of this year: Sergeant Carl Curran and Specialist Mark Kasecky.

Last fall, 1-108 FA began transforming into a Stryker brigade MTOE with M198

howitzers. The battalion conducted NET for the howitzers and other equipment.

In September, 1-108 FA conducted an AFATDS NET with other Div Arty elements. The NET is part of a larger initiative to modernize and accelerate AFATDS fielding throughout the 28th Div Arty—*Charged to Excellence!*

## 29th Infantry Division (Light) Artillery

The 29th Infantry Division (Light) Artillery, *Militia Thunder*, Virginia Army National Guard, is headquartered in Sandston, Virginia, and has units located in three states: 1-246 FA, E/111 FA and the 129th FA Detachment in Virginia; 2-110 FA in Maryland; and 1-101 FA in Massachusetts.

Every unit within the 29th Division Artillery has deployed in support of Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF) and Operation Noble Eagle in the past 18 months.

Redlegs of 2-110 FA, 1-246 FA, HHB Division Artillery and E/111 FA were among the first assigned Operation Noble Eagle force protection missions at Forts Myer and Belvoir, Virginia; Fort Meade and Aberdeen Proving Grounds, Maryland; and Fort McNair, Washington, DC. In addition, they protected the Pentagon and many airports on the eastern seaboard. Upon demobilization of the initial 29th Division Artillery elements, 1-101 FA was tasked to provide fire support and target acquisition support to the 42d Division for deployment to OIF as well as to provide M102 howitzer sections to Fort Sill, Oklahoma, for school training support.

129 FA Detachment is preparing to deploy in support of OIF. Additionally, the

29th Division Artillery has provided Soldiers to train the Afghan Army and support the Guantanamo Bay mission in Cuba this past year.

During this time of mobilizations, the training tempo has remained high with participation in the 29th Infantry Division Warfighter Exercise as well as providing higher command support for the 28th Infantry Division's Warfighter Exercise.

2-110 FA and 1-246 FA conducted reintegration training before being released from active duty to hone artillery skills as they resumed their direct support missions to the 29th Infantry Division. Equipment upgrades to the units continued during deployments, to include the fielding of gun-laying and positioning system (GLPS), single-channel ground and airborne radio system (SINC-GARS), and initial fire support automation system (IFSAS) version upgrades.

The M102 howitzers of the 29th Division Artillery remain ready to fire. *Militia Thunder!*



29th Div Arty Redlegs conduct air mobile operations at Fort Drum, New York.

# Silhouettes of STEEL

## 34th Infantry Division (Mechanized) Artillery

The 34th Div Arty (MN-ARNG and IAARNG) demonstrated its readiness in TY04, deploying Soldiers for Stabilization Force 14 (SFOR-14), Kosovo Peacekeeping Force 5B (KFOR-5B), USAFE II, OIF II and OEF III. One unit is now on alert for OIF III.

1-194 FA, DS to 2d Brigade, is the only Div Arty FA unit to perform AT while conducting its wartime mission. The 194th mobilized for one year in September 2002 to support Operation Noble Eagle II, a homeland security mission. Its focus was homeland security stability and support operations (SOSO); however, it also trained on FA Table VI/VII tasks during the year. 24 months had passed since the unit last fired its howitzers. The 194th conducted AT at Camp Guernsey, WY, achieving Table XV with assistance and an EXEVAL from the Div Arty headquarters. On reaching that level, it delivered more than 3,000 rounds down range. 1-194 FA has 74 personnel and equipment supporting other operations,



An E/151 FA Q-37 Firefinder radar overlooks Baqubah, Iraq.

including OIF, OEF III and KFOR.

1-125 FA, DS to 1st Brigade, and 1-151 FA, GS, did not conduct AT due to its deployment to support the European Command (EUCOM). The deployment provided force protection and security at DoD facilities in England, Belgium, Germany, Italy and Turkey. 1-125 FA will conduct artillery live fire during the 4th

Quarter of TY04 and began fielding the gun-laying and positioning system (GLPS) and initial fire support automation system (IFSAS) V-7 software in September.

1-151 FA, a corps asset, planned to go to WY for its AT, but an alert order in May changed its focus for the remainder of TY04. It will supply two security companies and a support cell for OIF III, if mobilized. Its training changed to that of a security company. 1-151 suspended all FA table tasks and began an aggressive SOSO lanes package for its AT cycle.

E/151 FA (TA) deployed for OIF II, providing radar coverage for multiple units, including elements of the 1st ID, 1st Cav, 1st AD, 2d

ID, 4th ID, 25th ID and I MEF.

While serving at Camp Bondsteel, Kosovo, HHB 34th Div Arty, donated humanitarian aid and helped repair the Ramadan Rexhepi School, including the removal of land mines.

The 34th Red Bull Div Arty stands ready and proud to be a partner in today's Army. *Attack, Attack, Attack!*

## 35th Infantry Division (Mechanized) Artillery

The 35th Div Arty Redlegs, Kansas Army National Guard (ARNG), Deep Steel, met the challenge of force modernization and forward deployments while participating in corps and division Warfighter exercises. The year also brought a change of command and new leadership focused on Soldier readiness and a can-do attitude.

2-122 FA, Illinois ARNG, showed its flexibility by transitioning Soldiers into

two provisional military police companies and deploying them to support Operation Iraqi Freedom (OIF) II. Members not deployed participated in a joint training exercise with 1-16 FA at Fort Riley, KS. Soldiers engaged in rigorous lane training, including cross training on the M109A5.

1-161 FA, Kansas ARNG, continued to support Operation Enduring Freedom (OEF) and Armored Falcon (Kansas) with 73 Soldiers. The battalion went to Fort

Riley for AT and engaged Soldiers in move, shoot, and survive lanes focused on section- and platoon-level skills. 1-161 FA also had a maintenance inspection at AT. It finished single-channel ground and airborne radio system (SINCGARS) fielding and advanced FA tactically data system (AFATDS) training.

E/161 FA (TA), Kansas ARNG, deployed one Q-36 Firefinder radar and two crews to support OIF II. The unit supported many Firefinder missions during the past year for both the 35th Div Arty and the 130th FA Brigade. In addition, the TA Battery supported the 169th FA Brigade's MLRS fielding at Fort Carson, Colorado. The remainder of the unit is preparing to deploy to support OIF III.

HHB, Div Arty Soldiers returned from their Stabilization Force 13 (SFOR-13) mission in Kosovo. In conjunction, the battery supported the deployments of Div Arty subordinate units. Members trained on AFATDS and command and control personal computers (C<sup>2</sup>PC) to better support the I Corps (Cascade Peak) and 35th Division Warfighters.

35th Div Arty is committed to preparing Soldiers and leaders to meet the FA challenges in the present and future defense of our nation. *WETSU!*



C/1-161 FA conducts a live-fire exercise during annual training at Fort Riley, Kansas.

# Silhouettes of STEEL

## 36th Infantry Division (Mechanized) Artillery

This has been a historic and exciting year for the Texas Artillery. On 1 May 2004, the 49th Armored Division, Texas ARNG, was officially reflagged as the historic 36th Infantry Division. A reflagging ceremony was held on 17 July 2004 in Austin. The 36th Infantry Division Artillery continues its fast pace in support of state and Federal missions.

1-133 FA had a busy and challenging year. The battalion formed, trained and deployed two provisional Military Police (MP) companies. All had to become branch- and MOS-qualified as MPs. Many of the remaining Soldiers have deployed to OIF or OEF as part of other units. The battalion also supported the Tiger Balm Exercise with the Singaporean Army and exchanged an artillery platoon with the Chilean Army.

2-131 FA (MLRS), the Army's only AC/RC dual-mission battalion, supports the 1st Cavalry, 3d Infantry, 4th Infantry and the 36th Infantry Divisions. Battery B won the prestigious 2003 Alexander Hamilton Best Battery Award and best unit in TXARNG. The battery returned from Iraq in March with the first TXARNG Soldier awarded the Purple Heart since WWII.

The same month, 2-131 FA deployed A Battery (TA) to Iraq, testing the new light-



Soldiers of 1-133 FA from the 36th Div Arty train with Chilean soldiers from the 5th Artillery Group in Antofagasta, Chile, in November 2003.

weight countermortar radar (LCMR) while deployed. Training intensified with M270A1 launcher NET for C Battery earlier in the year. D Battery is continuing to build its strength. Also, Soldiers from HHS deployed to Afghanistan and Iraq in support of other units.

4-133 FA has been honing its FA skills after a year supporting Operation Noble Eagle II. During AT 2004, the battalion conducted an LFX with 1-133 FA at Fort

Hood. It also hosted a Chilean FA platoon as part of the Small Unit Familiarization Program.

3-133 FA was mobilized as part of the 36th Division's 56th BCT in August 2004 to begin training for a deployment to Iraq for OIF III.

The 36th Div Arty has proven it can accomplish missions in support of Texas and the US, carrying on the proud traditions of the *T Patchers—Balls of Fire!*

## 38th Infantry Division (Mechanized) Artillery

The 38th Div Arty, *Cyclone's Thunder*, INARNG, headquartered in Indianapolis, had a busy year. We supported Operation Noble Eagle, OIF and Stabilization Force 15 (SFOR-15) and others. We conducted recruiting events and attended the Leadership Development and Education Sustained Pace in Monterey, CA, to prepare for SFOR-15.

The Div Arty supported Operation LifeVest, September 2003, as the state had substantial flooding. In March and April, Soldiers attended subject matter expert (SME) training on AFATDS at Fort Sill, OK. Headquarters fielded the initial fire support automation system (IFSAS)/battery computer system (BCS)/light-weight forward-entry device (LFED) V-7.0 upgrade in July.

2-150 FA, headquartered in Bloomington, supports Operation Noble Eagle IV. Soldiers not mobilized attended AT at Camp Grayling, MI, in June, completing FAT 8 and convoy lanes training.

3-139 FA, headquartered in Crawfordsville, received the gun-laying and positioning system (GLPS) in November 2003 and, in May, conducted its first LFX in almost two years. In June it conducted AT at Camp Grayling and conducted LFXs, including LFXs for convoys.

1-119 FA headquartered in Lansing, MI, activated 222 combat arms Soldiers in December 2003 and deployed them to Guantanamo Bay, Cuba, where they work in detention facilities. 119th personnel also deployed to the Sinai and Iraq. The remaining Soldiers conducted AT at Camp Grayling. In one week, new crews conducted all section certifications, allowing the composite battery to conduct live fires. The battalion's higher headquarters changed from the 38th Div Arty to the 42d

Div Arty from Massachusetts.

1-163 FA, headquartered in Evansville, deployed FISTS in March 2003 and the radar section in February to support OIF. In July, embedded training teams deployed to Afghanistan to support OEF.

In June, E/139 FA (TA) conducted AT at Camp Grayling, completing a convoy LFX. It is preparing to deploy, to support the Global War on Terrorism.

Prepared as FA in support of the Army and our nation at war—*Cyclone's Thunder!*



Redlegs from 2-150 FA react during convoy lanes training at Camp Grayling, Michigan.

# Silhouettes of STEEL

## 40th Infantry Division (Mechanized) Artillery

The Sunburst Division Artillery of the California ARNG is actively supporting the Global War on Terrorism (GWOT) while simultaneously maintaining section- and battery-level proficiencies.

In November 2002, 1-144 FA mobilized in support of Operation Armored Falcon to provide security for nine active Air Force and Air Reserve Bases throughout California. Currently, more than 300 of these fine California Redlegs are still answering their nation's call by supporting our Brothers in Blue. Also, Soldiers from 1-143 FA activated to protect the symbolic Golden Gate Bridge in San Francisco and other critical installations of the California Army National Guard.

Concurrently, the 40th Division Artillery maintained warfighting proficiency by participating in Yama Sakura with the Japanese Defense Forces and the Cobra Gold FTX/CPX with I Corps and the Royal Thai Army. In addition, the Div Arty augmented the 40th Infantry Division Staff that served as the high command for the 49th Armored Division's Warfighter.



Soldiers of the 40th Infantry Division Artillery are taught security force TTPs for detaining a suspect on 2 April 2003 at Travis Air Force Base, California.

Annual Training 2003. After hosting soldiers from the German's 75th Panzer-artillerie Battalion at Camp Roberts, California, 501-143 FA Soldiers traveled to Germany in September 2003 to train with the German Artillery.

After having served in Bosnia and Kosovo, F/144 TAB once again deployed, this time to Afghanistan in support of Operation Enduring Freedom. F/144 TAB is routinely providing counter-fire acquisitions for Combined Joint Task Force-180 targeting. By all reports, F/144 TAB is well engaged, "taking care of business." Additionally, fire supporters from 1-143 FA mobilized in sup-

port of *The Stonewall Brigade*, the 116th Infantry Regiment, for service in Operation Enduring Freedom.

The remainder of the Soldiers in the *Sunburst Artillery* are actively preparing to meet the challenges of future deployments in support of GWOT—both in the US and around the world.

## 42d Infantry Division (Mechanized) Artillery

The Redlegs of the 42d Rainbow Infantry Division (Mechanized) of the Massachusetts, New York, New Jersey and Michigan ARNG, with its headquarters in Massachusetts, have been very active in the Global War on Terrorism (GWOT), mobilizing elements in support of OIF and Operation Noble Eagle in Bosnia.

In December 2003, 1-119 FA (155-mm self-propelled howitzers), headquartered in Lansing, Michigan, activated 222 combat arms Soldiers, trained them as Military Policemen (MPs) and deployed them to Guantanamo Bay, Cuba, where they

currently are working in detention facilities. The 119th also has personnel deployed to the Sinai and Iraq. With the remaining Soldiers, the 119th conducted very successful annual training at Camp Grayling, Michigan.

1-258 FA (155-mm self-propelled howitzers) out of Jamaica, New York, actively has been supporting state security missions in New York City at various subway and mass transit locations and had one firing battery participate as the OPFOR at the NTC. In December 2003, 1-258 FA mobilized and trained two firing batteries as provisional MP companies. The com-

panies currently are supporting Operation Iraqi Freedom.

3-112 FA (155-mm self-propelled howitzers), headquartered in Morristown, New Jersey, started the year supporting Operation Noble Eagle. In January 2004, the battalion deployed 182 Soldiers from the B Battery and 5-117 Cav (in lieu of MPs) to support OIF II. The battalion also provided 23 Soldiers for the 50th Brigade's deployment to Guantanamo Bay in May. 3-112 FA conducted a very successful annual training at Fort Dix, New Jersey.

AT 2004 focused on preparing Batteries A and C for their provisional MP company deployments in October. Additionally, AT prepared the stay-behind force for homeland security contingencies. The stay-behinds also fielded the palletized loading system (PLS).

In March 2004, the 42d Div Arty headquarters shifted from preparing for a stabilization force (SFOR) mission in Bosnia to a historic deployment along with the 42d Infantry Division in support of OIF III. The Div Arty's E/101 TAB and 272d Chemical Company trained at Fort Drum, New York, and also deployed to OIF III.

The *Rainbow Thunder* Redlegs are prepared to fight and win anywhere in the world, supporting the GWOT.



A howitzer from 1-119 FA prepares for a live-fire at Camp Grayling, MI.

# Silhouettes of STEEL

## 82d Airborne Division Artillery

The 82d Airborne Div Arty, Fort Bragg, North Carolina, maintains its ability to deploy worldwide with no notice and synchronize joint effects for the division. The Div Arty headquarters deployed elements in support of operations in Afghanistan and Iraq.

The division FSE routinely planned and

coordinated Air Force CAS for the ground commander and coordinated with Special Operations and Coalition Forces to synchronize effects in large areas of operations.

1-319 Airborne FA Regiment (AFAR), the *Loyalty Battalion*, supported the 3d BCT with fires during OIF from September 2003 to March 2004. It conducted full-spectrum operations—counterfire, convoy security, civil military operations (CMO), information operations (IO) and the defense of Forward Operating Base Saint Mere.

1-319 AFAR created the Counter-Mortar Exploitation Team of 15 Soldiers who captured enemy weapons and munitions, assessed battle and collateral damage, and identified enemy TTPs.

Paratroopers of 2-319 AFAR, the *Falcon's Fury*, were de-

ployed for 12 months for OIF, marching from Kuwait to Baghdad, providing timely lethal and nonlethal fires and, ultimately, fighting as a maneuver battalion. Immediately upon redeployment, *Falcon's Fury* certified its FISTS, howitzer sections, FDCs and leaders and conducted many airborne assaults. The battalion's intensive training culminated with participation in a brigade-level airborne assault and airfield seizure that ended the year.

3-319 AFAR, the *Gun Devils*, fired the first lethal artillery counterfire mission in support of Operation Enduring Freedom. After eight months in Afghanistan, 3-319 AFAR redeployed, completed equipment regeneration and regained proficiency on all artillery-related tasks. In January, the fire supporters deployed to OIF with the 1st BCT. While deployed, they executed combat and stability and support operations (SOSO).

At Fort Bragg, the remainder of the battalion executed a base-piece LFX and continued preparations for future combat operations.

The 319th AFAR is poised to deliver airborne fires 18 hours from the call, anywhere in the world, any time and in any environment.

*Airborne—All the Way!*



Soldiers from 1-319 FAR, 82d Airborne Division, locate an enemy rocket launcher near a point of origin determined by a Q-36 radar.

## 101st Airborne Division (Air Assault) Artillery

The 101st Airborne Division's *Guns of Glory* Division Artillery, Fort Campbell, Kentucky, continues to provide timely, accurate and devastating fires in support of all division operations.

In February and March 2003, the Div Arty deployed to the sands of Kuwait in anticipation of the division's attack north into Iraq.

In mid-March, the Div Arty supported the division's attack and provided fires for the next five weeks—the *Top Guns* 1-320 FAR, *Balls of the Eagle* 2-320 FAR, *Red Knights* 3-320 FAR, *Gunslingers* 1-377 FAR, *Guardians* 2 FAD and *Eagle Fires* HHB Div Arty fought as one.

*Guns of Glory* battalions provided close supporting fires in the Battles of Karbala, An Najaf, Kifl and Al Hilla and in the liberation of south Baghdad, often reinforcing each other in the fight. After the liberation of Baghdad, the division moved north to Mosul to control deteriorating stability in that region.

During this mission, the Div Arty performed various security missions. The *Top Guns* had their own sector of Mosul to patrol and provide stability for while maintaining their guns ready to provide fire support. *Balls* secured a large area south of Mosul, portions of the Northern Oil

Pipeline and the largest ammunition supply point (ASP) in northern Iraq. The *Red Knights* were positioned in the west with their task force where they provided security for oil refinery fixed sites and thousands of oil tanker convoys from the Syrian border. The *Gunslingers* ran collecting, securing and destruction operations of captured enemy ammunition caches. The *Guardians* provided 24-hour radar coverage for all division operations. The Soldiers of *Eagle Fires* provided non-stop support to the Div Arty TOC for all missions.

Following redeployment to Fort Campbell in the spring of 2004, the Div Arty began to support the transformation of the 101st Division as directed by the Chief of Staff of the Army. As part of the transformation, the three DS

battalions have been assigned to BCTs as of 10 September, and 4-320 FAR was activated as part of the 4th BCT on 17 August. The Div Arty will continue to command and control HHB, 2 FAD and C/1-377 FAR until a decision is made to transform the Div Arty into the 101st's Fires Brigade.

Whatever the name or structure, *Guns of Glory* Redlegs stand ready to support the 101st in its next *Rendezvous With Destiny!*



Photo by SPC Robert Woodward

Soldiers of 320 FAR, 101st Airborne Division, fire missions at Udair Range in Kuwait.

# Silhouettes of STEEL

## 10th Marine Regiment

**A**s the 2d Marine Division's *Arm of Decision*, the 10th Marine Regiment, Camp Lejeune, North Carolina, has supported many operational deployments and exercises during the last two years.

Throughout this period, firing batteries deployed in support of the 22d, 24th and 26th Marine Expeditionary Units (MEUs) and contributed to Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF) and many exercises around the world in support of the Global War on Terrorism.

10th Marines also continuously supported the Marine Corps' unit deployment program (UDP) to the 3d Marine Division in Okinawa, Japan.

From January to June 2003, 1st Battalion, 10th Marines (Reinforced) deployed with Regimental Combat Team (RCT)-2, the ground combat element for Task Force Tarawa, in support of OIF. The battalion fired more than 2,000 rounds during the Battle of An Nasiriyah, which lasted from 23 March until 2 April 2003.

Battery I, 3d Battalion; Battery R, 5th



1st Battalion, 10th Marines M198 howitzers emplaced on the outskirts of An Nasiriyah.

Battalion; and radar teams from the regiment were attached to 1st Marine Division units for OIF and supported combat actions throughout Iraq, to include the areas in and around Baghdad.

Elements of the regiment also supported 8th Marines in Haiti, 6th Marines in Afghanistan, the Pan Sahel Initiative and

operations in the Horn of Africa and the Republic of Georgia.

The 2d Battalion transformed itself into a provisional rifle battalion and, along with Battery S, 5th Battalion, deployed in September 2004 in support of OIF II.

In addition to operational commitments and a new focus on provisional infantry readiness, 10th Marines ensured artillery proficiency with its semi-annual deployments to Fort Bragg, North Carolina, for exercise Rolling Thunder. The regiment supported a multitude of exercises on Camp Lejeune and served as the Marine air-ground task force (MAGTF) headquarters for type commander's amphibious training (TCAT) in December 2003 and Fleet Week 2004. Additionally, the 10th Marines provided teams

to test new equipment, such as the arctic phase testing of the M777 lightweight 155-mm howitzer.

The 10th Marine Regiment continues to prepare units for deployment to OIF III and stands ready to provide timely and accurate fires as the 2d Marine Division's *Arm of Decision!*

## 11th Marine Regiment

In 2004, the 11th Marines found themselves supporting a variety of traditional and nontraditional missions in support of the Global War on Terrorism. The 11th Marines *Cannon Cockers* have

four battalions: 1/11, 2/11 and 5/11 at Camp Pendleton, California, and 3/11 at Twentynine Palms, California.

In addition to supporting the unique requirements of Operation Iraqi Freedom (OIF) II, the regiment continued to deploy batteries with the 11th, 13th, 15th, and 31st Marine Expeditionary Units (MEUs). It also provided batteries in support of the unit deployment program (UDP) in Okinawa, Japan.

In Iraq, the regiment deployed its counterbattery radar (CBR) platoon, two firing batteries (A/1/11 and E/2/11) and its fire support coordination center (FSCC) to furnish close and continuous fire support to the 1st Marine Division and to coor-

dinate information, civil affairs and psychological operations. In addition, the regiment deployed 3/11 in a provisional military police role to provide convoy security throughout the Al Anbar Province and beyond.

Back home, the 11th Marine Regiment maintained its technical proficiency by conducting many artillery fires exercises at both Camp Pendleton and Twentynine Palms.

Furthermore, it was involved in testing the prototype expeditionary fire support systems (EFSS) and the joint lightweight howitzer 155-mm (JLWH 155-mm).

Also during this period, the regiment received accolades for its flawless execution of "Operation Simi Valley," the funeral salute for former President Ronald Reagan.

This period was characterized by an exceptionally high operational tempo, and the seamless execution of numerous deployments further demonstrated the proficiency, adaptability, toughness and dedication of the Marines of the 11th Regiment.

The 11th Marines will continue to deliver fires on time and on target in any capacity, any climate or any place for the 1st Marine Division—*Cannon Cockers!*



Marines of Gun 5, Battery A, 1st Battalion, 11th Marines, fire an M198 155-mm howitzer at Camp Fallujah, Iraq.

# Silhouettes of STEEL

## 12th Marine Regiment

In the past two years, the 12th Marine Regiment, Okinawa, Japan, has remained on the "tip of the spear" as the Marine Corps' only forward deployed artillery regiment, providing around-the-clock, all-weather fire support to the 3d Marine Division. In support of operations in Hawaii, Japan, Korea, the Philippines, Australia, Thailand and India, the 12th Marines continue to be deployed throughout the Pacific Rim in almost 7,000 square miles.

In the latter part of January 2003, the 12th Marines Headquarters with its two organic battalions (1/12 and 3/12) deployed to the Fuji Training Area, Japan, for the month-plus long LFX Fire Dragon. The 12th Marines then hosted a Japanese Officer Exchange Program to help develop the Japanese Ground Self Defense Force. In the spring, the regiment participated in Exercise Cobra Gold, culminating in an FSCX with Thai Marines in Lop-Buri, Thailand.



Marines of Battery M 3/11 in the 12th Marines as part of the unit deployment program load a high-explosive round on the direct fire range at Lop Buri, Thailand, during Cobra Gold 2004.

Operations continued throughout the months of July and August with a series of CPXs with the Republic of Korea forces. In early November, selected 12th Marines participated in the India Subject Matter Expert Exchange (SME) in New Delhi,

India, to improve the artillery interoperability of the two forces and foster professional relationships.

For the rest of the regiment, the close of 2003 saw a bevy of activities. 3/12 deployed to Camp Fuji for a month-long relocation LFX, and 1/12 supported Exercise K-Fires in the Pahakuloa Training Area, Hawaii, for a month. The first half of 2004 saw the continuation of the relocation program, moving live fire off Okinawa to ranges on mainland Japan.

The highlight of 2004, however, has been the yearly Cobra Gold exercise in Thailand. The month-long exercise tested multiple aspects of the regiment's combat readiness, to include embarkation, maintenance and overall artillery proficiency.

The 12th Marine Regiment will continue honing its artillery skills throughout the Pacific area of operations and provide the most accurate, timely fire support possible to the 3d Marine Division. 12th Marines—*America's Thunder and Steel!*

## 14th Marine Regiment

The 14th Marine Regiment, headquartered in Fort Worth, Texas, is the largest regiment in the Marine Corps. It has five battalions, each with a headquarters and three firing batteries with one of the batteries transitioning to HIMARS. The regiment has a total of 21 units at 19 sites in 13 states throughout the continental United States.

The regiment has been training for its role as the force artillery for III MEF. In August 2003, the 14th Marines participated in Ulchi Focus Lens in Korea. The purpose of the exercise was to validate TTPs that will enable the Marine air ground task force (MAGTF) commander to support deep battle shaping operations, reinforce the close battle, provide a ground-based counterfire capability and control all non-ground combat element (GCE) artillery.

The 14th Marines also supported the Global War on Terrorism in 2003. It provided more than 100 individual augmentees to various active duty units deployed to Iraq, Afghanistan and Africa.

In January 2004, the regimental staff resumed training with III MEF as its force artillery mission. The operations and MAGTF liaison sections were part of several operational planning teams (OPTs)

with their counterparts at III MEF during the first half of 2004. These teams refined procedures for command and control of force artillery assets, coordination of counterfire, development of a MAGTF counterfire plan and implementation of liaison teams for attached and coalition artillery units.

In May, the 14th Marines sent forces to OIF: a radar platoon, two provisional truck platoons and two provisional military police companies. The 14th Marines later deployed Battery M 4/14 Marines to provide counterfires in Iraq while Battery P 5/14 became a provisional security force in Iraq.

In all, the regiment activated more than 700 Marines and Sailors to serve in OIF in 2004, the vast majority of whom are



Members of the 14th Marines fire an M198.

conducting non-artillery (provisional) missions.

In August, the regiment again supported III MEF as its force artillery in Ulchi Focus Lens and also formulated its plan to train for nontraditional OIF missions in 2005.

As always, the 14th Marines are committed to being a relevant, ready and capable force and will train to live up to its motto: *At the Ready!*

# Transformation of the FA Center and School

By Colonel Stephen D. Mitchell

During the past two years, the Field Artillery Center and School at Fort Sill, Oklahoma, have undergone the most dramatic organizational change in more than 50 years. The Field Artillery School and Fort Sill staffs have combined functions and organizations to become one staff for the Commanding General (CG)/Commandant. This restructuring is enabling the branch and school to better support joint and expeditionary warfighting while keeping pace with Army transformation into the Modular Force and on to the future combat system (FCS)-equipped Future Force. (See Figure 1.)

**Reorganization Overview.** One purpose of the transformation was to streamline training and support functions by merging four organizations in the FA School into three. Simply put, the three organizations are the 30th Field Artillery Regiment that executes training, the Directorate of Training and Doctrine (DOTD) that develops training and the Quality Assurance Office (QAO) that evaluates the quality and effectiveness of the training.

The 30th FA Regiment (school brigade) that performed "housekeeping" functions for permanent party and students was merged with the Gunnery and Fire Support and Combined Arms Operations Departments (FSCAOD) that both managed and executed training and coordinated doctrine. Some functions formerly performed by all three were consolidated into the one organization. The regiment has a headquarters, two teaching battalions, a support battalion and the International Student Division (ISD). (See Figure 2 on Page 44.)

The former Warfighting Integration and Development Directorate (WIDD) that focused on training and doctrine development and quality assurance was divided to reestablish the DOTD and QAO. DOTD was stood up to do training and doctrine development, training management and school operations missions. This structure has one organization headed by a colonel in charge of executing training (30th Regiment) and one organization headed by a colonel

focused on developing and resourcing training and doctrine requirements and conducting school operations (DOTD).

In addition, the reorganization eliminated a level of overhead, the Training Command (Provisional) G-staff, by redistributing that staff into the 30th Regiment and the CG's staff. Prior to the reorganization, the 30th Regiment Commander was dual-hatted as the Training Command Chief of Staff.

Creating a G-staff for the CG/Commandant keeps pace with the Army's changing environment, especially with base operations transitioning to a new organization: the Installation Management Agency (IMA). It is more efficient to have only one G-staff on the Training and Doctrine Command (TRADOC) side of Fort Sill with one Fort Sill Chief of Staff coordinating all mission activities. A logical choice for Fort Sill operations was DOTD, which now also serves as the CG's G3.

This change facilitated more efficient operations both on and off Fort Sill. It is now much clearer to TRADOC staff members who their counterparts are on Fort Sill.

**30th Regiment—Enlisted and Officer Training.** The 1st Battalion, 30th Field Artillery (1-30 FA), formerly the staff and faculty battalion, became the enlisted and warrant officer training battalion. Among other courses, it executes all 13 Series enlisted advanced individual training (AIT), except 13B Cannoneer, which is taught by the FA Training Center.

In terms of efficiencies, several enlisted FA military occupational specialties (MOS) had resided in both the Gunnery Department and FSCAOD. For example, both departments had 13D FA Tactical Data System Specialist training. Consolidating all 13Ds and their instruction into one battalion relieved the strain on manning and other resources for training for that MOS.

1-30 FA also executes the FA Warrant Officer Basic and Advanced Courses. In addition, the battalion executes specialty courses, such Advanced FA Tac-

tical Data System (AFATDS) Command and Staff, Tactical Communications, the Bradley Fire Support Team (BFIST) Vehicle and other courses. It is preparing a Stryker Transition Course for Soldiers going to the Stryker Brigade Combat Teams (SBCTs).

3-30 FA now not only has student officers assigned to them, but also became the executer of officer instruction. The battalion teaches both the captain's career course (CCC) and officer basic course (OBC). Previously, CCC and OBC instructors had been divided between the Gunnery Department and FSCAOD. In addition, 3-30 FA teaches the Paladin Commander's Course and the FA Weapons Maintenance Course. It is ramping up to execute the Basic Officer Leader Course (BOLC), which will change the way we train second lieutenants significantly.

Consolidating enlisted and officer training facilitates cross talk among the instructors and makes coordination more efficient.

An added benefit of the reorganization is being able to take advantage of the years of FA and fire support experience of the 1-30 FA and 3-30 FA commanders as they manage their teaching organizations and are directly involved in the training.

The school took the overhead savings from this consolidation and put them against other missions that had long been undermanned or neglected altogether due to personnel shortages.

**G3/DOTD.** This is the staff agency that performs many of the CG's training and doctrine proponency roles and does the planning for the branch's TRADOC missions. Some of the more significant functions range from doctrine development to training development, both individual and collective. DOTD writes and maintains all the programs of instruction (POI) for the FA branch courses taught at Fort Sill and in the National Guard Regional Training Institutions and manages mobilization POIs and plans for the school.

In addition, G3/DOTD is responsible

for providing new equipment training (NET); planning out-year training strategies and student loads; maintaining the school's academic records; creating the new Fires Knowledge Network (FKN), which stood up on Army Knowledge Online (AKO) this fall; developing Master Gunner training; conducting distance learning; and supporting operational forces with FA subject matter experts (SMEs). Although this list is

by no means all-inclusive, G3/DOTD also collects, maintains and incorporates into POIs all FA and fire support lessons learned from operations such as Operation Iraqi Freedom (OIF).

**Quality Assurance Office.** The QAO was reestablished to advise the Commandant on the effectiveness and efficiency of his training programs and products. This office oversees the quality of Field Artillery training programs,

both at Fort Sill and in the National Guard regions. QAO ensures we implement The Army School System (TASS) with the same critical tasks being taught to both the Reserve and Active Components.

The QAO's efforts already paid off this year in preparation for TRADOC's accreditation of the FA School. The school not only attained accreditation without difficulty, but also was recognized for having a TRADOC "QAO of

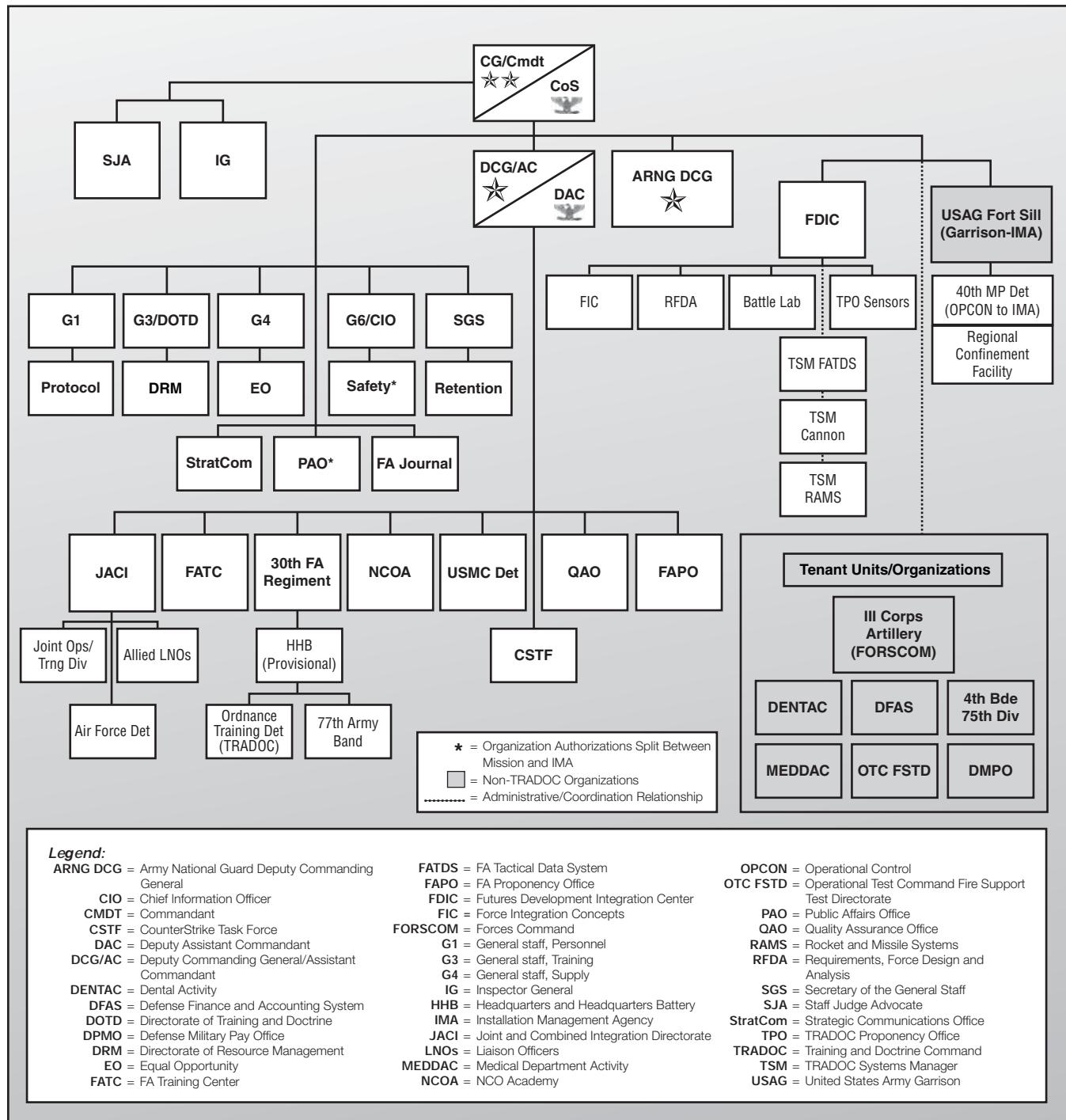


Figure 1: Field Artillery Center, School and Fort Sill Mission Organization Chart. Fort Sill's Directories of Plans, Training and Mobilization (DPTM); Information Management (DOIM); Logistics (DOL); and other such installation support agencies fall under USAG Fort Sill.

Excellence."

**Historical Perspective.** Since the early 1980s, the TRADOC school models and all other proponents have had an organization called the DOT (Directorate of Training) or DOTD (Directorate of Training and Doctrine), but the FA School had disbanded its DOTD in 1992. After only two years, in 1994 the school stood up a "DOTD light," called WIDD. This directorate was not a "DOTD," although it performed some of the DOTD functions. This caused some confusion both on and off Fort Sill.

During this latest reorganization, the school pulled back assets that had been given to the teaching departments and used some of the overhead savings and those from WIDD to reform the DOTD.

Later, the CG added some installation operations functions to DOTD and redesignated it as the G3/DOTD. This is an initiative several of the TRADOC proponents have taken in response to IMA's standing up and the transformation of higher-level staffs.

In 2001, the school diverged from the more traditional model of having a Directorate of Combat Developments (DCD) in the school and expanded that organization into the Futures Development Integration Center (FDIC). In October of that year, FDIC was stood up, combining Task Force XXI; the Depth and Simultaneous Battle Lab; Training and Doctrine Command (TRADOC) Proponency Office for Sensors (TPO-Sensors); TRADOC Systems Managers for Cannons (TSM Cannon), Rocket and Missile Systems (TSM RAMS) and FA Tactical Data Systems (TSM FATDS); and other combat development functions. FDIC helps the program managers (PMs) develop FA systems and organizations from "cradle to grave."

#### Other Reorganization Initiatives.

Three other key reorganization initiatives are the establishment of the Joint and Combined Integration Directorate (JACI) and the StratCom Directorate, both headed by colonels, and the Chief Information Officer (CIO), the G6.

**JACI.** As part of the TRADOC initiative to develop a standard model, Fort Sill proposed a JACI be established in the schools. Creating this directorate put "teeth" into Fort Sill's role as the Army's

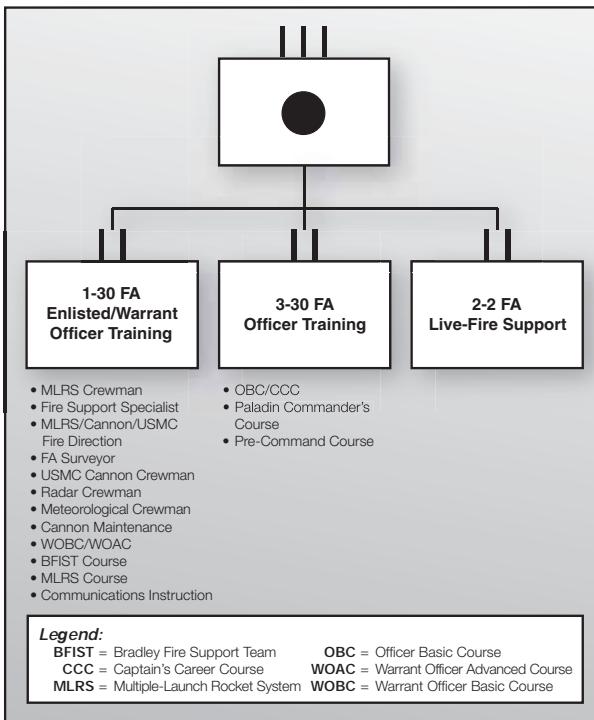


Figure 2: 30th FA Regiment. The 30th Regiment also includes the International Student Division (ISD) and the former Gunner Department and Fire Support and Combined Arms Operations Department (FSCAO).

#### Joint Fires and Effects Integrator.

JACI provides additional colonel-level leadership to manage transformation and work joint issues. The authorization for the colonel director of JACI is redesignated from the former Deputy Assistant Commandant (DAC) position.

This directorate is still in the process of being stood up and will consist of personnel to handle all joint missions for Fort Sill. Its Joint Operations and Training Division will include personnel from all services. JACI also will include an Air Force Detachment to work the joint close air support (JCAS) and other joint training at Fort Sill. In the spring, the CG brought back CAS training to Fort Sill both in the school and with quarterly joint exercises run by III Corps Artillery.

The JACI director serves as one of TRADOC's key representatives on the JCAS Council of Colonels and, as a senior member of the FA, attends many other joint meetings that previously did not have senior FA representation.

One of JACI's initiatives is the three-week Joint Fires and Effects Course (JFEC). The first JFEC was conducted this fall with 25 students from various services attending.

JACI works the Joint Fires and Effects Training System (JFETS) in coordina-

tion with the G3 and Battle Lab. This prototype interactive virtual and simulated joint training system with a call-for-fire trainer embedded is already being used to train CCC students and for the culminating practical exercise (PE) in JFEC.

JACI also is resolving issues related to training Universal Observers who are proficient in the conduct of Types 2 and 3 CAS as well as surface-to-surface fires. Type 1 CAS is when the risk of fratricide requires the controller visually acquire the attacking aircraft and the target. Type 2 is when visually acquiring the attacking aircraft or target is not possible. Type 3 CAS is when the attacking aircraft poses a low risk of fratricide.

JACI has ensured a number of fire support personnel have received CAS training at the Air-Ground Operations School (AGOS) at Nellis Air Force Base, Nevada.

**StratCom.** Strategic Communications was stood up to better tell the branch's story to branch "stakeholders." StratCom advises the CG, DCG, Chief of Staff, JACI and others on strategies that communicate branch initiatives, issues and messages in a variety of venues to the appropriate audiences. StratCom develops strategic communications products to support the mission of the FA School and Fort Sill.

The Department of the Army has recognized the need for its major subordinate commands to have StratCom to help the Army proactively communicate its priorities to specific audiences, including those inside the Army, Department of Defense, civilian industries, various branches of the government and other agencies. Fort Sill's StratCom complements the Army Campaign Plan and the Army and TRADOC strategic communications efforts.

This focused marketing of specific themes and messages differs from operations typically carried out by the Public Affairs Office (PAO). PAO has the broader mission of keeping the American people and the Army informed and establishing conditions that lead to America's confidence in her Army.

PAO maintains positive relations with the civilian communities, communicates with the civilian news media and con-

ducts command information programs. PAO and StratCom support each other, especially when strategic themes and messages need to be communicated to the public at large through the news media.

Another key difference is that PAO is not always proactive. It is often reactive, requiring the PAO to respond to inquiries from the media and advise the command of public concerns and issues. StratCom is almost always proactive and entails developing the right message, planning its delivery to the right person or audience, executing it at the right time and analyzing its effectiveness.

**CIO/G6.** Finally, the reorganization created a much-needed general staff office, the Chief Information Officer/G6.

The CIO/G6 manages the information systems of the Field Artillery Center and School. This officer and staff de-

velop the strategic planning of FA information systems, determining the current and future information technology requirements for executing the center's and school's missions and the CG's priorities.

This office also coordinates with Fort Sill's Directorate of Information Management (DOIM) on information requirements and day-to-day information technology support for all mission activities.

This dramatic reorganization at Fort Sill has enabled us to resource top requirements, such as supporting the War on Terrorism and transformation of the Army. The Field Artillery School is transforming along with the Army and actively working to shape the transformation of our formations in the field.

The Field Artillery School produces world-class graduates competent in their joint fires and effects skills and imbued

with Warrior ethos. Fort Sill is fulfilling its vital role as the Army's Joint Fires and Effects Integrator.

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## Fires Knowledge Network (FKN)

The Field Artillery School, Fort Sill, Oklahoma, has developed a Fires Knowledge Network (FKN) that will put the entire school, its experts and publications—plus information on FA units and organizations—at the fingertips of every Soldier. FKN will be accessible through Army Knowledge Online (AKO) by the end of the year and be an interactive “one-stop shop” for Soldiers, allowing two-way communications within the fire support community and the Army.

FKN is the first of its kind as a branch website behind AKO. The pilot was launched in spring of 2003 but has not been accessible Army-wide.

The concept was born in October 2002 from a need to provide a way for Soldiers to ask questions and access manuals; white papers; tactics, techniques and procedures (TTPs); lesson plans; and other data centrally from one location. The schoolhouse and its leaders designed FKN to be a complete collaboration tool for Soldiers.

That idea grew into one online location consolidating an official FA data repository, tools for asking questions or providing feedback, and the ability to build communities of practice (CoPs) around staff organizations, units and their missions. CoPs are individual sites or communities

that allow organizations to post information, ask questions, host discussions and conduct surveys and are fully interactive online with each other.

Individual FA units or organizations will be able to establish a CoP on the FKN and control it. Administrators can limit who has access to the CoP, although most CoPs will be open to anyone with access to AKO. No special webmaster skills are needed to manage the CoP. The average computer user has the skills.

Combined with new features in the redesigned AKO portal, FKN users will be able to target information to a specific audience. For example, users will be able to send a message to all Soldiers who hold the 13B Cannoneer Military Occupational Specialty (MOS), directing them to information relative to that MOS.

Communities will be able to build groups based on Soldiers' location, rank, MOS and unit affiliation. The groups then can be centered on specific professional jobs or missions. The goal is to target information and build communities that will help Soldiers and units become more effective warfighters.

FKN already is helping Soldiers in Iraq. Senior FA targeting technicians created a CoP for unit members in the Army, the USMC and civilian contractors. This community is private and only invited members can gain access. Within the CoP, Soldiers and experts

discuss For Official Use Only (FOUO) TTPs in Iraq. The CoP is resolving TA technical problems for units in Iraq, using the experts at the schoolhouse. The information then is passed electronically to other units preparing to deploy and instructors at the school for future courses.

FKN is not cleared for classified data, but the ability to limit who participates allows for the free exchange of ideas and information up to classified information.

AKO plans to implement an additional FKN platform on the secure internet protocol network (SIPRNET), also by year's end. Once that security measure is in place, developers and commanders in the field will be able to exploit the platform more fully to support the Global War on Terrorism.

Other Army branches as well as other services eventually will have the opportunity to build a knowledge network around their domains, which will allow combined arms and joint interactive information exchanges.

When AKO launches FKN, it will post a notice on the main AKO page telling users how to access the Fires Knowledge Network.

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