



# Field Artillery

*A Professional Bulletin for Redlegs*

November-December 1995



# The Red Book

## An Annual Report



A Professional Bulletin for Redlegs

November-December 1995

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### Senior Fire Support Conference: *Joint Fires for Force XXI*

The Senior Fire Support Conference will be 11 to 15 March 1996 at the Field Artillery School, Fort Sill, Oklahoma. The conference theme is "Joint Fires for Force XXI." Presentations and discussions will center around the role of fires in Force XXI and fire support issues in doctrine, materiel, training, force development and joint operations.

Invitations will go out in November to all active duty Army and Marine FA general officers and selected retired general officers, corps/Marine expeditionary force and division commanders, Training and Doctrine Command (TRADOC) commandants, corps artillery commanders and FA brigade/regiment and division artillery commanders to include their command sergeants major (CSMs). Reserve Component (RC) commanders of I Corps Artillery, divisions, FA brigades, the 14th Marine Regiment and division artilleries also will receive invitations to attend the conference with their CSMs.

Invitations will be sent to US FA Association corporate members. FA Association corporate members and other companies may have displays at the conference.

For more information, call the Conference Support Center at the Field Artillery School at DSN 639-3323/4509 or commercial (405) 442-3323/4509.

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**PURPOSE** (as stated in the first *Field Artillery Journal* in 1911): To publish a journal for disseminating professional knowledge and furnishing information as to the Field Artillery's progress, development and best use in campaign; to cultivate, with the other arms, a common understanding of the power and limitations of each; to foster a feeling of interdependence among the different arms and of hearty cooperation by all; and to promote understanding between the regular and militia forces by a closer bond; all of which objects are worthy and contribute to the good of our country.

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# FORCE XXI



## Fires for Division XXI: State of the Branch 1995

by Brigadier General Randall L. Rigby, Chief of Field Artillery

***No matter how we structure Division XXI, the division of the future, it must have Field Artillery assets to fire simultaneously throughout the depth of the battlespace to set the conditions for decisive maneuver and to protect the force.***

***Everyone knows that Force XXI is important and is the driving force behind most of what we do. Not everyone understands completely what Force XXI means. In this article, I articulate that in terms of Field Artillery force structure, systems and training.***

**F**orce XXI is not a "thing" we're building; it's a concept in force design that plays to our strengths—quality people and high technology. In simple terms, Force XXI is about providing our soldiers the best possible organization, equipment and training. We'll combine innovative force structure and new systems to produce a force with pervasive situational awareness, one capable of rapidly focusing overwhelming firepower during high-tempo operations.

Force XXI, as a concept, will drive the design of Division XXI. For Division XXI, our primary concern is developing the Field Artillery force structure that will generate the most effective division base of fires. The Division XXI fire support system must be versatile (able to perform a variety of missions) and adaptable (modular to facilitate tactical tailoring for specific missions).

The Division XXI fire support system must be able to prosecute fires simultaneously throughout the depth of the battlespace to extend it in space and time, expose or attack enemy centers of gravity and set the conditions for decisive maneuver. Fires will continue to protect the force by neutralizing or destroying enemy combat power to produce more favorable force ratios and minimize friendly losses and by neutralizing, destroying or suppressing other enemy capabilities, especially command and control.

To generate these fires, Division XXI will require a robust, all-weather capacity to attack the enemy throughout the depth of his formations and the ability to coordinate joint fires affecting its battlespace. The fires for heavy divisions will come from new weapons such as the Crusader howitzer system and the multiple-launch rocket system (MLRS); weapons such as the advanced towed cannon system (ATCAS) and high-mobility artillery rocket system (HIMARS) will support light divisions. Fire supporters in command

and control vehicles such as the Bradley fire support vehicle (BFIST) will coordinate fires using the advanced Field Artillery tactical data system (AFATDS).

## Organizational Innovation

Organizational innovation must exploit future materiel developments and support the operational concepts of a mission-adaptive force. Field Artillery organizations for Division XXI must have the versatility to conduct a range of tactical missions (traditional fire support tasks) and the adaptability to rapidly task organize with other assets (combat aviation or other members of the combined arms team). To develop these capabilities, we have tested various organizations in a number of advanced warfighting experiments (AWEs) in the past year.

**Advanced Warfighting Experiments.** The Field Artillery School established Task Force 2000 last year to function as the Field Artillery Center's link to the AWEs and the rest of the Force XXI developmental process. Its mission is to insert Field Artillery-specific considerations into all AWEs. It is the Field Artillery School's point of contact with all the battle labs, and it maintains tight linkage to the Combat Training Centers (CTCs) and field units conducting the AWEs.

During Prairie Warrior 95, the Battle Command Battle Lab AWE and capstone command post exercise for the Command and General Staff Officers Course at Fort Leavenworth, Kansas, we tested the requirement for a division artillery (Div Arty) headquarters in a fully digitized division. Prairie Warrior 95 validated the need for an organizational structure that allows commanders to command and control their fire support assets, and it demonstrated that the Div Arty headquarters remains the best organization for that function. Prairie Warrior 95 also demonstrated that the Div Arty headquarters can plan maneuver operations, functioning like a maneuver brigade headquarters.

We conducted many fire support experiments during Focused Dispatch, the August 1995 Mounted Battlespace Battle Lab experiment at Fort Knox, Kentucky. We began to experiment with the concept of forming "Striker" platoons. This entails consolidating all forward observers (FOs) and combat observation and lasing teams (COLTs) at the task-force level and mounting them in high-mobility multipurpose wheeled vehicles (HMMWVs). Meanwhile, fire support coordinators from the company-level up continue to maneuver with their supported commanders in armored vehicles. We also experimented with sensor-to-shooter links connecting the inter-vehicular communications system (IVIS) in Abrams tanks and Bradley fighting vehicles directly with fire support systems.

Focused Dispatch was a successful experiment. Two points were immediately apparent: no matter how we configure the force or how good our situational awareness is, we must still clear and coordinate fires, and we must still plan fires to support the combined arms team in ground combat operations.

Warrior Focus, an AWE by the Dismounted Battlespace Battle Lab of Fort Benning, Georgia, is scheduled for November 5 to 25 at the Joint Readiness Training Center, Fort Polk, Louisiana. It will test light force fire support requirements and include the first use of AFATDS by a light force. We also will test ATCAS and employ the lightweight laser designator range finder (LLDR). This experiment will help us refine the requirement for the systems critical for supporting the light force.

Looking down the road to early 1997, Task Force XXI, the centerpiece AWE of Force XXI's initial phase, will be held at



HIMARS will support our light forces in Division XXI. (Photo by Sam Orr)

the National Training Center (NTC), Fort Irwin, California. The experiment will include a digitally equipped brigade-sized experimental force (EXFOR) trained to exploit the advantages of information age technology (such as the AFATDS and improved radar and meteorological systems). In this AWE, we'll continue to look at the Striker platoon and employ Paladin to develop insights into how the cannon battalion of the future should fight. The Army's experimentation will culminate with the Division XXI AWE planned for the summer of 1997.

**Reserve Component (RC).** The Division XXI base of fires will require augmentation from corps artillery assets. To determine just how much augmentation is required, the Army Science Board conducted a study on the Field Artillery force structure and its sufficiency; its results were released this year. (See the excellent article "Army Science Board: How Much Artillery is Enough?" by John J. Todd and Lieutenant Colonel James M. Holt in the June 1995 edition.)

The study concluded that each division must have two Field Artillery brigades to support it. At least one of those additional Field Artillery brigades will come from the Army National Guard (ARNG). Our commitment to resourcing the recommended support increases the importance of the ARNG to the Division XXI base of fires.

The ARNG is an essential element of our force today, but its role will increase dramatically in the future. In FY 90, ARNG and Army Reserve (USAR) Field Artillery battalions comprised 53 percent of the Field Artillery force. Our RC Field Artillery battalions will experience 92 major changes between 1995 and 1999 with USAR inactivations and ARNG battalion and brigade activations, conversions to new weapon systems and up-gunning to 3x8 configurations. By the end of FY 96, all USAR FA units will be inactivated.

Then by FY 99, ARNG battalions will comprise 62 percent of the Field Artillery. This means that one of the two Field Artillery brigades we assign to support every division will be an ARNG brigade—we won't be able to win a major conflict without ARNG support.

It has never been more important to maintain a trained and ready RC force. We must make training relationships work. Active and ARNG units must work together to foster relationships that give our



Crusader—the first major weapon system designed for the digitized battlefield and the prototype for the next generation of land combat vehicles—is a Field Artillery revolution.

RC units "registration points" for planning peacetime training.

### Materiel Innovation

Materiel innovation is essential for supporting Division XXI. Our objective is to attack the enemy simultaneously in depth to bewilder and overwhelm him, offering him no sanctuary and no options—only multiple ways to die. We must construct a seamless battlespace of deadly threats. We are working to field the weapon systems to do just that.

**Heavy Force Fires.** Currently we're fielding Paladin, an excellent weapon system that provides maneuverability, survivability and range superior to the M109A3 howitzer. We already have fielded Paladin to the 2d Battalion, 17th Field Artillery, 212th FA Brigade, part of III Corps Artillery at Fort Sill, Oklahoma; the 24th Infantry Division (Mechanized) Artillery at Fort Stewart, Georgia; and the 3d Armored Cavalry Regiment at Fort Bliss, Texas. In the next year, we'll field the howitzer in the 2d Armored and 1st Cavalry Divisions, both at Fort Hood, Texas, providing our heavy units the best howitzer we have. Even though Paladin

significantly improves our present self-propelled howitzer fleet, fielding Crusader, a system being developed for warfare in the 21st century, is critical to Division XXI.

Crusader—the first major weapon system designed for the digitized battlefield and the prototype for the next generation of land combat vehicles—is a Field Artillery revolution. It will change the way we fight with fires.

The Field Artillery has lacked the mobility to keep up with the maneuver arms since the advent of the Bradley fighting vehicle and the Abrams tank; Crusader will have mobility equivalent to Bradley and Abrams and will maneuver right alongside them. That mobility, along with ballistic protection, smart countermeasures and automated situational awareness will increase Crusader's survivability. Crusader will be able to move constantly while firing on more targets than ever before. Crusader's increased range and high rate of fire will put fires on targets simultaneously throughout the battlespace, reducing friendly troops' exposure to hostile fire during the direct fire battle by killing the enemy deeper and earlier.

Crusader is funded and currently in the demonstration and validation stage of development. We set up the Crusader crew module at Prairie Warrior 95, giving future leaders a glimpse of tomorrow. Contractors and Army experts are meeting to formulate the initial configuration of the system. We expect to begin fielding Crusader in 2006.

Starting in the year 2000, fire supporters in the heavy force will achieve a level of maneuverability that complements Crusader's as they transition into the BFIST. This system will have mobility, survivability and night-vision capability equivalent to the maneuver forces it supports and will use Bradley common repair parts. The Crusader and BFIST team will be able to exploit the advantages of a digitized, information-dominant force, using situational awareness and relevant combat knowledge to vector fires with hair-trigger responsiveness. We expect to begin fielding BFIST in 2000 with a more advanced version coming in 2004.

MLRS will continue to provide the deep attack fires for Division XXI. Using MLRS to conduct precision strikes against key targets, the Division XXI commander will rob the enemy of his ability to gain information or achieve dominance in any corner of the battlespace. To retain an overmatching

ability to strike at depth with rocket and missile fires, MLRS requires improved maneuverability and responsiveness and the continued development of the MLRS family of munitions (MFOM), which includes advanced rockets and the Army tactical missile system (ATACMS).

We're working on two systems to improve the performance of our M-270 self-propelled launcher-loader (SPLL); the improved fire control system (IFCS) and the improved launcher mechanical system (ILMS). The two systems will significantly reduce the time required for fire mission processing and for procedures on the firing point.

IFCS will incorporate more and faster processors and increased memory/storage to reduce fire mission processing time and increase processing capacity dramatically. It also will incorporate the global positioning system (GPS) and a low-level wind measurement device, enhancing MLRS' fire control operations.

The ILMS will reduce the time required for procedures on the firing point by 83 percent and for reloading by 35 percent. The SPLL will be able to elevate and traverse its launcher-loader module faster and simultaneously. The ILMS is funded; the operational test and evaluation (OT&E) will occur simultaneously with the OT&E of IFCS in FY 98. Units will start to receive launchers retrofitted with IFCS and ILMS in FY 2000.

As we improve our SPLLs, we're also improving the MFOM. The guided extended-range MLRS (ER-MLRS) will extend the range of our free-flight rockets out to at least 60 kilometers and increase accuracy at ranges exceeding 25 kilometers. ER-MLRS is funded as an advanced technology demonstration. We'll flight-test five rockets in 1997 and pursue funding for engineer manufacturing and development that same year.

ATACMS Block IA will extend the range of our current missile (165 kilometers) out to 300 kilometers. The Block II and IIA missiles will deliver BAT brilliant antiarmor sub-munitions out to 140 kilometers and 280 kilometers,

respectively. We expect to have the first units equipped with ATACMS Block IA in 1998, Block II in 2001 and Block IIA in 2003.

**Fires for Light Forces.** While we look at fire support for heavy divisions, we're also examining fire support for light forces. The weapon systems we have in support of our light forces are aging—we need to update them as well.

Legal Mix VIII, a Deputy Chief of Staff for Operations (DCSOPS)-directed study, will determine the best weapon systems for supporting the light forces; we expect an interim report in February 1996 with the final report coming in September. The final report will tell us exactly which weapon systems we need to update our fire support for light divisions.

Right now, we are looking at employing both HIMARS and ATCAS in a light-heavy force mix. HIMARS will provide us a lightweight, deployable rocket and missile launcher to support light forces; ATCAS will provide light forces a lighter weight, medium howitzer that can fire all current 155-mm munitions to a range of at least 30 kilometers.

In initial operations, HIMARS and ATCAS will protect the force from threats ranging from harassment by mortars to ballistic missiles carrying weapons of mass destruction. They'll allow the commander to shape his battlespace from the beginning of the campaign.

As the campaign progresses, the commander will use light forces to alter the tempo of battle by employing air-mobile operations. HIMARS and ATCAS will protect his air bridgeheads—platforms from which he can reach out to extend the battlespace even further. Together, HIMARS and ATCAS will provide the optimum mix of cannon, rocket and missile fires for light fire support, requiring minimum strategic and intra-theater lift support.

HIMARS development continues at a rapid pace. We have funds allocated for developing four prototypes. During FY 98, soldiers of XVIII Airborne Corps out of Fort Bragg, North Carolina, will field test the prototypes for 24 months, providing feedback to help expedite design changes.

We're also examining two prototypes of the ATCAS; a third company has submitted a design proposal and is in the process of building a prototype. In March 1996, we'll hold a "shoot off" to determine which prototype will be the model for the next generation of light howitzer.



ATACMS Block IA will extend the range of our current missile (shown here) out to 300 kilometers.

**Digitization.** Some systems will support both heavy and light forces. Division XXI will acquire key targets using Field Artillery observers and target acquisition radars. Ground observers will exploit situational awareness to identify and direct fires against deep targets. The upgraded Q-36 Firefinder radar will integrate new technologies to expand the range at which it can detect targets and the types of counterfire targets for attack and destruction. Digitization throughout heavy and light forces will support both passive and active force protection.

The centerpiece of the Field Artillery's digitization effort is AFATDS. AFATDS will seamlessly interface the artillery with all Army and joint command and control systems. Its advanced decision aids will help the commander manage information and expand the commander's flexibility in battle command of a mission-adaptive Field Artillery force for Division XXI.

The 1st Cavalry Division completed the AFATDS initial operational test and evaluation on 3 September. Before the test began, the 1st Cavalry fielded the system and gave it a shakedown during NTC rotations and Battle Command Training Program (BCTP) Warfighter exercises. The 2d Armored Division (EXFOR) will begin fielding the system in February 1996. AFATDS, the first Force XXI FA system to be fielded, is the leading edge of Force XXI digitization.

## Training for Division XXI

Division XXI systems will require well trained and educated soldiers, NCOs and officers to operate them. To ensure a comprehensive approach to supporting future Field Artillery training requirements, we created the Warfighting Integration and Development Directorate (WIDD) in the Field Artillery School. WIDD consists of the old Directorate of Training and Evaluation combined with elements from the Fire Support and Combined Arms Operations Department (FSCAOD) and the Gunnery Department (GD).

WIDD's primary mission is to design, develop and manage effective training to support Total Army institutional and unit training requirements and new systems fieldings. WIDD is also responsible for producing responsive Field Artillery doctrine and tactics, techniques and procedures (TTP) synchronized with Army and joint doctrine. In addition, WIDD designs,



The FA's AFATDS is the leading edge of Force XXI digitization.

develops and manages effective training to support new systems and new doctrine.

In decentralized operations on future battlefields, junior officers and NCOs must be able to function independently. WIDD is leading the evolution of our institutional training to meet this challenge. We have revised the curriculum at the Field Artillery School to keep pace with new concepts and technology. We're focusing more on automated fire direction and integrated instruction—teaching systems as a whole instead of systems a piece at a time.

Future classrooms will take advantage of multimedia capabilities. Technological advances in electronic media—for example, video teletraining, computer networks and CD-ROMs—will improve distance learning. At the same time, WIDD is reconfiguring the curriculum to train combat critical tasks to one standard for the Total Army.

We'll benefit from improved distance learning in many ways. Just as we conduct centralized planning for decentralized execution in field operations, WIDD will centrally produce modular training support packages for use both by the schoolhouse in formal programs of instruction and by unit commanders in decentralized execution of their sustainment training requirements. Distance learning will help us establish uniformly high-quality training across the Active and Reserve Component forces.

Among other projects, WIDD is working the revision of *FM 6-20 Doctrine for Fire Support*, our capstone field manual.

FM 6-20 (Coordinating Draft) is being sent out for comments in December 1995. Moreover, three other field manuals and nine Army training evaluation program mission training plans (ARTEPS/MTPs) are contracted for revision in FY 96, bringing them up to date for users in the field.

## Boresighting on the Future

Fort Sill will host the 1996 Senior Fire Support Conference from 11 to 15 March; the theme will be "Joint Fires for Force XXI." At this important conference, senior leaders from the Army, Air Force, Navy and Marines will meet to work on synchronizing fire support for Force XXI.

The Army and the FA are devoting tremendous energy and thought to developing the force of the future. The AWEs, the system modernization and the advances in training all have one purpose: to provide our soldiers the best that's possible in organization, equipment and training. What we do today determines what we'll become tomorrow.

But, while we keep our vision focused on the future, we must keep our primary function in sight—maintaining a trained and ready force for the defense of our nation.



**Brigadier General (Promotable) Randall L. Rigby, Chief of Field Artillery, is the Commandant of the Field Artillery School and Commanding General of the Field Artillery Center and Fort Sill, Oklahoma. Other assignments include serving as Deputy Commandant of the Command and General Staff College at Fort Leavenworth, Kansas; Deputy Director for Assessment, J8 of the Joint Staff at the Pentagon; and Executive Officer to the Vice Chief of Staff of the Army, also at the Pentagon. He commanded the 6th Infantry Division (Light) Artillery in Alaska; the 4th Battalion, 4th Field Artillery (now 5th Battalion, 18th Field Artillery), 75th Field Artillery Brigade of III Corps Artillery at Fort Sill; and two batteries: one in the 172d Infantry Brigade (Mechanized), also in Alaska, and one in the 1st Cavalry Division (Airmobile) in Vietnam. Among other positions, Brigadier General Rigby has served in the continental US, Germany and Korea as a G3 for a corps artillery, S3 of a battalion and Executive Officer for both a brigade and battalion.**



# Deep Attack and CAS— Joint Roles and Missions

by Lieutenant Colonel John Gordon IV

**Deep Attack Issue:** *Continuing independent service development of multiple long-range attack systems risks combat effectiveness as well as optimal resource investments....*

**Close Air Support (CAS) Issue:** *The array of organizations providing control of weapons to conduct fire support raises the concern of overlapping responsibilities and capabilities in terms of who, how and to what degree fire support should be provided in the form of CAS to surface forces.*

*Extracted from Roles and Mission  
Commission Issue Papers*

This article reviews how the congressionally mandated Roles and Missions Commission of the armed forces dealt with two issues—deep attack and CAS—and previews where these issues seem to be headed in the future.

The Roles and Mission Commission was formed at the direction of Congress, opening its doors in May 1994. Led by Dr. John P. White, at that time a member of the Harvard University faculty, the commission was to define the roles and missions of the various services, ensuring redundancies in capabilities among the services was necessary and contributed significantly to US combat capabilities. The commission was comprised of 11 unpaid members, plus a full-time staff located in Arlington, Virginia, and had one year to define the issues, study them and produce a report—dated 24 May 1995. Yet all is not resolved. An additional study of deep attack currently is being conducted with study results due in spring of 1996.

## The Roles and Mission Issues

The commission's initial efforts focused on identifying a finite number of important issues it could study. After examining many recommendations, the commissioners settled on 26 (later reduced to 25) issues. Two of those issues were deep attack/precision conventional strike and CAS.

The commission selected deep attack as an issue because, "Some service doctrines call for developing long-range capabilities similar to those resident in other services. Aside from the potential of excess resource expenditures, a potential problem posed by the spread of overlapping deep capability is the resulting difficulty in unifying the effective employment of the various service deep systems....This issue offers the clear potential for increasing combat capability and achieving fiscal savings by reducing truly duplicative forces and expenditures on future deep systems of marginal utility" (extracted from a Roles and Mission Commission issue paper).

The commission selected CAS for the following reasons: "Advances in technology, weapon system capability and operational employment have changed the warfare environment in which the original functional assignments for CAS were made in 1948....Ground forces with modern



surface-to-surface weapons and attack helicopters have the potential to successfully engage targets previously only feasible with fixed-wing CAS....These reasons, as well as the fact that each service is currently assigned CAS as a primary function, suggest that CAS may be a potential area for force realignment and financial savings" (also extracted from a Roles and Mission Commission issue paper).

Thus, one can see the motivation the commissioners had to include these two issues in their initial list of 26 for examination. Once the decision on the issues had been made, the commission and other agencies began to organize to tackle the problem.

The commissioners met only periodically. Between their formal meetings the commission's full-time staff gathered information, held meetings, arranged for studies and received input from interested parties. Each service placed two active-duty O6s on the commission staff.

The commission "organized for combat" by forming a team for each of the 26 issues. The team leader, normally one of the Army, Air Force or Marine colonels or Navy captains, chaired meetings on the subject and gathered relevant data. Ultimately, it was the responsibility of the team leader to write a paper for the commissioners that would outline key features of the issue and provide options for the future. Each service was asked to provide a position on the issues.

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## Joint Points of View

The Army positions on deep attack and CAS provided to the commission were as follows:

*Army Position on Deep Attack:* To ensure decisive, quick victory with minimum casualties, the land component commander (LCC) must be responsible for synchronizing all actions within his area of operations (AO) to set the conditions for success. The land commander needs a mix of organic and supporting joint systems to conduct deep operations within his AO.

*Army Position on CAS:* Fixed-wing CAS remains an important tool of the joint force commander (JFC). The USAF should retain CAS as a primary function.

The Army position on these issues was in conflict with the Air Force's position. The Air Force, then under the leadership of General Merrill A. McPeak, approached the Roles and Missions Commission with a very aggressive

agenda. It had an overarching operational model in mind. The USAF recommended to the commission that future operations be "segmented" into five areas: Littoral/maritime, rear, close, high and deep. Staking out a claim to the "high" and "deep" battle, the USAF recommended that service responsibilities be divided and codified along those lines.

The Air Force positions on deep attack and CAS were as follows:

*Air Force Position on Deep Attack:* As part of its recommendation to segment the battlefield, the Army and Marine Corps should be divested of deep attack systems, such as the Army tactical missile system (ATACMS) and the F/A 18 Hornet aircraft. Deep attack, thus, would become primarily an Air Force and Navy responsibility with the joint force air component commander (JFACC) commanding the deep battle. According to the Air Force, the dividing line between the close and deep battle would be the fire support coordination line (FSCL), normally positioned at multiple-launch rocket system (MLRS) range.

*Air Force Position on CAS:* Because the Army's need for traditional fixed-wing CAS has declined significantly since World War II with the advent of the modern attack helicopter, CAS should become a collateral mission for the USAF. Air Force tactical air control parties (TACPs) should be withdrawn from the Army structure. The A-10 Warthog eventually would be retired for a savings of some \$6 billion. The Air Force would retain the ability to come to the Army's assistance as a JFC may direct—but as a collateral mission.

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## Work at the Commission

Beginning in the fall of 1994, the commission issue team leaders began assembling input on both CAS and deep attack. The services and commanders-in-chief (CINCs) provided input and were available for discussion. Many meetings were held, existing studies were analyzed and several short turn-around studies were initiated by both the commission and the services.

The Army's position on both issues was heavily influenced by doctrine. Using approved joint doctrine, particularly *Joint Pub 3-0 Doctrine for Joint Operations*, the Army stressed that the land commander is the *supported* force in the land AO. Both the Navy and Marine Corps strongly supported the Army's position. All three services agreed that existing joint doctrine provided a sound

framework for synchronizing joint deep operations.

The Army made the case that with today's and tomorrow's joint sensors and command and control systems, the land commander will have an unprecedentedly clear, real-time picture of the friendly and enemy situation within his AO. Therefore, he'll have the ability to synchronize the supporting efforts of other components of the joint force within the land AO. Unity of command—one commander orchestrating the fight inside the land AO—was also a key aspect of the Army position.

The Army also cited the need for an organic deep fires capability exemplified by ATACMS. The missile system's advantages are its responsiveness, all-weather capability and ability to penetrate high-threat air defense areas. The Navy and USMC supported the Army position on ATACMS, and the Army recognized the USMC's use of the Hornet as its organic deep attack and CAS system in a Marine Force (MARFOR) AO.

Several prominent Washington, DC-area federally funded research and development centers were used in the deep attack study. The Rand Corporation, the Center for Naval Analysis and the Institute for Defense Analysis (IDA) all participated in the effort. The Army Staff contracted for a short-notice analysis by Sigmatech, Inc. That study showed the cost effectiveness and the tactical advantages and disadvantages of employing missiles, such as ATACMS, versus fixed-wing aircraft in the deep attack role.

The Army pointed out that fixed-wing CAS is still a significant source of firepower for the land commander—particularly in the early entry phase of an operation when the land force's organic firepower could be limited. Additionally, fixed-wing CAS allows the JFC to supplement or reinforce the fire support capabilities of his multinational partners. Another advantage of fixed-wing CAS—in close terrain, such as jungles and mountains, it could be the land force's fire support means of choice due to problems of ground observation and terrain masking trajectories.

The Army argued that the relegation of CAS to a collateral mission for the USAF would require the Army to spend additional resources to enhance its organic capabilities—more Field Artillery, attack helicopters and reconnaissance forces. Even with such increases, it isn't clear if these systems can substitute for the capabilities



The F/A-18 Hornet is the USMC's organic deep attack and CAS system in a Marine Force (MARFOR) area of operations.

inherent in fixed-wing CAS. The Navy and USMC agreed with the Army's argument. Indeed, the Marine Corps' traditional commitment to fixed-wing CAS was clearly evident at the Roles and Missions Commission.

The focal point for the development of Army positions and data on the deep attack and CAS issues was in the Office of the Deputy Chief of Staff for Operations and Plans (DCSOPS). When the roles and missions process began, the Army Staff formed a temporary office under (then) Brigadier General John Costello in DCSOPS. In addition, personnel from the Training and Doctrine Command (TRADOC), particularly the Deputy Chief of Staff for Doctrine, and several other agencies provided important research and analysis for the CAS and deep attack issues. Coordinated positions were developed on each issue; the Army regarded CAS and deep attack as two of the most important issues.

## The 1995 Decisions

*Commission Decisions on Deep Attack:* This issue had been contentious from the beginning. It was regarded as very important by the Army leadership because it influenced the future of ATACMS and the deep operations prerogatives of the land commander. Approved joint and Army doctrine had great impact on the issue. The Army's position was that the LCC must synchronize deep attack within the land AO and that he must have the ability to employ both organic and joint

systems. This issue also had implications for the control of theater missile defense attack operations, particularly within the land AO. The Army has long felt it has the best system to strike hostile missile launchers operating within the land AO—a very time-sensitive target.

The issue was subdivided into deep attack and precision conventional strike. The commission defined deep attack as all actions that can apply force outside the area of close combat. Options provided to the commissioners included:

1. Base Line. Each service retains its current portion of deep attack/precision conventional strike resources, forces and control mechanisms.
2. Without changing service responsibilities, cut unnecessary, redundant deep attack systems. This option was regarded by the Army Staff as a way to curtail future ATACMS buys.
3. Establish a framework for defining service and (or) functional component joint warfighting responsibilities within the context of a theater. The underlying message of this option was a significant change in joint doctrine and greater control of deep attack systems by the JFACC.
4. Change the FSCL from a permissive to restrictive fire support coordination measure by making it the forward boundary of the joint force land component commander's (JFLCC's) AO. This option was designed to increase the JFACC's control of deep operations.
5. Shift organizations, programs and doctrine to emphasize the use of precision conventional strikes to halt advancing

adversary forces. This option would have increased overall Department of Defense (DoD) airpower and resulted in further reductions to the bottom-up review force structure.

6. Determine if changing precision conventional strike capabilities to conduct conflict and (or) overseas presence dictates a re-balancing of the armed services aircraft mix. This option was directed toward congressional interest in the heavy bomber versus carrier aviation mix.

The Army's initial reaction to the options drafted by the commission staff was that only Option 1 was acceptable. The Army also objected to the way some of its input and recommendations had been used by the issue team leader. The Navy and USMC registered similar objections with the commission.

When the commission's May 1995 report was issued, the following recommendation was made about the deep attack/precision conventional strike issue:

"In a world with weapons of mass destruction and sophisticated air defense systems, there is great value in fighting from as far as possible beyond an enemy's reach. The CINCs have available several different weapon systems that can attack land and sea targets at various ranges....All these capabilities are useful. In the Gulf War, all were used. No CINC that we talked to proposed eliminating any of these capabilities, and it is almost inconceivable that one ever would because they allow the JFC to bring force to bear in a near simultaneous manner against the full array of enemy capabilities and sources of strength.

"However, it is not clear that DoD has the correct balance of these various weapons. Currently, no one in DoD has specific responsibility for specifying the overall number and mix of deep attack systems....Consequently, we recommend prompt initiation of a DoD-wide cost-effectiveness study focused on finding the appropriate combination and quantities of deep attack capabilities currently fielded and under development by all services. Only by approaching capabilities in the aggregate, from the CINCs' perspective rather than the services', can this particular 'who-needs-what' question be answered."

The Army concurred with this recommendation and urged the evaluation take place with service input. The commission recognized the value of deep attack systems provided by all components while

stating that a better understanding of the quantity and mix of joint systems was needed. The Army was particularly pleased that the commission rejected the notion of segmenting the battlefield.

The next step in this issue is an effort titled "Deep Attack/Weapons Mix Study," co-chaired by Dr. Edward L. Warner, Assistant Secretary of Defense for Strategy and Requirements; Dr. George R. Schneiter, Director for Strategic and Tactical Systems in the Office of the Secretary of Defense; and Rear Admiral Francis W. Lacroix, the Director for Force Structure, Resources and Assessments, J8. Initiated in August 1995, the study will examine deep attack weapon and supporting command, control, communications and intelligence (C<sup>4</sup>I) systems throughout DoD. The study will report out in April 1996.

The Army is deeply involved in this study. It has forwarded key data on Army weapons and C<sup>4</sup>I to the study group and has presented its view of the future battlefield, which is based on approved joint doctrine. The Army position is that a sound doctrinal framework, including an appreciation for the supporting-supported relationships among the components, must be the "base line" for the Deep Attack/Weapons Mix Study.

*Commission Decision on CAS:* The CAS team leader provided a number of options in this issue to the commissioners. These included:

1. All services are assigned CAS as a primary responsibility. This was essentially a status-quo recommendation. The Army preferred this option.

2. All services are assigned CAS as a primary responsibility with the exception of the Air Force that has CAS as a collateral responsibility. The Army regarded this as unacceptable.

3. Army and Marine Corps have CAS as a primary responsibility; Navy and Air Force have CAS as a collateral responsibility. The Army also saw this option as unacceptable.

4. Navy and Air Force have CAS as a primary responsibility; Army and Marine Corps have CAS as a collateral responsibility. The Marine Corps objected to this because fixed-wing CAS is so important to the Marine air-ground task force (MAGTF) concept.



Deadly Debut—ATACMS firing in Desert Storm, the Army's newest deep attack system.

The commission's 24 May 1995 report made the following recommendations on CAS:

"Today, CAS is performed by all services. In our view, this is appropriate. CAS is a vital capability that complements other fire support options. It is essential to the combined arms force that underpins US military success. CAS is only one of many functions performed by both fixed- and rotary-wing aviation...It is clear that no significant savings would result from removing the CAS function from one or more of the services unless inventories of multi-mission aircraft were reduced. It is equally clear that overall capabilities would decrease and the forces in the field would be weakened. CAS is an important and demanding function. We recommend increased joint CAS training for all the service's pilots and ground forces."

Needless to say, the Army was pleased with the commission's findings on the CAS issue.

A great deal of effort had gone into the commission's work—by the commissioners, their staff, the federally funded agencies and those in the service and CINC headquarters who participated in the process. The commission's report was intended to assist DoD and the Congress chart a course for our armed forces of the

21st century. With the Office of the Secretary of Defense and J8 Deep Attack/Weapons Mix Study, this effort is still underway.



**Lieutenant Colonel John Gordon IV was a member of the Deputy Chief of Staff for Operations and Plans (DCSOPS) Roles and Missions team for Deep Battle and several other issues. He is a Staff Officer in the Concepts, Doctrine and Force Policy Division in DCSOPS at the Pentagon. His previous assignment was as a project Officer in the Concepts Directorate of Headquarters, Training and Doctrine Command at Fort Monroe, Virginia. Among other assignments, Lieutenant Colonel Gordon served two tours in the 2d Infantry Division Artillery in Korea and a tour with the 82d Airborne Division Artillery at Fort Bragg, North Carolina. He holds a Master of Arts in International Relations from Saint Mary's University in San Antonio, Texas, and is completing his Master of Business Administration from Marymount University in Arlington, Virginia. In addition to nine other articles published in *Field Artillery*, Lieutenant Colonel Gordon has had articles published in *Naval Institute Proceedings*, *Army*, *Military Review* and the *Joint Force Quarterly*.**



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### Redleg Hotline:

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Questions/24-Hour Response  
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### Tactical Software Hotline:

Software Problems/24-Hour  
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### Senior Fire Support Conference

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Officer Management Branch  
4301/6383

Fire Support Research Collection  
(ATSF-AI-RC) 6783  
Morris Swett Library 4525/2982

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Development Division (ATSF-DT) 4050  
FA OES/WOES/NCOES Programs  
of Instruction  
CMF 13 Programs of Instruction  
and Soldier Training Products  
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Development

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FA Army Correspondence Course  
Program (ACCP) 6101  
ATRRS 3611  
Total Army Training System  
Courses 5903  
T-Net Training on Demand 6101

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Combined Arms 4653/6808  
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MLRS (MOS 13M and 13P) 6688/6324  
Survey (GPS, PLGR and MOS 82C  
Instruction) 2297/2805/FAX 3216  
M119/M198 Maintenance (ASI U6) 2323  
OBC Revision 6224/5409  
Manual/Automated Gunnery 6224/5409  
Unit-Level Logistics System (ULLS) 2323  
MOS 13E Instruction 6803/5345

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OIC/NCOIC, Marine Cannon  
Crewman Course (MOS 0811)  
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IFSAS/MCFS NET Team 2371

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PLDC 4241/3562

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3-321 FA (BCT/OSUT) ATZR-KI-O)  
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# Shaping Battlespace

## More than Just Deep Attack

Brigadier General Randall L. Rigby, Chief of Field Artillery,  
and Brigadier General Lon E. Maggart, Chief of Armor

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*Today we're writing the future warfighting doctrine—for the Army of the 21st century. In Force XXI, how we shape battlespace—set the conditions that allow commanders to dominate an enemy—will dramatically impact how we fight decisive operations. We envision future commanders shaping battlespace with such skill and authority that their operations will culminate in engagements where their forces have an assured overwhelming advantage.*

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The core of Force XXI doctrine will be built around six operational patterns—projecting the force, protecting the force, gaining information dominance, shaping the battlespace, conducting decisive operations and sustaining and transitioning to future operations. These patterns define the essential tasks of military operations. As technology and our warfighting concepts evolve, the importance of shaping battlespace in support of the other operational patterns also will grow. Shaping battlespace in the 21st century will mean more than just deep attacks to attrit enemy formations. Shaping will become an integral tool for supporting a range of activities throughout the battlespace.

Shaping the battlespace means setting conditions that allow commanders to freely apply combat power. In Force XXI operations, commanders must have the ability to accomplish the mission and protect the force through every phase of an operation—from initial entry to reconstitution and preparation for the next deployment. To ensure this freedom of action, commanders must be able to control a volume of space at a specific time. This task is a prerequisite for successfully implementing the other operational patterns. As our concepts evolve, we'll address the hard questions that define the role of controlling battlespace in Force XXI.

### **What's changing in Force XXI?**

Force XXI's capability to conduct information operations will significantly expand commanders'

opportunities to shape battlespace. Commanders will employ advanced digital systems to collect, collate and distribute information with astonishing speed. These systems also will tailor the information to the commanders' needs, allowing them to make accurate tactical decisions quickly. Commanders will use these systems to determine how best to cripple the enemy's ability to gain information and make decisions.

Accurate information will significantly enhance our ability to strike with precision fires and maneuver at depth. We'll be able to team our information advantage with future systems designed to exploit information warfare. Direct and indirect fire weapons will have overmatching accuracy, range and rate of fire. Force XXI systems, such as Crusader, M1A2 Abrams, the armored gun system (AGS) and Comanche, will have the speed and endurance to out-pace any enemy. Commanders will be able to expand the size of their battlespace significantly.

These capabilities will enhance our ability to conduct full dimensional warfare. Commanders will shape battlespace across the width and depth of the battlefield. For example, they might attack coastal targets, such as land-based radars and anti-ship missile sites. Army attack of land-based littoral threats would allow for naval air and strike operations to support decisive land battles. Ground commanders also might shape battlespace to facilitate employing air and space-based assets.

In addition, commanders will set conditions in the invisible dimensions of battle—time, the electromagnetic spectrum and the human dimension (i.e., psychological and physiological aspects of combat). This ability to fight and function in every dimension of battlespace is the essence of full-dimensional warfare.

Within this expanded battlespace, commanders will exploit long-range fires and maneuver, attacking the enemy simultaneously throughout the depth of the battlespace—giving him no rest, no place to hide and multiple ways to die. The frequency and effectiveness of these attacks will be unprecedented. The effects will bewilder the enemy, speeding his defeat. We need doctrine that matches these extraordinary capabilities—operational concepts to allow commanders to exploit the full potential of Force XXI.

**How will Force XXI commanders shape battlespace?** Commanders will begin by envisioning an end state for their operation and a concept of how they'll conduct decisive action. Information operations will offer future commanders a distinct advantage in visualizing their operations and taking the initiative better than any time in the past. However, leaders will never have perfect knowledge of all activities in their battlespace. Even if such a capability could be achieved, no enemy commander would sit passively by and allow his opponent to freely exercise that advantage. Twenty-first century warfare will be a continuous contest of action and counteraction between two determined, wary foes.

The commander will have to organize his activities to create windows of advantage. He must identify the points in time and space when he can establish a distinct advantage in critical information over the enemy and then use that opportunity to shape his battlespace. This shaping will, in turn, help him expand his information edge, creating additional windows of advantage, culminating in the conditions to support decisive action. Before the commander can begin the shaping process, however, he must specify his battlespace conditions in terms of enemy and friendly forces and the environment. First, he must determine when, where and in what posture he wants the enemy before the decisive action. Second, he must define the position, condition and posture of the friendly force. Finally, he must determine the appropriate environmental conditions that will support his operations. These include factors other than those directly relating to

the combat forces—from visualizing the terrain to dealing with the press.

Future commanders will see the greatest changes in setting conditions on the battlefield in relation to the environment. The future will bring both new possibilities and new problems. Force XXI will have expanded capabilities to set environmental conditions. Meteorological systems, for example, will enable the force to determine precise weather conditions in real-time throughout the battlespace. Commanders will, in effect, "own the weather." This capability will provide commanders unimagined capabilities to maneuver and target at depth.

In the 21st century, commanders also will face many environmental challenges. The expanding global information environment (GIE), for example, will increase the demands of maintaining operational security in a world where even low-tech countries have high-tech commercial media and communications access. To preclude commanders from being overwhelmed by these concerns, our doctrine must stress freeing tactical commanders from having to manage complex environmental factors. Information technology is ideally suited for this task.

After determining the conditions that must be established, the commander develops specific tasks to achieve them and ensures the tasks are part of a holistic, synchronized plan. These tasks may include a host of actions from positioning forces to sustainment. They may include non-combat-related activities such as controlling the civilian population. Completing these tasks will set the conditions necessary to accomplish the mission and protect the force.

While shaping battlespace involves more than striking the enemy, the importance of non-lethal as well as lethal attack will expand commensurate with the increased capabilities of Force XXI. As a result, the Army's decide, detect, deliver and assess (D<sup>3</sup>A) targeting process will become an increasingly critical tool for shaping battlespace. This conclusion is supported by the results of all the Army's advanced warfighting experiments (AWEs). The AWEs test future warfighting concepts, systems and organizations and have demonstrated that D<sup>3</sup>A is still the best means for developing and attacking critical high-payoff targets.



Armored Gun System (AGS)

At the same time, AWEs have shown we must ensure we optimize the process for Force XXI operations. Though there are exceptions, today's D<sup>3</sup>A is essentially a linear, sequential process with human intervention and assessment each step of the way. Future capabilities will make the process more dynamic. For example, enhanced situational awareness and digitized command and control will allow more flexible employment of sensor-to-shooter links, automating intermediate steps in the process. In Force XXI, commanders will have significantly greater options in how they implement D<sup>3</sup>A.

Future commanders also will need expanded capabilities to command and control shaping operations. No matter what our future staffs look like, they must be integrated to facilitate operations at depth. The deep operations coordination cell (DOCC) or a similar capability will be essential for shaping battlespace. The DOCC, currently in all our corps, calls for linking all elements of the staff with automated systems for planning and executing deep operations. The DOCC also includes joint linkages to integrate joint deep strike and reconnaissance assets.

Results of the AWEs reinforce the effectiveness of the DOCC concept and suggest that to shape battlespace more effectively, we may need to establish DOCCs at the division and, perhaps, the brigade and division artillery levels. Our challenge is to develop innovations that proliferate the capabilities of the DOCC

in the smaller and more agile staffs and command centers of the future Army.

**How will Force XXI fight?** We must design the way Force XXI fights to exploit our capability to shape battlespace. We're developing future operational concepts by focusing initially on the role of the division in combat operations.

The Training and Doctrine Command (TRADOC) has created a futuristic warfighting scenario to help develop and war-game our concepts. In this scenario, a Force XXI division is assigned the mission of maneuvering at depth and defeating a numerically superior, high-tech mechanized force. The enemy can conduct information operations supported by a range of human intelligence (HUMINT), imagery intelligence (IMINT) and electronic intelligence (ELINT). The battlefield is large and complex with varied, compartmentalized

terrain features interspersed with urban environments. Insights gained from applying the Force XXI concepts to this fight will become the foundation for future doctrine.

As part of this process, we've developed a menu of tactics, techniques and procedures (TTP) that could be used by future commanders to shape battlespace. Some are new concepts that emphasize the conduct of simultaneous operations at depth and best exploit information operations. Others are proven TTP that show expanded potential when employed with Force XXI systems. We applied these TTP to our warfighting scenario based on a commander's concept of the operation and the conditions he set for decisive operations.

The scenario required us to shape battlespace to support dispersed operations over a wide area. The Force XXI division will plan and conduct engagements on an extended battlefield, maneuvering units in a dispersed formation. Dispersed operations will facilitate simultaneous, multiple attacks in depth. They also will limit the enemy's ability to determine friendly intentions and identify targets for attack by precision munitions.

To maneuver in these formations, forces must have the flexibility to move when and where required to bypass obstacles, go deep fast using the path of least resistance and then mass effects at the decisive

points. Operations can't be constrained by the limitations imposed by conventional graphical control measures, such as a fire support coordination line (FSCL). In fact, we may need a whole new framework to describe these operations on a battlefield where close, deep and rear activities are intermingled throughout the battlespace.

Battlespace must be shaped in a manner that ensures the freedom to maneuver dispersed units, protects and sustains the force and retains the commander's information advantage. To accomplish this on a dispersed battlefield, the division commander will need a lot of help. Many of the non-combat functions required to shape battlespace will not be organic to the division. Example: the division in this scenario would need echelon-above-division (EAD) assets to limit the HUMINT threat by a combination of counterintelligence, civil and public affairs operations. To facilitate dispersed maneuver in Force XXI, division and EAD operations will have to be synchronized to greater degree than ever before.

In this scenario, the division began to shape battlespace by employing joint precision strikes (JPS). JPS integrates organic, theater and national assets, including the extended-range Army tactical missile system (ATACMS) to attack high-payoff targets with precision fires. JPS was directed against key enemy intelligence nodes to disrupt his ability to collect and process IMINT and ELINT data. By limiting enemy information operations, he can draw only an incomplete picture of the division's scheme of dispersed maneuver. At best, he could detect only scattered movements that are useless for targeting or determining the force's size or intentions.

To fully exploit dispersed formations, freedom to maneuver by air is particularly crucial to the Force XXI division. Air maneuver will allow commanders to rapidly position forces at depth at a time and place the enemy could not anticipate, react to or control.

In this scenario, we set the conditions for air maneuver by dispatching a strike force of MLRS launchers, electronic warfare (EW) assets and air defense systems forward of the division's advance. The strike force was a temporary organization comprised of attack assets and a small security and sustainment force designed specifically to control a corridor of space for follow-on air maneuver.

First, EW attack exposed weaknesses in the enemy's air defense coverage. The

strike force exploited this non-lethal attack with a barrage of extended-range guided MLRS rockets armed with smart warheads. These strikes destroyed critical targets, creating gaps in the enemy air defense coverage. Meanwhile, the friendly air defense assets closed off the enemy's air attack routes, limiting his ability to conduct close air support (CAS) or employ unmanned aerial vehicles (UAVs) in specific areas.

The strike force opened an air corridor through which the division inserted a raid force of attack and scout helicopters and air transport. The transport carried infantry forces, air defense, sustainment support and a complement of high-mobility artillery rocket system (HIMARS) launchers and light artillery. Stretching deep into enemy territory, the raid force established forward attack bases. The attack bases allowed the commander to position additional strike forces at depth, holding them in a position where they were poised to strike the enemy force at its most vulnerable points.

Simultaneously, friendly heavy ground forces were positioned for the decisive operation. In dispersed formations, the heavy units infiltrated the enemy instead of conducting a traditional movement-to-contact. Artillery units also advanced in dispersed formations, positioning themselves to deliver massed fires against critical targets in support of the decisive attack. In this engagement, the artillery was used to rapidly defeat the enemy's divisional artillery group.

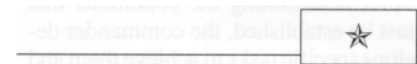
By employing the tactics of dispersed air and ground maneuver supported by precision fires, the division commander shaped his battlespace so the enemy was vulnerable to the simultaneous application of combat power. Because the enemy was denied critical information on the location and intentions of the friendly force—was unable to identify the large, main force about to attack—he continued to maneuver in column formation. Attack aviation employing the Apache Long-Bow, air assault forces supported by AGS and rocket and cannon fires from the forward attack base ambushed the rear of the enemy force; simultaneously, the heavy forces overwhelmed the lead units in column. The enemy, denied air defense, CAS and artillery coverage, was unable to coordinate a response to the multiple threats from multiple directions.

As the operation developed, the commander continued to exploit information operations to visualize the

developing situation and verify the conditions were set for decisive action. Only when conditions were set did the commander commit the preponderance of his combat power to close combat. The enemy force found itself without tactical cohesion and, suddenly, overwhelmed by massed fires.

**What's next?** This scenario illuminates the tremendous potential of shaping battlespace—not just deep attack, but simultaneous operations across the depth of battlespace to set the conditions of combat. Division XXI's maneuver forces should never be committed until absolutely needed and then under conditions of decisive advantage. Force XXI doctrine will arm 21st century commanders with the intellectual weapons to shape battlespace for these engagements.

The TTP for shaping battlespace will be exercised in the divisional AWEs. These experiments combined with our other Force XXI efforts will help refine the organizational, materiel and doctrinal requirements for the Army of the 21st century. Ultimately, this will lead to a new *FM 100-5 Army Operations*—a powerful new statement of how America's Army will remain the dominant land power on the battlefields of the future.



**Brigadier General (Promotable) Randall L. Rigby is Commandant of the Field Artillery School and Commanding General of the Field Artillery Center and Fort Sill, Oklahoma. Other assignments include serving as Deputy Commandant of the Command and General Staff College at Fort Leavenworth, Kansas; Deputy Director for Assessment, J8, Joint Staff at the Pentagon; and Executive Officer to the Vice Chief of Staff of the Army, also at the Pentagon. He commanded the 6th Infantry Division (Light) Artillery in Alaska.**

**Brigadier General (Promotable) Lon E. Maggart is the Commandant of the Armor School and Commanding General of the Armor Center and Fort Knox, Kentucky. His assignments include serving as Deputy Commanding General of the Armor Center and Fort Knox and Assistant Commandant of the Armor School; Executive Officer to the Commanding General of the Training and Doctrine Command, Fort Monroe, Virginia; and commander of 1st Brigade, 1st Infantry Division (Mechanized) during Operations Desert Shield/Storm.**



# 1996 *Field Artillery* Author's Guide



**Readership.** A bimonthly 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.

**Subjects.** We accept articles on subjects related to the tactical, operational and strategic levels of war as long as the contents relate to fire support or are of special interest to our readers. But the majority of our articles address issues at the tactical or operational levels.

If writing about the past, analyze the events and show how they apply to Field Artillerymen today—not just record history. If identifying current problems, propose solutions. In addressing the future, clearly explain your points and their implications.

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

*Field Artillery* has a theme for each edition, but we're not theme-bound. In each edition, we include several articles not related to the theme.

**Style.** Write clearly and concisely and put your thesis statement (bottom line) up front with the body of your article systematically contributing to your thesis. One way to check your organization is to add sub-heads throughout your article and see if the sequence of your points is logical and contributes to your thesis. Be specific about your points, giving examples when possible.

When writing, think like the Redleg in the field—what is it, what will it do for me and how do I implement it (or when will I get it)? When using an acronym, spell it out the first time you use it. When mentioning a new or rare concept, system or technique, briefly explain it, even if it isn't your main point.

**Submissions.** Include—

- A clean, double-spaced, typed, unpublished manuscript of no more than 3,000 words with footnotes and bibliography, as appropriate. If possible, send a Macintosh (3 1/2-inch) or IBM disk in ASCII text format with the hard copy of the manuscript. Except in the case of Army-wide "news" items, please *do not submit a manuscript to **Field Artillery** while it's being considered elsewhere.*

- A comprehensive biography, highlighting experience and training that credentials you as an author on your subject. Include your full name, current job, address and telephone and FAX numbers. If there is any change in your position or address before the article is published, notify the *Field Artillery* staff.

- Graphics with captions to illustrate and clarify your article. These include black and white or color photographs of any size (no Polaroids, please), drawings, slides, maps, charts, graphs, unit crests or symbols, etc.

By the dates listed in the figure, send your manuscript, biography and graphics to—

**Field Artillery**  
**P.O. Box 33311**  
**Fort Sill, Oklahoma 73503-0311**

The *Field Artillery* staff will edit all manuscripts and put them in the magazine's style and format. In addition, we'll staff selected articles to subject matter experts to check them for accuracy, safety and classified information. You will receive a "check copy" of the edited version before publication. If you have questions, feel free to call the Editor at DSN 639-5121 or 6806 or commercial (405) 442-5121 or 6806. To FAX, call DSN 639-5121 or commercial (405) 442-5127.



## Field Artillery Themes for 1996

Edition	Theme	Copy Deadline
January-February	Targeting	18 Sep 95
March-April	Training	20 Nov 95
May-June	The Fire Support-Aviation Team	17 Jan 96
July-August	History Writing Contest	5 Feb (Contest)* 20 Mar (Other)
September-October	Digitizing the Force	15 May
November-December	Red Book Annual Report	17 Jul

\* 1996 US Field Artillery Association History Writing Contest rules are on Page 45 of the June 1995 edition.



# Active Army FA Regiment Reflagging Plan

This chart lists all the active Army FA regiments that are reflagging from late FY 95 through FY 96; the information listed is accurate at the time of publication but is subject to revision.

Most of the changes listed are related to the reflagging of divisions. For example, the 2d Armored Division at Fort Hood, Texas, will reflag as the 4th Infantry Division, now at Fort Carson, Colorado; the 2d Armored Division will inactivate in early 1996.

On 15 February 1996, three divisions will be involved in reflagging. The 3d Infantry Division (Mechanized) in Germany will reflag as the 1st Infantry Division (Mechanized), currently at Fort Riley, Kansas. One brigade of the 1st Infantry Division will remain at Fort Riley. Also on 15 February, the 24th Infantry Division (Mechanized), headquartered at Fort Stewart, Georgia, will reflag as the 3d Infantry Division with one brigade at Fort Benning, Georgia; the 24th Infantry Division will inactivate.

By the end of FY 96, the plan will be complete: units will be realigned with the divisions/major commands based on several factors. These include restoring traditional divisional associations, retaining units with the best histories, maximizing the number of regimental flags and minimizing turbulence. FA regiments not listed in the chart have no reflaggings scheduled.

Regiment	Division Association	Assignments		Turbulence	Effective Date*
		Current	Future		
<b>1st FA</b> 4th Bn (155 SP)	6ID	Inactive	1AD	Reflag 4-5 FA (1ID) as 4-1 FA at Fort Riley	15 Feb 96
<b>4th FA</b> 2d Bn (MLRS)		Inactive	Fort Sill	Reflag 3-9 FA (214 FA Bde) as 2-4 FA	4/FY 96
<b>5th FA</b> 2d Bn (155 SP)	1ID	Inactive	Fort Sill	Reflag 2-17 FA (212 FA Bde) as 2-5 FA	4/FY 96
<b>6th FA</b> 1st Bn (155 SP) 3d Bn (105)	1ID	Inactive Inactive	1ID 10MD	Reflag 3-1 FA (SID) as 1-6 FA in Germany Reflag 1-7 FA (10MD) as 3-6 FA	15 Feb 96 15 Dec 95
<b>7th FA</b> 1st Bn (155 SP)	1ID	10MD	1ID	Reflag 5-41 FA (3ID) as 1-7 FA in Germany	15 Feb 96
<b>8th FA</b> 2d Bn (105)	7ID/25ID	7ID**	25ID	Reassign to 25ID at Fort Lewis	16 Aug 95
<b>9th FA</b> 1st Bn (155 SP)	3ID	Inactive	3ID	Reflag 3-41 FA (24ID) as 1-9 FA at Fort Stewart	15 Feb 96
<b>10th FA</b> 1st Bn (155 SP)	3ID	Inactive	3ID	Reflag 4-41 FA (24ID) as 1-10 FA at Fort Benning	15 Feb 96
<b>13th FA</b> Battery A (MLRS) 3d Bn (MLRS)	4ID/24ID	24ID Inactive	3ID Fort Sill	Reassign to 3ID at Fort Stewart Reflag 4-27 FA (214 FA Bde) as 3-13 FA	15 Feb 96 15 Jan 96
<b>14th FA</b> 1st Bn (MLRS)	2AD	2AD	Fort Sill	Reflag 5-17 FA (214 FA Bde) as 1-14 FA	15 Mar 96
<b>15th FA</b> 2d Bn (105)	2ID	Inactive	10MD	Reflag 2-7 FA (10MD) as 2-15 FA	2/FY 96
<b>16th FA</b> 3d Bn (155 SP)	4ID/9AD	Inactive	4ID	Reflag 1-14 FA (2AD) as 3-16 FA at Fort Hood	15 Mar 96
<b>17th FA</b> 2d Bn (155 SP)	2ID	Fort Sill	2ID	Reflag 8-8 FA as 2-17 FA in Korea	3/FY 96
<b>20th FA</b> Battery B (MLRS)	4ID/5ID	Inactive	4ID	Reflag A/92 FA (2AD) as B/20 FA at Fort Hood	15 Mar 96

Regiment	Division Association	Assignments		Turbulence	Effective Date*
		Current	Future		
<b>22d FA</b> 3d Bn	4AD	TRADOC Inactive	TRADOC	Reflag 1-31 FA (FATC) as 3-22 FA at Fort Sill	15 Apr 96
<b>25th FA</b> Battery B (TAB) Battery C (TAB)		3ID Inactive	1ID 1AD	Reassign to 1ID in Germany Reflag C/333 FA (1AD) as C/25 FA in Germany	15 Feb 96 15 Feb 96
<b>26th FA</b> Battery A (TAB)	9ID	4ID	4ID	Reflag H/25 FA (2AD) as A/26 FA at Fort Hood	15 Mar 96
<b>27th FA</b> 4th Bn (155 SP)	1AD	Fort Sill	1AD	Reflag 4-29 FA (1AD) as 4-27 FA in Germany	15 Feb 96
<b>33d FA</b> Battery A (MLRS)	1ID	TRADOC TRADOC (1-33 FA, FATC)	1ID	Withdraw regiment from TRADOC New battery in Germany	15 Aug 95 15 Feb 96
<b>39th FA</b> Battery A (TAB)	3ID	Fort Bragg (1-39 FA, 18 FA Bde)	3ID	Reflag G/333 FA (24ID) as A/39 FA at Fort Stewart	15 Feb 96
<b>40th FA</b> 1st Bn		Inactive	TRADOC TRADOC	Allot regiment to TRADOC Reflag 3-321 FA (FATC) as 1-40 FA at Fort Sill	15 Jan 96 15 Jan 96
<b>41st FA</b> 1st Bn (155 SP)	3ID	24ID	3ID	Reassign to 3ID at Fort Stewart	15 Feb 96
<b>42d FA</b> 4th Bn (155 SP)	4ID	Inactive	4ID	Reflag 1-3 FA (2AD) as 4-42 FA at Fort Hood	15 Mar 96
<b>77th FA</b> 1st Bn (MLRS)	4ID	Inactive	Fort Sill	Reflag 5-18 FA (75 FA Bde) as 1-77 FA	4/FY 96
<b>79th FA</b> 1st Bn	7ID	Inactive	TRADOC TRADOC	Allot regiment to TRADOC Reflag 1-33 FA (FATC) as 1-79 FA at Fort Sill	15 Aug 95 15 Aug 95
<b>94th FA</b> Battery A (MLRS)	4AD	Inactive	1AD	New battery in Germany	16 Jul 95
<b>321st FA</b>  1st Bn (155 T) 3d Bn (155 T)	82ABD/ 101ABD	TRADOC  Inactive TRADOC	  Fort Bragg Fort Bragg	Withdraw regiment from TRADOC (3-321 FA, FATC) Reflag 1-39 FA (18 FA Bde) as 1-321 FA Reflag 3-8 FA (18 FA Bde) as 3-321 FA	15 Jan 96  15 Jan 96 15 Jan 96
<b>377th FA</b> 1st Bn (155 T)	101ABD	Inactive	Fort Bragg	Reflag 5-8 FA (18 FA Bde) as 1-377 FA	15 Jan 96

\*The official Effective Dates listed may not be the same dates units have selected for reflagging ceremonies.

\*\*Elements of the 7th Infantry Division (Light) were still officially in existence at the time. Source for Chart Information: Center of Military History, Washington, DC

**Legend:**

<b>1AD</b> = 1st Armored Division	<b>9AD</b> = 9th Armored Division	<b>SP</b> = Self-Propelled
<b>1ID</b> = 1st Infantry Division	<b>9ID</b> = 9th Infantry Division	<b>TAB</b> = Target Acquisition Battery
<b>2AD</b> = 2d Armored Division	<b>10MD</b> = 10th Mountain Division	<b>TRADOC</b> = Training and Doctrine Command
<b>2ID</b> = 2d Infantry Division	<b>24ID</b> = 24th Infantry Division	<b>Fort Benning, Georgia</b>
<b>3ID</b> = 3d Infantry Division	<b>25ID</b> = 25th Infantry Division	<b>Fort Bragg, North Carolina</b>
<b>4AD</b> = 4th Armored Division	<b>82ABD</b> = 82d Airborne Division	<b>Fort Hood, Texas</b>
<b>4ID</b> = 4th Infantry Division	<b>101ABD</b> = 101st Airborne Division	<b>Fort Lewis, Washington</b>
<b>5ID</b> = 5th Infantry Division	<b>Bde</b> = Brigade	<b>Fort Riley, Kansas</b>
<b>6ID</b> = 6th Infantry Division	<b>FATC</b> = FA Training Center, Fort Sill, Oklahoma	<b>Fort Sill, Oklahoma</b>
<b>7ID</b> = 7th Infantry Division	<b>MLRS</b> = Multiple-Launch Rocket System	<b>Fort Stewart, Georgia</b>

# Field Artillery Assignment Branches

As of 1 November 1995

## Active Army Branch Teams

### Officers

**LTC(P) David P. Valcourt**  
Field Artillery Branch Chief

**LTC Gerard M. Walsh**  
Colonels Division  
Colonel Assignments

**LTC John A. Bonsell**  
Lieutenant Colonel Assignments

**MAJ Jeffrey C. Lieb**  
**CPT(P) Stanley A. King**  
Major Assignments

**CPT David J. Brost**  
**CPT William R. Turner**  
Captain Assignments:  
Company-Grade Qualified

**CPT(P) Steven A. Sliwa**  
Captain Assignments: OAC

**CPT Kenneth L. Boehme**  
Future Readiness/Functional  
Area Designation/Professional  
Development and Lieutenant  
Assignments: Accessions/OBC

**CW4 John M. Clancy**  
Warrant Officer Career Manager  
Assignments

### Addresses and Telephone Numbers

**Lieutenant Colonels (P) and Colonels**  
Commander, PERSCOM ATTN:  
TAPC-OPC  
200 Stovall Street  
Alexandria, VA 22332-0412  
DSN 221-7862  
Commercial (703) 325-7862  
FAX: DSN 221-2783  
Commercial FAX (703)  
325-2783

**Lieutenant Colonels to Lieutenants:**  
Commander, PERSCOM ATTN:  
TAPC-OPE-F  
200 Stovall Street  
Alexandria, VA 22332-0414  
DSN 221-0116  
Commercial (703) 325-0116  
FAX: DSN 221-5463  
Commercial FAX  
(703)-325-5463

**Warrant Officers:**  
Commander, PERSCOM ATTN:  
TAPC-OPW-FA/AD 200 Stovall  
Street, Suite 6N07 Alexandria,  
VA 22332-0420  
DSN 221-5240/7837  
Commercial (703)  
325-5240/7837  
FAX: DSN 221-5232  
Commercial FAX (703)  
325-5232

### Officers' Microfiche Records

Request your microfiche in writing; include your name, rank, SSN and address, and be sure to sign the request, Mail it to:

Commander, PERSCOM ATTN:  
TAPC-MSR-S  
200 Stovall Street  
Alexandria, VA 22332-0444

### Enlisted

**LTC David C. Cutler**  
Field Artillery Branch Chief

**SGM Danny T. Lorenz**  
Branch Sergeant Major

**MSG David L. Evans**  
Senior Career Advisor  
13B (SFC), 13Z (1SG/MSG) and  
Drill  
Instructor

**SFC(P) Axel R. Rivera**  
13B (PVT thru SSG)

**SFC Alan H. Williams**  
13C, 13E and 13F

**SFC(P) Jonny A. Murray**  
13R, 82C and 93F

**SFC David P. Hixson**  
13M, 13P and Recruiting Duty

**SFC Roger L. Bunch**  
Reclassification/Qualitative

Management/Retirement/Service  
Schools

**Mr. William E. Wagner**  
ANCOG

### Addresses and Telephoned Numbers

Commander, PERSCOM ATTN:  
TAPC-EPK-F  
2461 Eisenhower Avenue  
Alexandria, VA 22331-0452  
DSN 221-1585  
Commercial (703) 325-1585  
FAX: DSN 221-4533  
Commercial FAX (703)  
325-4533

### Enlisted Microfiche Records

To request your microfiche, call the Enlisted Records Evaluation Center at Fort Benjamin Harrison, Indiana, at DSN: 699-3714 or Commercial (317) 542-3714. Follow the computerized instructions; the microfiche will automatically be mailed to your duty station address.



## Army Reserve Branch Teams

### Officers

**LTC Linda M. Witherell**  
Colonels

**LTC Kevin Sanford**  
Field Artillery Branch Chief  
Lieutenant Colonels

**MAJ Sheldon J. Pratt**  
Majors  
Lieutenants

**MAJ Joseph C. Frazier**  
Captains

**CW5 Wilbur A. Christopher**  
Warrant Officer Branch Chief

**CW2 Linda Thompson**  
Warrant Officers

### Addresses and Telephone Numbers

**Colonels**  
Commander, ARPERCEN ATTN:  
ARPC-OP-COL  
9700 Page Avenue  
St. Louis, MO 63132-5200  
DSN 892-3431  
Commercial (314) 538-3431  
Toll Free 1-800-325-4387  
FAX: DSN 892-2068  
Commercial FAX (314)  
538-2068

**Lieutenant Colonels to Lieutenants:**  
Commander, ARPERCEN  
ATTN: ARPC-OPC-FA/AD  
9700 Page Avenue  
St. Louis, MO 63132-5200  
DSN 892-3302/3301/3349  
Commercial (314)  
538-3302/3301/3349

Toll Free 1-800-325-4950  
FAX: DSN 892-2548  
Commercial FAX (314)  
538-2548

**Warrant Officers:**  
Commander, ARPERCEN ATTN:  
ARPC-OPF-WO  
9700 Page Avenue  
St. Louis, MO 63132-5200  
DSN 892-3997  
Commercial (314) 538-3997  
Toll Free 1-800-325-4361  
FAX: DSN 892-3345  
Commercial FAX (314)  
538-3345

### Enlisted

All personnel assisted on a  
first-come, first-served basis.

**MSG William E. Richardson**  
Field Artillery/Air Defense

Branch Chief  
**SFC Tina M. Otis**  
**SFC Charles W. Toland**  
**SFC Susan Clark**  
Commander, ARPERCEN

### Address and Telephone Numbers

ATTN: ARPC-EPA-FA/AD  
9700 Page Avenue  
St. Louis, MO 63132-5200  
DSN 892-2215/2217  
Commercial (314)  
538-2215/2217  
Toll Free 1-800-325-4730  
FAX: DSN 892-2865  
Commercial FAX (314)  
538-2865





# Active Army and Marine Units in CONUS

As of 1 November 1995





# Active Army and Marine Units OCONUS

As of 1 November 1995

### Italy

**VICENZA**  
D/319 FA (105)

### Okinawa

**CAMP FOSTER**  
12 Mar (HQ)  
3/12 (155 T) USMC

### Republic of Korea

**CAMP HOVEY**  
8-8 FA (155 SP)

**CAMP CASEY**  
1-15 FA (155 SP)

**CAMP STANLEY**  
2 IN D/A (HHB)  
6-37 FA (+) (MLRS)  
F/26 FA (TA)

### Republic of Germany

**WIESBADEN**  
V C/A (HHB)

**KIRCHGOENS**  
2-3 FA (155 SP)

**SCHWEINFURT**  
5-41 FA (155 SP)

**BAMBERG**  
3 MECH D/A (HHB)  
3-1 FA (155 SP)  
B/25 FA (TA)  
A/76 FA (MLRS)

**BABENHAUSEN**  
41 FA Bde (HHB)  
1-27 FA (MLRS)  
A/25 FA (TA)

### Hawaii

**KANEOHE BAY**  
1/12 (155 T) USMC

**SCHOFIELD BARRACKS**  
25 IN (L) D/A (HHB)  
3-7 FA (105)  
1-8 FA (155 T)  
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)



# Army and Marine Reserves

As of 1 November 1995



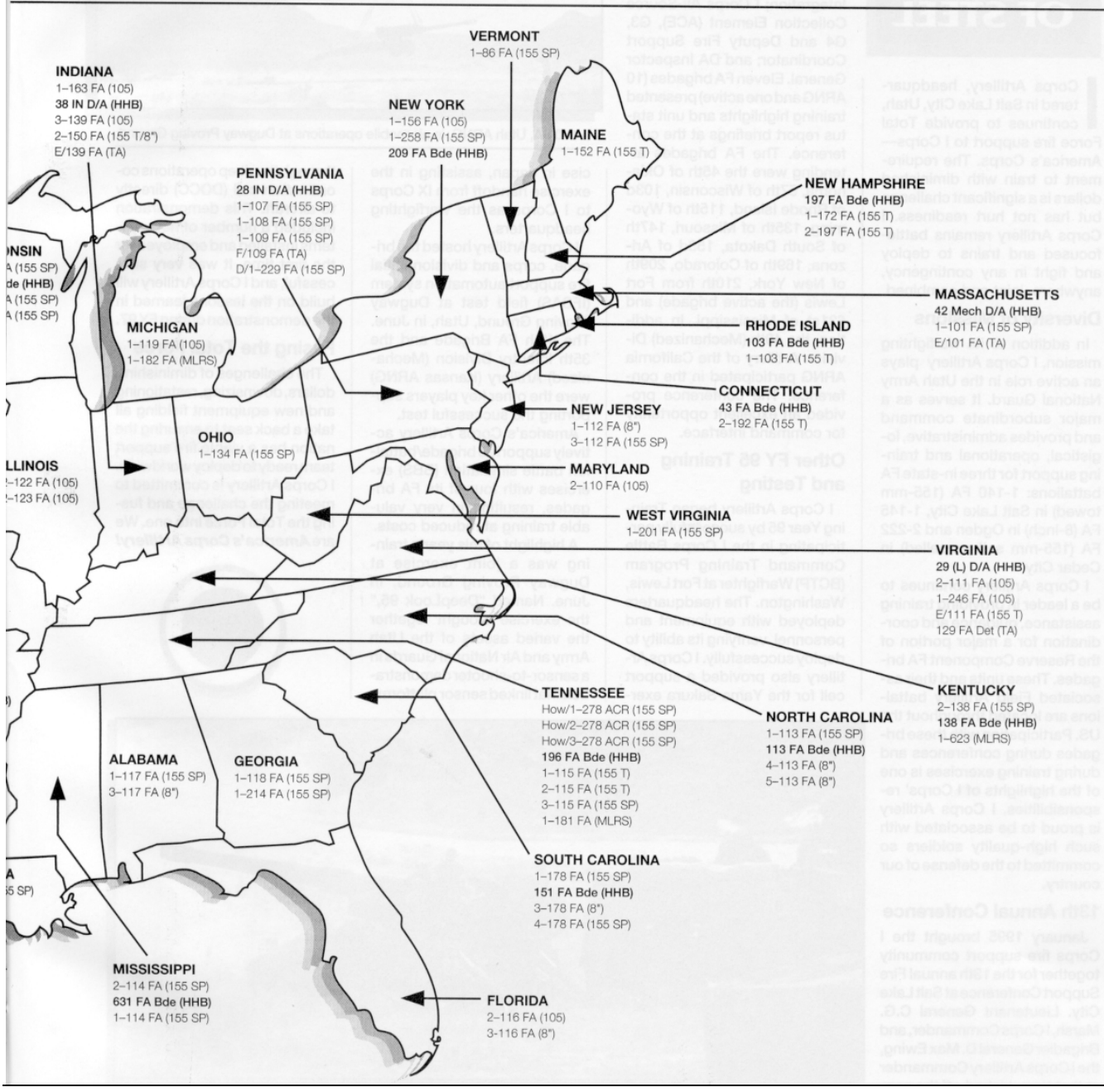
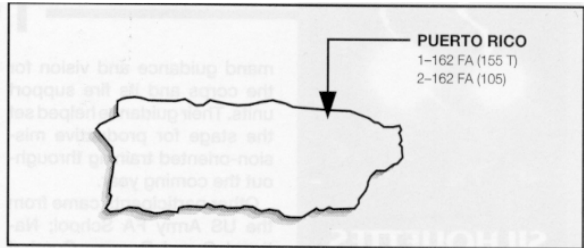
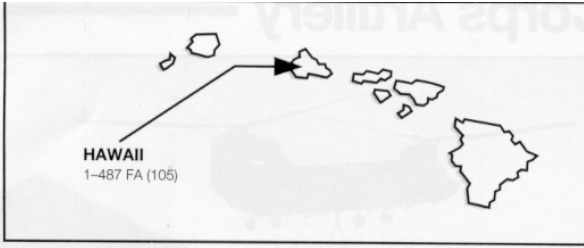


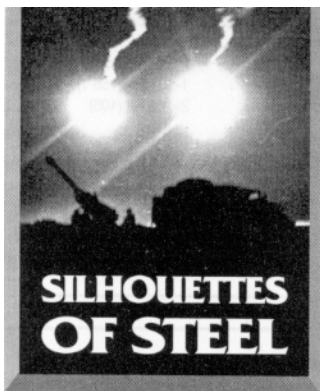
# Army National Guard

As of 1 November 1995









# I Corps Artillery

I Corps Artillery, headquartered in Salt Lake City, Utah, continues to provide Total Force fire support to I Corps—America's Corps. The requirement to train with diminished dollars is a significant challenge but has not hurt readiness. I Corps Artillery remains battle-focused and trains to deploy and fight in any contingency, anywhere, joint and combined.

## Diversity of Missions

In addition to its warfighting mission, I Corps Artillery plays an active role in the Utah Army National Guard. It serves as a major subordinate command and provides administrative, logistical, operational and training support for three in-state FA battalions: 1-140 FA (155-mm towed) in Salt Lake City, 1-145 FA (8-inch) in Ogden and 2-222 FA (155-mm self-propelled) in Cedar City.

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

## 13th Annual Conference

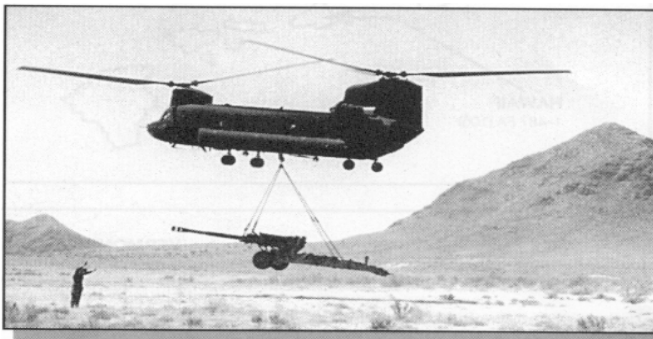
January 1995 brought the I Corps fire support community together for the 13th annual Fire Support Conference at Salt Lake City. Lieutenant General

C.G. Marsh, I Corps Commander, and Brigadier General D. Max Ewing, the I Corps Artillery Commander at that time, kicked off the conference by presenting their command guidance and vision for the corps and its fire support units. Their guidance helped set the stage for productive mission-oriented training throughout the coming year.

Other participants came from the US Army FA School; National Guard Bureau, Combat Integration; I Corps All-Source Collection Element (ACE), G3, G4 and Deputy Fire Support Coordinator; and DA Inspector General. Eleven FA brigades (10 ARNG and one active) presented training highlights and unit status report briefings at the conference. The FA brigades attending were the 45th of Oklahoma, 57th of Wisconsin, 103d of Rhode Island, 115th of Wyoming, 135th of Missouri, 147th of South Dakota, 153d of Arizona, 169th of Colorado, 209th of New York, 210th from Fort Lewis (the active brigade) and 631st of Mississippi. In addition, the 40th (Mechanized) Division Artillery of the California ARNG participated in the conference. The conference provided an excellent opportunity for command interface.

## Other FY 95 Training and Testing

I Corps Artillery began Training Year 95 by successfully participating in the I Corps Battle Command Training Program (BCTP) Warfighter at Fort Lewis, Washington. The headquarters



1-140 FA, Utah ARNG, in air-mobile operations at Dugway Proving Ground.

deployed with equipment and personnel, verifying its ability to deploy successfully. I Corps Artillery also provided a support cell for the Yama Sakura exercise in Japan, assisting in the exercise handoff from IX Corps to I Corps as the warfighting headquarters.

I Corps Artillery hosted the brigade, corps and division initial fire support automation system (IFSAS) field test at Dugway Proving Ground, Utah, in June. The 45th FA Brigade and the 35th Infantry Division (Mechanized) Artillery (Kansas ARNG) were the other key players supporting the successful test.

America's Corps Artillery actively supported brigade/battalion battle simulation (BBS) exercises with four of its FA brigades, resulting in very valuable training at reduced costs.

A highlight of this year's training was a joint exercise at Dugway Proving Ground, in June. Named "DeepLook 95," the exercise brought together the varied assets of the Utah Army and Air National Guards in

a sensor-to-shooter demonstration that linked sensor platforms through the deep operations coordination cell (DOCC) directly to aircraft. This demonstration included a number of new systems installed and employed for the first time. It was very successful, and I Corps Artillery will build on the lessons learned in the demonstration during FY 97.

## Fusing the Total Force

The challenges of diminishing dollars, downsizing, restationing and new equipment fielding 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 challenge and fusing the Total Force into one. We are **America's Corps Artillery!**



1-145 FA, Utah ARNG, live fires in conjunction with DeepLook 95 at Dugway Proving Ground.

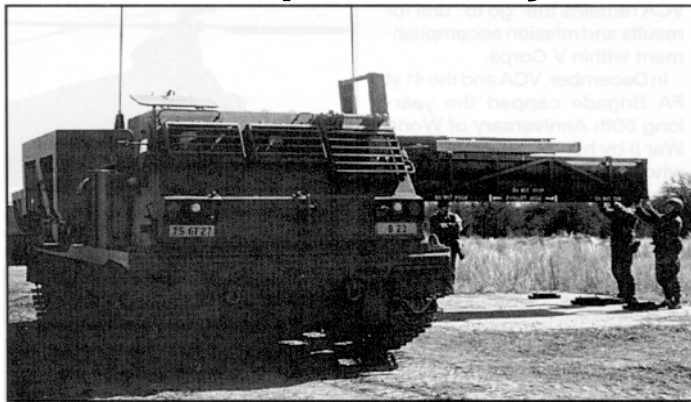
## III Corps Artillery

The *Phantom Corps Artillery* at Fort Sill, Oklahoma, saw the past and future in 1995 as we bade farewell to the 8-inch howitzer in the active Army and converted two battalions to MLRS. In addition, 3-17 FA (155-mm, self-propelled) was inactivated, and we welcomed the 4-27 FA (MLRS) to Fort Sill. We now stand at four brigades, 12 artillery battalions (nine MLRS and three M109) and two combat support battalions. All continue to train at Fort Sill; White Sands Missile Range, New Mexico; Twentynine Palms, California; and the NTC. International events led to no less than five humanitarian deployments to Haiti and Cuba. While the Army has grown smaller, our focus has expanded to training in a joint and combined environment.

**Headquarters, III Corps Artillery.** The world was our training area in 1995 as the *Phantom Corps Artillery* spanned the globe. Our exercise schedule was extensive with participation in BCTP and joint exercises at Fort Hood and Fort Bliss, Texas; Fort Leavenworth, Kansas; and in the Republic of Korea. At Fort Hood, the 1st Cavalry Division Warfighter served as a major event in the MLRS family of munitions (MFOM) force development test and experimentation (FDTE) program. Our efforts in joint exercises Unified Endeavor at Fort Hood, Roving Sands at Fort Bliss and Ulchi Focus Lens in Korea were successful in refining advanced techniques in fighting the corps deep battle as well as defining the role of an early entry FA tactical operations center in theater missile defense. These skills will serve us well in the III Corps Warfighter in March.

We also replaced TACFIRE with the initial fire support automation system (IFSAS), upgraded our automated deep operations coordination system (ADOCS) software and fielded the precision lightweight GPS receiver (PLGR).

**17th FA Brigade.** 1995 was a year of challenges and successes for the *Thunderbolt Brigade*. Power Projection became our motto as brigade units made nine off-post deployments during the past 12 months. Headquarters,



Rocketeers from B/6-27 FA conduct reload operations at Fort Sill during a field training exercise.

17th FA Brigade played critical roles in two BCTP Warfighters: the 2d Infantry Division Warfighter in Korea and 24th Infantry Division (Mechanized) Warfighter at Fort Stewart, Georgia.

5-3 FA (MLRS) deployed to Twentynine Palms and supported the Marine Corps' Desert Fire Exercise (DEFIREX) 2-95 followed by an ATACMS live fire at White Sands and then a deployment to Korea to evaluate 6-37 FA (MLRS) in the 2d Infantry Division's Warsteed exercise. 1-12 FA (MLRS) began its year with outstanding performance on its annual external evaluation (AEE) at home station. It then supported Roving Sands with a battery (-) and finished with a battalion training density at Fort Bliss. 3-18 FA (M109A5) deployed to Fort Bliss in April and June in preparation for a battalion rotation in September to the NTC in support of the 3d Armored Cavalry Regiment (ACR).

**75th FA Brigade.** The *Diamond Brigade* participated in many challenging events during 1995, including a brigade-level EDRE in March and April, the annual brigade FTX Taut Lanyards in February, Unified Endeavor in April and Ulchi Focus Lens in August. In Taut Lanyards, we not only massed rocket and cannon fires, but integrated Air Force attack aircraft as well.

The Army also bade farewell to its last active 8-inch howitzers with the completion of a successful AEE for 5-18 FA. With its last rounds fired, 5-18 FA deployed for six months on a

humanitarian mission to Guantanamo Bay, Cuba.

This year, the battalions took advantage of several training opportunities. 5-18 FA deployed to the NTC supporting brigades from the 1st Cav while 6-27 FA assisted in the 1-158 FA (Oklahoma ARNG) highly successful AT in June. 1-17 FA underwent a full-up EDRE in January, including rail load operations, followed by the brigade FTX. Additionally, the battalion deployed and fought with the 1st Infantry Division (Mechanized) at the NTC in October.

**212th FA Brigade.** Soldiers of the *Courage and Command Brigade* rang in the new year with a focus on warfighting, deploying to Fort Hood to participate in the 1st Cav Division Warfighter. The brigade refined counterfire doctrine and TTP using the MLRS extended-range rocket. The brigade also worked closely with the National Guard, supporting both the 49th Armored Division (Texas) Warfighter at Fort Leavenworth and the 142d FA Brigade (Arkansas) AT at Fort Chaffee.

2-17 FA participated in a rigorous CTC-based scenario for its AEE at Fort Sill in preparation for its September NTC rotation in direct support of the 3d ACR. 2-18 FA completed its transition from 8-inch to MLRS and was presented with the Army Chief of Staff's Unit Maintenance Award by General Gordon R. Sullivan in Washington. 6-32 FA provided cadre for 2-18 FA's MLRS collective training. The battalion deployed to White Sands in

August to participate in an ATACMS shoot and then again to White Sands in October for an AEE that evaluated all facets of its METL. The soldiers' warfighting skills are honed, and they are eagerly awaiting the challenges of 1996.

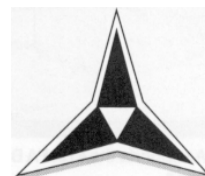
**214th FA Brigade.** The *Naturally We Lead Brigade* remains the Army's largest, most diversified FA brigade with medical, ordnance, chemical, aviation and finance personnel in addition to our artillerymen. We said "Goodbye" to 3-17 FA when it cased its colors 12 May and "Hello" to 4-27 FA, which completed its restationing to Fort Sill from Europe in August.

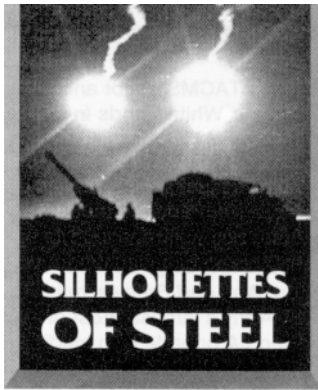
Our units spent the year training on primary METL tasks of deploy, fight and sustain. 5-17 FA underwent a sea EDRE in February and participated in the 11th Marine Regiment DEFIREX 96-1 at Twentynine Palms in September.

3-9 FA conducted battery and battalion collective training, followed by an AEE at White Sands Missile Range. The 47th Combat Support Battalion continued to provide outstanding support around the world by deploying medical personnel and engineers to Cuba, Haiti, Kuwait and, finally, to Egypt for Operation Bright Star. Soldiers from the 19th Maintenance Battalion provided ground and mission support to every III Corps Artillery field exercise and deployment plus honed its field skills with multiple FTXs.

The brigade staff continued METL-focused training by participating in Phantom Saber IV, two brigade CPXs, 1st Cav's Warfighter, Unified Endeavor and Roving Sands. Our Redlegs deployed to Korea, Germany, Western Sahara, Honduras, Kuwait, Egypt and Cuba.

The accomplishments of III Corps Artillery's 8,000 soldiers demonstrate our enormous capability. When the call goes out for firepower, **Phantom Firepower** is ready!





V Corps Artillery (VCA), with its headquarters in Wiesbaden, Germany, continues its *Steadfast and Strong* tradition of honing skills, providing fire support for contingency operations, leading the artillery community in deep battle operations and conducting joint/multinational training. Excelling under conditions of decreasing resources and increasing commitments has become the hallmark of VCA.

#### Beginning a New Era

4-27 FA (MLRS) completed its move to Fort Sill, Oklahoma, in mid-August with professionalism and class. The battalion maintained a trained combat capability until the last launcher was shipped while truly caring for the soldiers and families during the move.

27 June marked the beginning of a new era for VCA: Lieutenant General John N. Abrams, the V Corps Commander, passed the VCA colors from Brigadier General Thomas E. Swain to Colonel William J. Tetu, charging him with the responsibility to command V Corps Artillery and serve as the V Corps Fire Support Coordinator. As the Army's only forward deployed corps artillery, VCA remains the

## V Corps Artillery

"go to" unit for results and mission accomplishment within V Corps.

In December, VCA and the 41st FA Brigade capped the yearlong 50th Anniversary of World War II by honoring our veterans who served during the Battle of the Bulge. The highlight of the commemoration week was a dignified wreath-laying ceremony at Bastogne. The VIPs of the ceremony included the King of Belgium, US Ambassador to the United Nations and World War II veterans, who honored their fallen comrades.

#### Preparing for Contingencies

With the world's attention fixed on Bosnia, contingency operations became another VCA focus. As part of V Corps' contingency operation validation exercise Mountain Shield, VCA designed and implemented a live-fire coordination exercise (FCX) tailored to objectively assess and validate joint fire support planning and execution. VCA's methodology was adopted by USAREUR as a template when validating contingency plans. Furthermore, the V Corps Commander appointed VCA the Executive Agent for developing a comprehensive plan and capability to deploy V Corps out of sector.

VCA is committed to providing the best fire support the Artillery Community has to offer. This was evident when VCA augmented the Southern European Task Force (SETAF) during its preparation for contingency operations in Bosnia. In fact, VCA personnel manned the Joint Forces Fires Coordination Cell for SETAF. The train-up and validation



A/25 FA sling loads a Q-36 radar coupled with its prime mover.

exercise provided excellent training. VCA continues to focus its attention on providing fire support for contingency operations in Bosnia and the Middle East.

#### Training for Multinational and Joint Ops

The terms "multinational" and "joint" characterize training and warfighting within V Corps. VCA again has taken the lead in this environment. In exercise Atlantic Resolve, VCA was the force artillery headquarters for the land component commander (LCC) in the joint task force. It was in this exercise that VCA introduced the automated deep operations coordination system (ADOCS) to the battlefield control element (BCE) and the Air Force. VCA now uses ADOCS to send its air interdiction (AI) nominations to the BCE. ADOCS can download these AI nominations directly to the standard theater Army command and control system (STACCS). In addition, we improved our already solid working relationship with our Air Force brethren during Trailblazer III hosted by the Air Operations Command.

During Central Fortress 95, VCA worked interoperability issues with German artillery units. This effort included sending an LNO team equipped with the initial fire support automation system (IFSAS) to the V Panzer Artillery. The exercise was a resounding success, both in terms of learning allied artillery tactics and validating our approach to deep fires in a

multinational/joint environment.

Steadfast III, VCA's own live-fire exercise, codified our sensor-to-shooter procedures and validated the "weapons target pairing" function in ADOCS, which allows for nearly real-time responsive ATACMS fires. VCA continues at the forefront of delivering responsive fires on the complex multinational/joint battlefield.

The 41st FA Brigade continues its rigorous training program. It conducted challenging ARTEPs for both 1-27 FA Battalion and A/25 TAB in August at Grafenwoehr. The evaluations were thorough and intense, involving expert observer/controllers from both VCA and Fort Sill. Additionally, in March the brigade sent units to the CMTC at Hohenfels. The 41st FA Brigade is currently focusing its efforts to establish itself as the V Corps Counterfire Center of Excellence.

VCA's organizational vision incorporates a flexible, multi-dimensional fire support response for a multinational contingency corps while sustaining VCA's integrated and synchronized deep battle process. Excelling in this challenging and exciting environment, VCA remains committed to being **Steadfast and Strong!**



A/25 FA supports the 41st FA Brigade with a Q-37 radar during MLRS live-fire training.

# XVIII Airborne Corps Artillery

The XVIII Airborne Corps Artillery at Fort Bragg, North Carolina, continues to provide fire support for a highly capable strategic contingency force able to deploy with no-notice by land, sea or air and ready to fight and win anywhere in the world—America's Contingency Corps. The Corps Artillery, an integral and essential part of this powerful contingency force, consists of a corps FSE, 155-mm howitzers and MLRS ready to deploy within 18 hours of notification.

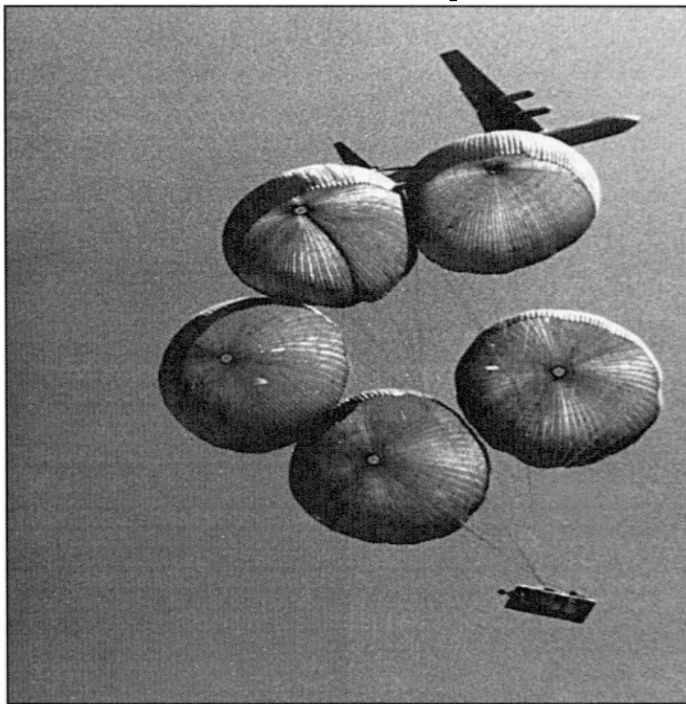
## Upholding Democracy

When the XVIII Airborne Corps prepared to intervene in Haiti during Operation Restore Democracy, the Corps Artillery was there. The Corps Artillery's fire support plan called for extensive synchronization of Army, Navy, Air Force and Marine fire support assets. The Corps FSE was prepared to execute combat operations, yet it was flexible enough to rapidly switch gears and execute an unopposed entry to conduct operations other than war in Operation Uphold Democracy. As part of Joint Task Force (JTF) 180 on the *USS Mount Whitney*, the Corps Arty coordinated fire support to deter any potential hostilities and ensure force protection. Meanwhile, the 18th FA Brigade conducted departure operations and provided linguists and joint staff augmentation to JTF 190 on Haiti and military police augmentees for Fort Bragg security while the majority of the MPs were deployed.

## Training the Corps Artillery

During the past year, training remained the top priority. Every unit in the XVIII Airborne Corps Artillery conducted various combinations of battery- and battalion-level ARTEPs, combined arms live-fire exercises, joint exercises, simulation-based BCTP Warfighter-type counterfire and deep operations exercises and JRTC and NTC rotations.

The 1-39 FA, *Warriors*, the Army's only airborne 155-mm battalion, participated in many EDREs involving heavy equipment and personnel



An M198 howitzer from 1st Battalion, 39th Field Artillery Regiment (Airborne) under canopy during a heavy drop mission at Fort Bragg. A second C-141 is dropping another load

parachute drops and live-fire drop-zone missions both day and night.

In September, 5-8 FA, *Centaurus*, the Army's only air assault 155-mm battalion, and 3-27 FA, *Steel Rain*, the Army's only contingency-ready MLRS battalion, deployed by sea to Vieques Island, Puerto Rico, to participate in the FTX/LFX portion of joint exercise *Fuertes Defensas*.

In addition, the Corps Artillery designated 3-8 FA, *Thunderbolts*, as the experimental battalion responsible for organizing and training a test platoon consisting of two enhanced, "Paladin-like" M198 155-mm howitzers and two different United Kingdom light 155-mm prototypes that are candidates for the new Army towed cannon artillery system (ATCAS). This platoon will demonstrate the systems' potential during the advanced warfighter experiment (AWE) Warrior Focus in November with the 10th Mountain Division at Fort Polk, Louisiana.

The major training exercise for the Corps Artillery this year was *Dragon Fire V*. This was a joint exercise involving more

than 8,500 personnel from the Active Army, Army National Guard, Marines and Air Force. The deep operations coordination cell (DOCC) phase consisted of a simulation-driven, corps-level CPX involving elements of the 82d Airborne Division, Fort Bragg; 101st Airborne Division (Air Assault), Fort Campbell, Kentucky; and the 24th Infantry Division (Mechanized), Fort Stewart, Georgia. The last phase was a series of LFXs with elements of the 18th FA Brigade; 82d Div Arty; 113th FA Brigade (North Carolina ARNG); 10th Marine Regiment from Camp Lejeune, North Carolina; 18th Aviation Brigade and the Air Force. This phase exercised the Corps Artillery's command and control of four FA brigades. In addition, 13 company- and battalion-level ARTEPs from all the Corps' separate brigades were synchronized as they supported the force artillery units.

To be an effective contingency corps, soldiers must train extensively in air-mobile, air-land and air-drop operations. Corps Artillery units conducted this training

throughout the year using the Army's CH-47 and Air Force's C-5A, C-130 and C-141 aircraft. Also, the 18th FA Brigade worked closely with the TEXCOM Airborne and Special Operations Test Directorate to gather data on FA-specific loading procedures, air-land operations and emergency safety procedures. During testing, the 18th FA Brigade successfully airdropped from a C-5A the M198 155-mm howitzer with its 5-ton prime mover truck and ammunition as one load, coupled together in tandem. In addition, units from the brigade supported the testing and fielding of the newest addition to the Air Force's airlift fleet, the C-17 Globemaster.

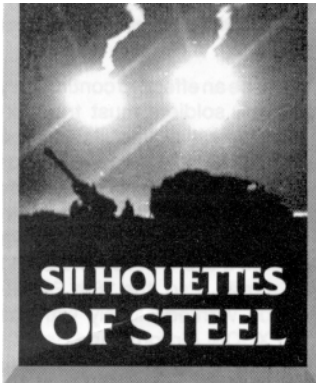
## Inactivating the Wheelhorse Brigade

On 30 June, the Corps Artillery officially inactivated the XVIII Airborne Corps' only 155-mm self-propelled artillery unit, the 42d FA Brigade, *Wheelhorse*, and its organic battalion, 4-82 FA, *Can and Will*, at Fort Polk. The brigade conducted the complex task of inactivation with great skill while ensuring its soldiers remained trained and ready as they transferred to other units throughout the Army. The Corps will miss this distinguished brigade and wish all its former soldiers well. *Wheelhorse!*

The past 12 months have been exciting for the XVIII Airborne Corps Artillery. As the Army's only airborne corps artillery, we remain...America's Contingency Corps Artillery...with outstanding soldiers and families...ready to deploy...trained to fight and win...contributing to decisive victory...serving the Nation at home and abroad—*Thunderbolt! Air Assault! Steel Rain! Airborne!*



# Field Artillery Training Command



**O**ur mission is to prepare America's FA to fight and win on any battlefield, today and tomorrow. We are the FA School, FA Training Center, the NCO Academy and the 30th FA Regiment—all at Fort Sill, Oklahoma, the world's center for fire support. We design the artillery of Force XXI and train today's soldier to conquer the challenges of the present and future—some 16,000 Redlegs in 1995.

In a resource-constrained environment, we're providing excellent training with a leaner staff of quality instructors executing a tighter curriculum designed to maximize hands-on training. We lead the way in developing many training programs, not only in TRADOC, but also for the Army. In addition, we've managed Crusader, AFATDS and ATACMS as well

other systems to assure their place in the future.

Our vision reaches out to Force XXI while keeping a finger on the pulse of readiness today.

## Designing the Future Force

We're making fundamental changes in our warfighting doctrine, equipment and organizations to create the FA for the Force XXI Army—a smaller, CONUS-based, power projection Army organized around information and information technologies. Participation in advanced warfighting experiments (AWEs) is our primary mechanism for developing, testing and implementing futuristic FA doctrine and technology to design Force XXI. Conducted through combinations of simulations and (or) tactical exercises, the AWEs identify potential combat systems, define new TTP and test alternative force designs.

Last year we introduced Task Force 2000, a study group that works for the Assistant Commandant, to explore initiatives for the future FA. It works closely with the Depth and Simultaneous Attack (D&SA)

Battle Lab—named the lead agency for Army deep battle issues—also at Fort Sill, other battle laboratories and our Directorate of Combat Developments. Task Force 2000 ensured FA concepts were integrated into the series of AWEs conducted this year. The tests included a theater-level evaluation of AFATDS,

extended-range ATACMS and Q-36 radars in attack operations; a division-sized force redesign to create an adaptive FA force comprised of MLRS, infantry and air defense; and a task force-level experimentation with digitized connectivity for situational

awareness and other heavy-light fire support-related options.

Additionally, D&SA Battle Lab's Intrepid Vision experiment at Fort Sill is being conducted from October 1995 to May 1996. Intrepid Vision is developing, analyzing and experimenting with emerging concepts and TTP that focus on the information flow among Army Aviation, the FA and Military Intelligence. The experiment should result in improved TTP and shorter sensor-to-shooter times, enhancing the warfighters/Experimental Force's capability to fight on the digital battlefield.

These AWEs and Battle Lab experiments and those yet to come are designing the FA of Force XXI. Lessons learned will be incorporated into the Task Force XXI AWE during a February 1996 NTC rotation.

## Changing the Schoolhouse

In order to rapidly implement the changes required for training Force XXI and improve responsiveness to the field, the FA School created the Warfighting Integration and Development Directorate (WIDD). We consolidated the Directorate of Training and Evaluation with the Warfighter Division from the Fire Support and Combined Arms Operations Department and training developers from the two training departments to create WIDD. The directorate is developing long-range training strategies, setting priorities for doctrine and training developments, developing FA products and doctrinal publications, providing doctrinal input to joint manuals and coordinating training programs and schedules.

WIDD was configured to continue the FA's lead in designing training for the future force. We lead the way for the Army in distance learning and, incorporating lessons learned from past initiatives, have developed improved programs—earning the school more than \$3 million in grants for our efforts. We have led TRADOC by working with the National Guard in preparation for the Total Army School

System (TASS), developing new course materials and training strategies.

In other training efforts, we reviewed and redesigned all officer courses, improving training to make it more relevant to the challenges of today's force while preparing the leaders of Force XXI for the challenges a-head. These courses retain an appropriate emphasis on manual gunnery while increasing instruction on ballistic theory and automated fire direction as the force shifts from TACFIRE to AFATDS. Combined arms simulations, such as Janus, and training with other branch schools through video teleconferences (VTCs) or T-Net enhance student learning. Students also have opportunities to discuss the latest doctrinal or TTP issues with CTCs' observer/controllers through VTCs or in person. In addition, our officer students are spending more time in the field for hands-on training.

We are beginning the same program of instruction (POI) review process for all enlisted courses. The FATC already has identified the needs of new MOS 13B Cannon Crewmen in Force XXI and has implemented a pilot program in E/1-31 FA to train them. The POI gives these entry-level Redlegs competencies in the categories of soldier responsibilities, the M109A6 Paladin and computer literacy. Also, the NCO Academy has moved the Advanced NCO Course (ANCOC) to Snow Hall, providing our senior NCOs the best facilities we have to offer.

As we move toward Force XXI, the Training Command remains a high-energy point of light, leading the Army in its quest to conquer the future and ensuring the FA is **On Time, On Target—Today and Tomorrow!**



Soldiers at the FA Training Center load a round into a M198 howitzer.



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## 1st Armored Division

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The 1st Armored Division Redlegs of *Ironland* Germany take great pride in placing steel on target for America's Tank Division. The 1995 training year has been fast-paced and extremely challenging but thoroughly rewarding. The Div Arty's training continued to focus on the pillars of our training strategy: artillery maneuver, gunnery and the integration of fires.

This year's training calendar began in Grafenwoehr Training Area where the Div Arty honed its technical gunnery skills. During this rotation, 2-3 FA performed flawlessly as the battalion underwent its rigorous Table XII external evaluations. November found the *Iron Steel* soldiers going head to head with the OPFOR in the mud at the CMTC at Hohenfels. As always, this training provided an excellent opportunity to refine warfighting skills, especially in the area of stability operations.

March saw A/4-29 FA deploy



Gunners of 2-3 FA conduct a cross-carriage fire mission at the Grafenwoehr Training Area.

to Kuwait for Operation Intrinsic Action. During the battery's three-month rotation, it conducted several successful training exercises with its Kuwaiti Redleg brethren and validated the Div Arty leader handbooks.

The Div Arty then changed its focus—welcoming a new member to the team and

farewelling another. In May, the Div Arty activated A/94 FA (MLRS). Then in July, the *Champion Battalion*, 6-29 FA (MLRS), cased its colors and inactivated, signaling the end of American occupation of Strassburg Kaserne in Idar Oberstein. Shortly afterward, the Div Arty conducted a change of

command, passing the colors from Colonel John R. Gingrich to Colonel Alan W. Thrasher.

As the political environment of Europe and the world changes, the Redlegs of the 1st Armored Division will continue to provide timely and accurate fires, wherever and whenever required. ***Iron Steel!***

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## 1st Cavalry Division Artillery

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The 1st Cavalry Division Artillery *Red Team*, Fort Hood, Texas, stands ready to lead the King of Battle into the 21st century trained with the artillery's state-of-the-art equipment. From August 1994 to September 1995, Red Team soldiers have operated and tested AFATDS, the next generation warfighter's fire support command and control tool. The doctrine and TTP developed will set the stage for AFATDS as a combat-multiplier.

Additionally, the Red Team fielded 24 new M992A2 FA ammunition support vehicles (FAASVs) in each DS battalion; enhanced position location reporting system (EPLRS) to the entire Div Arty; and the modular azimuth positioning system (MAPS) for its Q-36 radars in B/26 Target Acquisition Battery (TAB). Our DS battalions eagerly anticipate the 3d Quarter, FY 96 fielding of Paladin.

The Div Arty validated its capability as a contingency

force heavy division artillery—in part, by four division-level CPXs culminating with a heavy/light Warfighter with a Korean scenario. Artillerymen of the 212th

FA Brigade of Fort Sill, Oklahoma, and 1-160th FA (Oklahoma ARNG) participated in the Warfighter, bringing all digital artillery systems—AFATDS, the initial fire support automation system

(IFSAS) and TACFIRE—to the battle.

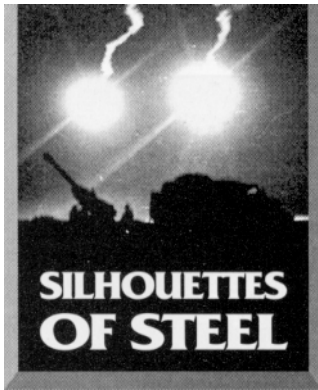
Throughout the year, the Red Team validated its ability to deploy anywhere in the world. We completed three successful NTC deployments, participated in an unannounced sea EDRE and deployed to Korea for Foal Eagle. The Red Team also deployed to Kuwait in support of Intrinsic Action. Within 48 hours of notification, an artillery task force under 3-82 FA—C/3-82

FA, A/21 FA (MLRS) and B/26 FA (TA)—deployed personnel and equipment by air and participated in METL-focused training, culminating in a combined operation with the Kuwaiti Army.

The 1st Cav Div Arty is proud to be part of our nation's contingency force and stands ready to deliver timely and accurate fires in support of America's First Team. ***Red Team!***



Red Team gun section on the move at the NTC.



## 1st Infantry Division (Mechanized) Artillery

4th Aviation Brigade's deep operations and the *Gunfighters* of the 1-1 Aviation Battalion's Hellfire missile firings.

*Hamilton's Own* 1-5 FA supported the 1st Brigade at the NTC, providing timely and accurate fires for the *Devil Brigade*. During this rotation, the battalion demonstrated the utility of HMMWVs as the vehicle of choice for brigade COLTs. The battalion also participated in many live-fire exercises, combined arms operations and a leader development staff ride through Gettysburg, Pennsylvania.

The *Faithful and True* 4-5 FA was DS to the *Dagger* Brigade at the NTC and during other training, including force-on-force and combined arms live-fire exercises. 4-5 FA built on the strong relationship with the *True and Tried* 1-178 FA of the South Carolina ARNG during AT at Fort Jackson.

The Headquarters and



1st Infantry Division gunners train from dug-in positions.

Headquarters Battery, the *Swift and Bold* rocketeers of B/6 FA (MLRS) and the *Wolfpack D/25* FA (TA) trained to warfighting proficiency with quarterly MLRS live-fire exercises, deep operations CPXs and semiannual Div Arty live-fire exercises.

In accordance with the Army's realignment plan, the DS artillery battalions were attached to the

brigade combat teams and aligned against the European divisions. The Div Arty headquarters and separate batteries cased their flags in September; the 3d Infantry (Mechanized) Division in Germany will be reflagged the 1st Infantry Division (Mechanized) in FY 96. The Big Red One Div Arty, only briefly silent, again will produce *Drumfire!*

**D***rumfire* soldiers of the 1st Infantry Div Arty, Fort Riley, Kansas, continued to "Focus on Warfighting" during a dynamic year of realistic, tough training. Many STXs, external evaluations, NTC rotations and a division Warfighter seminar honed the skills required for the success of the Big Red One's combined arms teams. The Div Arty fielded the initial fire support automation system (IFSAS), culminating in a validation exercise that included MLRS, rocket-assisted projectiles and high-explosive fires in support of

## 2d Armored Division Artillery

**H***ell's Fires* raged in 1995 as the Redlegs of the 2d Armored Division Artillery, Fort Hood, Texas, completed another dynamic year characterized by battle-focused training—the foundation of the Div Arty's achievements this year.

During the winter, the flames of hell burned their hottest as the 1-14 FA *Steel*

*Warriors* rained fire upon the NTC OPFOR. 1-14 FA's indirect fires assisted the 2d Brigade (*St. Lo!*) Combat Team in the destruction of all 167 targets in 1-67 Armor's night defense at Drinkwater Valley. The battalion earned high praise for exceptional performance and the accuracy of its fires throughout its outstanding NTC rotation.

In the spring, the entire Div Arty honed its ability to provide division-level fire support through a series of CPXs, culminating with Unified Endeavor 95, a corps joint task force-level exercise. 9-1 FA *Deep Strike* again established itself as the experts in implementing cutting-edge doctrine for a divisional deep fight.

The Div Arty continued its tradition of providing quality training to the 1-141 FA (Louisiana ARNG). During AT, 1-141 FA provided timely, accurate fires in support of the 256th Brigade with a NTC-like scenario at Fort Hood.

1-3 FA's tradition of providing demonic fire support continued as it conducted many combined arms integrated training exercises with the 1st (*Tiger*) Brigade. The *First Gunners'* ambitious training culminated in a CALFEX with the 3-17 Division Cavalry of the 10th Mountain Division from Fort Drum, New York, synchronizing massed fires with the AH-58 Kiowa Warriors' Hellfire missiles.

In December, *Hell's Fires* will begin testing new equipment and TTP as a part of Task Force XXI—the Army's premiere digitized force on the 21st century battlefield. Simultaneously, the division will reflag as the 4th Infantry Division (Mechanized) at Fort Hood; but until then, we will continue to produce *Hell's Fire!*



Redlegs drill during the annual 2d Armored Div Arty howitzer section competition. (Photo by SSG Grey Davis, 13th PAO)



## 2d Infantry Division Artillery

World attention focused on the Korean peninsula again this year with North Korea's continued brinkmanship over nuclear issues and troop buildup along the border. Despite the tension, the most forward deployed division artillery in the world, the Second to None 2d Infantry Division Artillery, remained decisively oriented on its mission to support the Warrior Division and our Republic of Korea (ROK) allies.

Interoperability with our fellow Redlegs in the ROK Army continued to be a priority effort in the Div Arty this year. Battle plans for the defense of South Korea were coordinated and integrated to a degree never before attempted. Combined artillery and radar demonstrations with the ROK Army validated the tactics for a smoothly synchronized combined fight.

Tough, realistic training kept the Div Arty fire supporters'

skills sharp. The Div Arty destroyed the World Class OPFOR in BCTP. The 6-37 FA (+) (MLRS) conducted two live fires during the year along with a rigorous two-week Warsteed evaluation that exercised the entire Warrior Division counterfire force.

The 8-8 FA and 1-15 FA sharpened their fire support synchronization skills, providing direct support to their respective maneuver brigades and designated task forces. They performed superbly in their own Warsteed evaluations as well as contributed significantly to the success of their supported brigades. The F/26 FA (TA) observed every round fired in the Div Arty during the year.

The Div Arty safety programs thrived. Enhanced



A Redleg from 1-15 FA during a Guns Bucks ammunition section evaluation.

leader development, awareness and participation in the safety process significantly contributed to the successful firing of 9,000 safe rounds into an impact area the size of one grid square.

A higher percentage of

artillerymen are being assigned to Korea than ever. These professionals will find their year of service and sacrifice fast-paced and professionally rewarding as they work hard and stand ready to provide

**Warrior Thunder!**

## 3d Infantry Division (Mechanized) Artillery

**M**arne Thunder artillery provided a year of excellence in fire support to the *Rock of the Marne*. The Div Arty started the year as the star in Marne Victory II, the division's Warfighter. This was the most successful division BCTP in recent years, due in large part to the massed fires of *Marne Thunder*.

The systems developed and refined during BCTP later fulfilled their mission during the Grafenwoehr gunnery density and Hohenfels CMTC rotations from February to April. 5-41 FA, *Mission Accomplished*, lived up to its motto with flawless performance on its maneuver-driven EXEVAL. The Div Arty massed fires,

exercised the counterfire system and conducted both joint air attack team (JAAT) missions and Operation Firestarter, the latter to link fire support with maneuver in preparation for CMTC rotations.

The demanding, computerized CPX Central Fortress drove fire support training at the brigade and

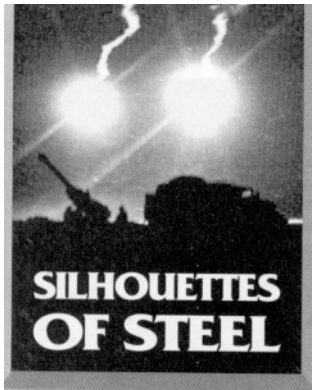
division levels while the V Corps fire coordination exercises Mountain Shield I and II prepared the Div Arty for its role in theater contingency operations. *Battle Thunder*, 3-1 FA, and the newly reorganized A/76 FA (MLRS) set new records in fire support excellence during the 3d Brigade CMTC rotation in July/August.

The year saw much transition as B/25 FA (TA) moved from Grafenwoehr to Bamberg. 2-14 FA (MLRS) inactivated with pride in both its past and its future as it gave rise to A/76 FA (MLRS). The Div Arty also converted to the palletized load system (PLS) and SINGGARS.

The Marne Div Arty closes the year with pride in the knowledge that our soldiers, their training and force modernization have produced a synchronized and lethal fire support system second to none. We look forward to April 96 as we become the 1st Infantry Division (Mechanized) Artillery—Big Red One Artillery—and a combat multiplier for the future. **Marne Thunder!**



These 3d Infantry Division Redlegs prepare their howitzer to fire for the Rock of the Marne.

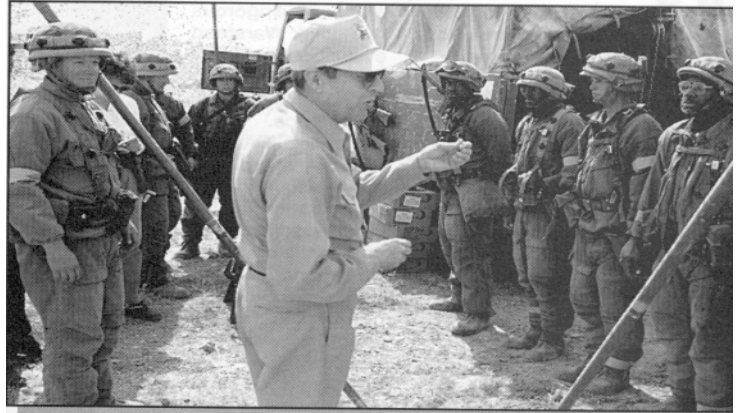


## 4th Infantry Division (Mechanized) Artillery

Warfighter at Fort Lewis, Washington. The division artillery brought with it the model for deep battle cell operations. It was a highly successful training event highlighted by lethal, proactive artillery fires.

The end of 1994 saw the reactivation of the 1-29 FA (Provisional). The *Red Barons* were a welcome addition to the Div Arty. As the Div Arty flag moves to Fort Hood, 1-29 FA (Prov) will remain at Fort Carson.

The soldiers of 3-29 FA *Pacesetters* have continued to train to excellence and also will remain at Fort Carson after the division artillery inactivation process is complete. The battalion had a highly successful rotation providing fire support at the NTC in May. The skills and knowledge gained at the NTC helped 3-29 FA support the 1-148 FA *Scorpions* (Idaho



Secretary of Defense William Perry visits with soldiers of C/3-29 FA at an NTC rotation. (Photo by Earl Albright)

The *Irongunners* of the 4th Infantry Division (Mechanized) Artillery, Fort Carson, Colorado, ushered in the year with news that the process of downsizing our nation's armed forces would directly impact the 4th Division. Although the 4th Div Arty inactivated this year, the Div Arty colors will transfer to Fort Hood, Texas, in January 1996. Meanwhile, the *Irongunners* continued to train, maintain and take care of soldiers throughout 1995.

Late in 1994, the 4th Div Arty participated in the I Corps BCTP

ARNG) and the 169th FA Brigade (Colorado ARNG) at AT. In the fall, 3-29 FA conducted the Army's first fully containerized rail and sea unit deployment and trained with the Canadian Army in Rendezvous 1995.

Although the 4th Infantry Div Arty will muster at Fort Carson

for the last time in December 1995, the tradition of the proud and battle-proven *Irongunners* will continue when the colors are unfurled across the former domains of the 2d Armored Division inactivating at Fort Hood in December. The 4th Div Arty will remain the *Irongunners!*

## 10th Mountain Division (Light Infantry) Artillery

The 10th Mountain Div Arty in Fort Drum, New York, once again demonstrated it's trained and ready to deploy, fight and win anywhere at any time. In January, elements of the 10th Mountain Div Arty completed their support of peace in Operation Uphold Democracy in Haiti. Traditional missions, such as targeting, counterfire and coordinating fires helped restore a safe and secure environment for the return of Haiti's legitimate government. We also performed many

non-traditional missions, including the Div Arty staff's standing up Task Force Mountain, the largest maneuver headquarters in the Combined Joint Task Force Haiti. Members of the fire support team served in a variety of organizations to plan a multipurpose range facility and provide force protection and local security; haul capacity; liaison; command and communications; and battle staffs for Multinational Forces.

The Div Arty then focused on

force modernization and new equipment training, including for the M119A1 light howitzer and the initial fire support automation system (IFSAS). Before Haiti, 1-7 FA and 2-7 FA integrated these with other new systems: LTACFIRE (Version 10) and single-channel ground and airborne radio system (SINCGARS). Additionally, 2-7 FA will field several new fire support systems



Gunners from 2-7 FA prepare for a high-angle mission.

for interoperability testing and evaluation in the advanced warfighting experiment (AWE) Warrior Focus at the JRTC in November. AFATDS will be the centerpiece of this AWE.

After live-fire certification of our howitzer sections and firing units, collective training focused on combined arms warfighting skills to prepare for the two brigade combat team rotations at the JRTC. Other summer activities included deploying 1-7 FA to the US Military Academy

at West Point for cadet summer training and 2-7 FA's support of Reserve Component training. Also, our GS howitzer battery, E/7 FA, fired in support of many combined arms live-fire exercises and warfighting demonstrations.

The Redlegs of the 10th Mountain Div Arty continue to focus on warfighting and stand ready to deploy worldwide for the next contingency operation. *Mountain Thunder!*



E/7 FA's "Big Guns" delivering steel on target. (Photo by SGT Troy Simmons)

## 24th Infantry Division (Mechanized) Artillery

The Redlegs of the 24th Div Arty, Fort Stewart, Georgia, worked hard throughout the year to fully modernize their primary warfighting systems. Through rigorous training, the 24th Div Arty assured its position as the most modern, lethal force artillery in the world.

Our mission remains to deploy to a contingency area by air, sea and land and provide fire support for mobile, combined arms offensive and defensive operations worldwide. The Div Arty accomplished this mission on several occasions this year. The successful rotation of all battalions to the NTC (1-41 FA, 3-41 FA and 4-41 FA) with the initial fire support automation system (IFSAS) and the M109A6 Paladin was a training milestone. In addition, the Div Arty deployed A/1-41 FA to Egypt in support of Operation Bright Star. Personnel from the 24th Div Arty currently are supporting Operation Uphold Democracy

in Haiti.

Each battalion continues to refine the TTP associated with the Paladin and its multiple new supporting systems. The new howitzer is extremely effective in providing accurate, responsive and devastating fires in support of the maneuver commander. These advances create challenges that place new demands on command and control, movement and battlefield space management. Div Arty training is resulting in valuable experiences to help shape future FA and fire support doctrine.

The 24th Division Artillery participated in a division Warfighter exercise while supporting the real-world division-ready brigade (DRB) mission. Additionally this year, the Div Arty headquarters assumed the mission as the alternate deployment control



A Paladin of the 24th Infantry Division stands ready for action.

headquarters for the division during all deployments in the absence of a corps support group.

We're equipped with the full array of fire support, command and control and ancillary fire support systems that will take us into the 21st century. We eagerly accept the challenge of developing

and employing new TTP that will enhance the effectiveness of future fire support. In February 1996, the division reflags as the 3d Infantry Division (Mechanized) and will continue forward as the most modern, lethal division in the world. Until that time, we are the 24th Div Arty—**First to Fire!**

## 25th Infantry Division (Light) Artillery

The *Tropic Thunder* Redlegs of the 25th Infantry Division (Light) Artillery at Schofield Barracks, Hawaii, completed a year of dynamic and challenging missions. Even with the inactivation of 7-8 FA in conjunction with the inactivation of the division's 1st Brigade, the Div Arty stands ready to defend national interests within the Pacific Rim.

In 1995, *Tropic Thunder* units deployed worldwide: Operation Uphold Democracy in Haiti; Yama Sakura, Orient Shield and North Wind in Japan; Cobra Gold in Thailand; I Corps Warfighter at Fort Lewis, Washington; and heavy/light rotations at the NTC. Uphold Democracy, in particular, tested the versatility of our fire supporters as they conducted civil affairs magnificently for two brigade task forces.

The Div Arty maintained the fire support edge in battle-focused training—EXEVALS for all

units and live-fire exercises on Oahu and at Pohakaloa Training Area (PTA) on the Big Island. We also participated in the division's CPX program and Lightning Thrust Brigade EXEVAL program and in many CALFEXs and the Div Arty LTACFIRE sustainment program. We prepared for the

December BCTP Warfighter by participating in division CPXs and tactical seminars.

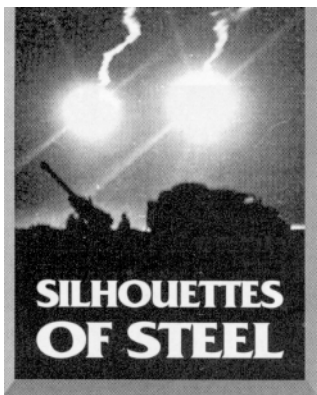
Force modernization included completing the M119A1 howitzer fielding and fielding the initial fire support automation system (IFSAS), survey north-seeking gyroscope, M40 protective

masks and Q-36 radar modular azimuth positioning system (MAPS). In addition, we test fired Charge 8 with the M119A1 howitzer at PTA.

The Div Arty closed the year knowing it is providing outstanding fire support to the Tropic Lightning Division. **Hooah—Tropic Thunder!**



A section from 2-11 FA in action during a calibration exercise with a new M119A1 howitzer.



## 28th Infantry Division (Mechanized) Artillery

instruction, practical exercises and CPXs with the system in May and June at Fort Indiantown Gap.

IFSAS was successfully implemented in a division-wide CPX at Fort Drum, New York, in August. Units will continue to train with the equipment in preparation for the 28th Division's Battle Command Training Program Warfighter in 1996 at Fort Leavenworth, Kansas.

The 28th Div Arty also continued conversion training

with new equipment as units upgraded from M109A4 to M109A5 howitzer systems. All 60 of the division's howitzers were upgraded in 1995.

The 28th is preparing to convert from 3x6 battery configuration to 3x8 to meet the force modernization requirements involved in the conversion to a mechanized division. As part of that process, coordination has begun to combine elements of the 1-107 FA and the 1-229 FA into one battalion—the 1-107 FA, 1-229

FA inactivated in October with one battery remaining intact as a division GS battery—D/1-229 FA.

The 1-109 FA, 1-107 FA and 1-229 FA conducted their conversion training during AT periods at Fort Indiantown Gap, while the 1-108 FA conducted its AT conversion training at Fort Pickett, Virginia.

As we train and modernize, the 28th Infantry Division (Mechanized) Artillery remains **Charged to Excellence!**

The 28th Infantry Division (Mechanized) Artillery, Pennsylvania ARNG, concentrated much of its efforts in Training Year 95 on conversion training and fielding new equipment.

The Div Arty accomplished one of its main goals of 1995 in fielding the initial fire support automation system (IFSAS) throughout the division. Members of Headquarters and Headquarters Battery, 1-107 FA (New Castle), 1-108 FA (Carlisle) and 1-109 FA (Wilkes-Barre) went through 17 days of classroom



C/1-109 FA conducts conversion training at Fort Indiantown Gap.

## 29th Infantry Division (Light) Artillery

For the 29th Div Arty, headquartered in Sandston, Virginia, with its units of the Virginia and Maryland ARNG, the emphasis was on combined arms training in preparation for the division Warfighter at Fort Leavenworth, Kansas, in August. The Div Arty FSE honed its skills by participating in two Army training battle simulation systems (ARTBASS) and two brigade command battle staff training (BCBST) exercises.

The Div Arty also fielded the initial fire support automation system (IFSAS), forward observer command and control system (FOCC) and mobile subscriber radio terminal (MSRT). The FDCs received their updated BCS software for their LCUs—the entire fire support team now is linked digitally.

In preparation for its Warfighter, the FSE with the division staff trained in war-gaming to prepare the fire support plan. Warfighter provided a sound foundation for future training.

1-246 FA of Danville,

Virginia, had a productive year, participating in several live-fire exercises. The battalion also fielded IFSAS, FOCC and MSRT and participated in Warfighter.

2-111 FA of Hampton, Virginia, conducted six live-fire exercises to prepare its firing batteries for internal evaluation. The battalion's approach was to schedule soldier training during Sergeant's Time and then time for battery and battalion training. The emphasis was on digital

communications and IFSAS fielding.

2-110 FA of Baltimore, Maryland, participated in a BCBST and continued to focus training on LTACFIRE and digital communications. In addition, it has taken a proactive role in junior leader development and in strength management for future federal and state missions.

E-111 FA, our GS battery from Emporia, Virginia, received a combat-ready rating in AT and, as the active

Army AT evaluator stated, "consistently fired devastatingly accurate fires." 129 FAD (TA) of Sandston maintained its Q-37 radars at 100 percent operational readiness and worked with the 113 FA Brigade's targeting cell during Warfighter 95.

Combat skills and digital communications are the watchwords at the 29th Div Arty, supporting the only Reserve Component light division in the Army. **We Stand Ready!**



29th Division Artillery supporting infantry in the attack. (Photo by CPT Kenneth L. Bowman)

## 34th Infantry Division (Mechanized) Artillery

The 34th Red Bull Division Artillery (Minnesota, Iowa, and Illinois ARNG) completed an aggressive yearly training program culminating with the new equipment training (NET) and fielding of the initial fire support automation system (IFSAS).

All three DS battalions, the GS battalion and a non-divisional battalion, 2-122 FA, (Illinois ARNG) attended NET/AT at Camp Ripley, Minnesota, from 15 July through 5 August 1995. The fielding culminated with an FTX/CPX and Div Arty mass live-fire missions.

2-123 FA participated in IFSAS fielding with the other battalions of the Div Arty. It completed a successful AT period at Camp Ripley in July and August with the 34th Div Arty, its last as a DS battalion for the 66th Brigade of the 34th Division. This fall, it begins converting to an echelons-above-division

battalion with M198 howitzers.

1-125 FA (Minnesota) focused on the Reserve Training Concept culminating during AT with a series of lanes administered by the Div Arty headquarters. Other significant events for the battalion included four Army training battle simulation system (ARTBASS) exercises with the 1st Brigade and a brigade command battle staff training (BCBST) Warfighter train-up CPX in August.

1-194 FA (Iowa) focused on leader validation and FA lanes using the Reserve Training Concept. Highlights included IFSAS and mobile subscriber equipment (MSE) fielding, air assault operations, direct fire and gunnery validations.

1-151 FA (Minnesota)



Redlegs of 1-151 FA direct fire on targets at Camp Ripley during Annual Training 1995.

implemented an aggressive lane training strategy that tested the soldiers—not only in day-to-day FA operations, but also in extended/continuous operations. The battalion was certified to Artillery Table 11 on its M198s. D/1-151 FA fired its last eight-inch round

during AT 95 at Camp Ripley. 1-151 FA is being replaced by F/151 FA, the division's GS artillery.

The 34th Red Bull Division Artillery is a proud partner in America's Army—standing ready to **Attack, Attack, Attack!**

## 35th Infantry Division (Mechanized) Artillery

The 35th (Santa Fe) Division Artillery (Kansas, Kentucky and Nebraska ARNG) continued its tradition of excellence during Training Year 95. The Div Arty participated in several exercises during the year, concluding with the Division Wagon Wheel, which will serve as a training ramp-up for the Battle Command Training Program (BCTP) Warfighter



35th Div Arty Redlegs transfer M110 rounds in preparation for delivery of timely and accurate fires. (Photo by 105th PAD)

1996.

The 1-161 FA (GS) and 1-127 FA (DS), both of the Kansas ARNG, conducted aggressive lane training at Fort Riley where gunners held an exhibition before 300-plus employers, community leaders and state legislators. The Div Arty Employer Support Initiative is the largest of its kind in the state of Kansas. This initiative established a new and refreshing relationship between local government and the "hometown" National Guard. The community and state VIPs were briefed about the National Guard and its role in national security and its local economic impact, and the VIPs witnessed what the young men and women of their communities actually do in support of briefed objectives.

Additionally, the 35th Div Arty provided a 44-man cell at Dugway Proving Ground, Utah, to participate in the Test and Evaluation Command's Early User Experiment of the brigade, corps and division initial fire support automation system (IFSAS) software

package.

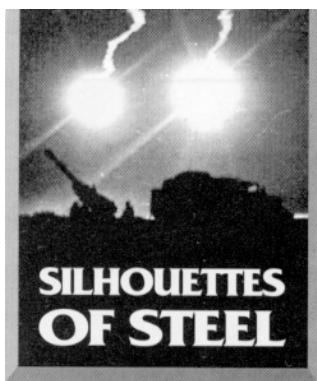
The 1-127 FA, 1-168 (Nebraska ARNG) and 2-138 (Kentucky ARNG), all DS battalions, participated in BCTP, fighting a world-class opposing force in support of their maneuver brigades. 1-168 FA conducted lane training at Camp Guernsey, Wyoming; 2-138 FA conducted lane training at Camp Atterbury, Indiana. Lane training focus was at the section and battery levels with support from lane evaluators and observer/controller s (OCs) from the 35th Div Arty and the 1st Infantry Div Arty at Fort Riley. All three DS battalions are converting to M109A5 howitzers. The GS battery coming on line in October 1996 also

will have M109A5s.

The 35th Div Arty stands trained and ready to meet the challenges of the future and support the **Santa Fe Division!**



Redlegs of the 35th Div Arty prepare to deliver steel on target. (Photo by 105th PAD)



## 38th Infantry Division Artillery

Indiana ARNG, a M198 and M110A2 (8-inch howitzer) composite battalion in general support to the division; and E/139 FA (TA) make up the 38th Division Artillery.

Each DS battalion participated with its respective brigade in a brigade command battle staff training (BCBST) exercise, and 3-139 FA participated in a staff exercise at the NTC with the 2d Brigade in April. The Div Arty change continues with the 3-139 FA's transition from its M101A1s to M102s and 1-119 FA's conversion from M101As to M109s.

The major training endeavor in 1995 was the successful fielding and new equipment training (NET) on the initial fire support automation system (IFSAS) in the Div Arty. Elements of the Div Arty also continued lane training based

on Field Artillery tables and conducted several live-fire exercises. 1-119 FA conducted AT and IFSAS NET at Camp Grayling, Michigan, in early April. All remaining elements of the 38th Division Artillery conducted AT and IFSAS NET at Camp Atterbury, Indiana, in late July and early August.

The 38th Div Arty continues to build on its tradition of excellence and anticipates the entire Div Arty will complete IFSAS NET, along with AT, in 1996—maintaining the professionalism and combat readiness the 38th Division has come to expect of **Cyclone's Thunder!**



D/2-150 FA prepares to deliver steel at Camp Atterbury during AT.

The 38th Infantry Division (Mechanized) Artillery, ARNG, headquartered in Indianapolis, Indiana, was reorganized on 1 October 1994 into a three-state Div Arty. The 1-134 FA, Ohio ARNG, a M109 howitzer battalion in direct support of the 37th Armor Brigade; 1-119 FA, Michigan ARNG, a M101A1 howitzer battalion in direct support of the 46th Mechanized Brigade; 3-139 FA, Indiana ARNG, a M101A1 howitzer battalion in direct support of the 2d Infantry Brigade; 2-150 FA,

## 40th Infantry Division (Mechanized) Artillery

1995 was another dynamite training year for the units of the 40th Infantry Division Artillery, California Army National Guard, with its headquarters in Los Angeles.

The major training event of

the year was the successful fielding of the initial fire support automation system (IFSAS), beginning in May. All three direct support battalions (1-143 FA, 2-144 FA and 3-144 FA), our general support battery (D/144 FA), target

acquisition battery (F/144 FA) and the Division Artillery headquarters received new equipment training (NET) at Camp Roberts, California, during the three-week annual training period.

In June, an exhilarating

Division Artillery live-fire exercise (LFX) was conducted, which included digitally massing the fires of the entire Division Artillery and validating the IFSAS fielding. The training was an exceptional fire support exercise from top to bottom.

In addition to the IFSAS fielding, the 40th Infantry Division Artillery units conducted lane training throughout the year, focusing on tasks in our mission essential task list (METL). Also, members of the Division Artillery completed another yearlong MOS 13F Fire Support Specialist school, supported the maneuver community with battalion/brigade simulation (BBS) and Army training battle simulation system (ARTBASS) training as well as completing the combat lifesaver course.

Based on the training completed during the past two years and events scheduled for the future, our mission-oriented training will continue to be exciting for the **Fighting Fortieth Div Arty!**



SSG Robert Cordoza prepares to fire on the M203 qualification range at Camp Roberts.

## 42d Infantry Division (Mechanized) Artillery

Training year 1995 was extremely rewarding for the *Redleg Thunder* artillerymen of the 42d (Rainbow) Infantry Division (Mechanized) Artillery (Massachusetts, New York and New Jersey Army National Guard). Coming off a very successful BCTP rotation in 1994, the Division Artillery shifted its focus to fielding the initial fire support automation system (IFSAS) and new equipment training (NET) on this new command and control system. Fielding was

completed in March with NET conducted at Fort Drum, New York, in June. In addition to the 42d Division Artillery elements, the Div Arty headquarters also hosted training for members of the 209th FA Brigade and the 1-156 FA, both from the New York ARNG.

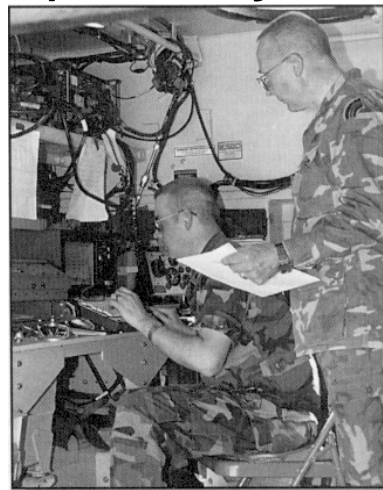
Even though faced with a major obstacle, given the geographical diversity of the Division Artillery elements, the challenge of fielding and training to standard was met and overcome through

innovative planning. Concurrently with IFSAS training, the battalions progressed with their lane training, completing Field Artillery Tables V-VIII during annual training. Battle staff skills were developed and enhanced through the conduct of several challenging command post exercises.

Renewed emphasis throughout the year was placed on the development and sustainment of individual soldier skills, marksmanship, common task training and physical fitness. This training year ends with significant

improvement in the posture and combat readiness of the soldiers in the 42d Infantry Division Artillery.

The 42d Div Arty looks forward to the challenges ahead with full confidence in



SP4 Stephen Thrasher and MSG Wayne Tinti at their computer station execute a prep during the final CPX of IFSAS training at Fort Drum.

the professionalism and competence of its artillerymen. Second to none, they stand ready for their place in Force XXI to support the 42d Infantry Division with **Redleg Thunder!**



A/101 FA of the 42d Infantry Division Artillery prepares to fire from dug-in positions. (Photo by CPT David A. Affonso)

## 49th Armored Division Artillery

As in the past, training year 1995 was a year of challenge and change for the 49th *Lone Star* Armored Division Artillery—Texas ARNG. The upgrade of all our M109A4 howitzers to M109A5 specifications was completed as was the fielding of and new equipment training (NET) for the initial fire support automation system (IFSAS). In July, the Div Arty faced the

world class OPFOR for the second time in a Warfighter at Fort Leavenworth, Kansas.

The direct support howitzer battalions conducted live-fire exercises at Fort Hood and Fort Bliss, Texas, several times during the year. E/133 FA (TA) deployed its Q-36 and Q-37 radars from San Antonio via US Air Force Reserve C-5A to support the firing operations of 3-133 FA at Fort

Bliss and 1-133 FA at Fort Hood. These efforts enhanced the training of both the radar personnel and the cannoneers of the 49th Div Arty.

The entire Div Arty deployed to Fort Hood for AT 1995. For the first time, the new IFSAS trained at AT will give the 49th Div Arty an automated fire support command and control system. During IFSAS NET, the gun sections conducted crew-

and section-level lane training while the command and control elements participated in Iron Star 1995 to prepare for the Warfighter exercise at Fort Leavenworth. As in past years, BCTP sustainment, lane training and live-fire exercises were conducted to make the most of prime training time.

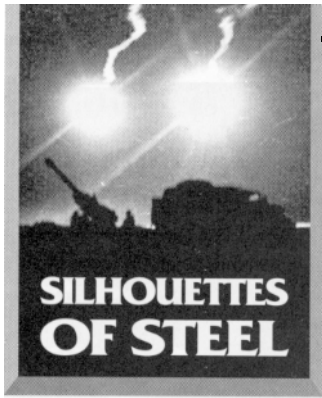
Employer support of the Guard and Reserve was a highlight for the 49th Div Arty during AT. More than 200 civilian employers, locally elected officials and members of the Texas and US House of Representatives were treated to an equipment display and a live-fire demonstration.

In the 49th Div Arty's July Warfighter, the Texas Cannoneers decimated the forces of Nordland, provided deadly "Steel Rain" in support of the maneuver brigades and fought the OPFOR to a standstill.

With the approach of 1996, the 49th Armored Div Arty continues to build upon its traditions of warfighting professionalism and strength as the **Texas Artillery!**



Vehicles and personnel from E/133 FA (TAB) loading on a USAF Reserve C-5A at Kelly AFB for deployment to Fort Bliss to support operations of 3-133 FA.



## 82d Airborne Division Artillery

The 82d Airborne Div Arty, Fort Bragg, North Carolina, continues to execute high-intensity, METL-focused training and real-world contingency missions. Div Arty battalions participated in training exercises across the North American continent and in Europe. All exercises focused the Div Arty on integrating and delivering lethal and non-lethal fires for corps/division no-notice contingency operations.

During the past 12 months,

the Div Arty maintained the highest operational tempo in recent memory. The 1-319 (Airborne) FA Regiment deployed to the JRTC with a reinforcing M198 platoon from the 18th FA Brigade in October 1994. Then, without notice, 1-319 FA deployed its FIST to Panama in January for refugee control during Operation Safe Haven. Also in January, 2-319 FAR deployed B Battery to the NTC and visited the country of Cortina at the JRTC in February along with an M198 platoon from the 18th FA Brigade. In March, Giant Step XIX, a division CPX, trained the Div Arty's collective warfighting skills. 3-319 FAR followed its sister battalions to the JRTC by conducting a night parachute assault into a dark and rainy Fort Polk in April and provided devastating fires. Again, the 18th FA Brigade (B/3-8 FAR) provided reinforcing fires. Also in April, some of 2-319 FAR's FIST traveled to the Jungle Operations Center in Panama. In May, the Div Arty took part in



On the Way! 82d Airborne gunners fire rounds during training.

Big Drop II, the semiannual three-brigade airborne operation.

As the 82d Airborne Div Arty moves into the 21st century, it continues to modernize and improve its lethality. The Div Arty recently fielded precision lightweight global positioning system receivers (PLGRs), advanced night-vision equipment,

improved single-channel ground and airborne radio system (SINCGARS) radios, the north-seeking gyro, laser pointers and the initial fire support automation system (IFSAS).

The 82d Airborne Div Arty—blessed with America's finest troopers—continues to set the standard. **Mass the Fire—Loyalty—Airborne!**

## 101st Airborne Division (Air Assault) Artillery

1995 has been a great year for the 101st Div Arty at Fort Campbell, Kentucky. Our Redlegs participated in many training events, all focused on providing accurate and responsive fires in support of the Army's only Air Assault Division.

Throughout the year, we maintained a demanding OPTEMPO in training and readiness exercises. In May, 101st Redlegs participated in the XVIII Airborne Corps' Dragon Fire V. In August, our

division FSE deployed to Korea for Ulchi Focus Lens. The success of the division's air assault operations during these two training exercises was due to the targeting cell's ability to synchronize all fire support assets. This training enhanced the 101st Division's ability to set the conditions for air assault operations in any contingency.

The division sea EDRE in September focused on recalling, loading and deploying by rail and sea and also provided valuable training.

The 320th FA's DS battalions all executed METL training throughout the year. The 1-320 FA (*Top Guns*) participated in two 30-day field training exercises at Fort Campbell in April and August/September.

In October, key leaders attended a Leaders' Training Program at the JRTC in preparation for a rotation to the

JRTC in January 96. 2-320 FA (*Balls of the Eagle*) experienced the challenge of a rigorous four-week FTX during January and February, to include live-fire lanes with its supported infantry. In May, the unit deployed to the JRTC for the third time in 13 months. 3-320 FA (*Red Knights*) deployed to the JRTC in March, conducting two air assault operations to standard. The battalion also participated in the sea EDRE.

New equipment and improvements included



A 1-320 FA gun chief loads a round.

upgrading our Q-36 Firefinders with the modular azimuth positioning system (MAPS). The 101st Div Arty also fielded the initial fire support automation system/forward entry device (IFSAS/FED) Version 2 software in July, significantly enhancing fire support planning and fire control capabilities.

Redlegs of the Screaming Eagle Division continue to train to standard and stand ready to deploy worldwide in their next rendezvous with destiny. **Guns of Glory!**



1-320 FA conducts an air assault raid at Fort Campbell.



## 10th Marine Regiment

As the 2d Marine Division's *Arm of Decision*, the 10th Marines from Camp Lejeune, North Carolina, conducted extensive joint/combined operations during FY 95. These included deployments to Okinawa, Japan; the Caribbean; Norway; the Mediterranean Sea; and several locations in CONUS. On Okinawa, the regiment provided batteries to the battalion Landing Teams of the 22d, 24th and 26th Marine Expeditionary Units and for the unit deployment program that supports the 3d Marine Division. In the Caribbean, the regiment continued support for Migration Interdiction Operations with security forces aboard the Coast Guard and Navy ships.

In January, the 3d Battalion (-) conducted a security operation at Camp Blanding, Florida. The 1st Battalion (Rein) was designated as a provisional infantry battalion and conducted cold weather

operations at the Mountain Warfare Training Center at Bridgeport, California, and subsequently deployed to Norway for joint/combined Operation Strong Resolve.

Express Sword, a semiannual exercise at Fort Bragg, North Carolina, was conducted during October and May. These exercises also integrated into the training the Army's XVIII Airborne Corps Artillery; MLRS (CPX); 3d Battalion, 14th Marines from the Marine Reserve; and Army rotary-wing and Marine fixed-wing sorties. 10th Marines headquarters deployed to the Marine Corps Air Ground Combat Center (MCAGCC) at 29 Palms, California, and served as the Marine Air Ground Task Force (MAGTF) command element for combined arms exercises. The 5th Battalion deployed to



A CH-53E helicopter externally lifts a forklift in support of the 10th Marine Regiment during Operation Express Sword at Fort Bragg.

MCAGCC to support a CAX; participated in Exercise Unified Endeavor, a US Atlantic Command corps-level CPX; and conducted live-fire operations in Vieques, Puerto Rico. The 1st Battalion deployed to MCAGCC in

August to support a CAX.

The regiment celebrated its 81st birthday in April. As the 10th Marines, we continue to uphold our legacy as the oldest artillery regiment in the Marine Corps and as the 3d Division's *Arm of Decision!*

## 11th Marine Regiment

Throughout the year, the 11th Marines *Cannon Cockers*, Camp Pendleton, California, continued to train and deploy around the world in support of the 1st Marine Division.

The regiment deployed its firing batteries for six-month rotations to support the 11th, 13th and 15th Marine Expeditionary Units (MEUs) and the unit deployment program (UDP). Deployment locations included Somalia; the Persian Gulf; Southwest Asia; Okinawa, Japan; Australia; and Korea. In Somalia, a battery from 1st Battalion serving with the 15th MEU performed a provisional infantry mission during Operation United Shield, helping to retrograde UN and Marine forces from the area.

In CONUS, 11th Marines trained at the Mountain Warfare Training Center in Bridgeport, California; Chocolate Mountains in Yuma, Arizona; and the Marine Air Ground Combat Center in Twentynine Palms, California, where the *Cannon Cockers* conducted CAXs as well as

the regiment's premiere joint training exercise—the semiannual Desert Firing Exercise (DESFIREX).

During each DESFIREX, more than 8,500 rounds and 100 MLRS practice rockets are fired and hundreds of joint aircraft sorties are integrated into the training. In the spring DESFIREX, the 11th Marines seamlessly operated with an entire MLRS battalion (6-27

FA, III Corps Artillery) and a Marine Reserve battalion (5/14).

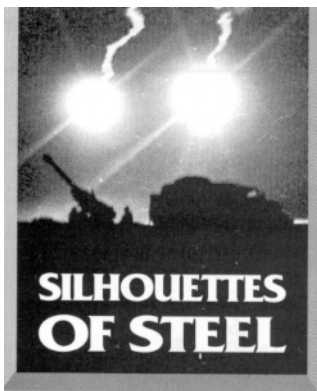
April through June were dedicated to fielding and integrating the lightweight computer unit (LCU) and SINCGARS, part of the fire support command and control system (FSCCS), which uses the initial fire support automation system software. The Marine Corps Systems

Command validated the system during the I MEF digital CPX in July. In May and June, the 2d Battalion supported two JTF-6 counterdrug missions along the south San Diego border.

Once again, the 11th Marines have demonstrated consistent combat readiness to deploy anywhere in the world and deliver steel on target—*Cannon Cockers!*



11th Marine Redlegs send steel down range.



## 12th Marine Regiment

**1**995 has been another impressive year for the *Thunder and Steel* Regiment, headquartered at Camp Foster, Okinawa, Japan. Remaining the corps' only forward-based, globally sourced artillery regiment, the 12th Marines continues to receive firing batteries from other artillery units through the unit deployment program (UDP). Although restructured to contain only two M198 howitzer battalions, the regiment remains a key member of the 3d Marine Division team.

As in the past, the regiment

executed an aggressive exercise deployment plan in support of the 3d Marine Division and III Marine Expeditionary Force (MEF). Off-island deployments for joint and combined operations included Freedom Banner and Ulchi Focus Lens in Korea; Keen Edge in Hokaido, Japan; Forest Light in mainland Japan; Tandem Thrust in Tinian; Cobra Gold in Thailand; and Southern Frontier in Australia. The regiment also deployed a counterbattery radar detachment for Operation United Shield in Somalia.

On-island, the regiment participated fully in 3d Division exercises Display Flexibility and Resolute Pearl as well as the Marine Air Ground Task Force (MAGTF) Staff Training Program (MSTP) Phase II exercise in February. Additionally, the 12th Marines served as the ground combat element in the 1st Marine Air Wing Exercise BeachCrest 95 and conducted its own

logistics exercise, Operation Boar Hunt.

But the heart of the year for our two battalions is the live-fire training on at Camp Fuji, Okinawa, and the Pohakalua Training Area on Hawaii. The culmination of 1995 training was Fire Dragon in September at Camp Fuji with the entire regiment and a battalion from the 1st Artillery Regiment, Japanese Ground Self-Defense Force.

Finally, the regiment provided saluting details and honor companies to celebrate the 50th anniversaries of two great battles: Iwo Jima and Okinawa. These ceremonies reminded us that only through commitment and teamwork has the corps—and regiment—established the reputation it enjoys today. ***Thunder and Steel!***



Battery L, 3d Battalion, 12th Marines live firing at Camp Fuji, Japan.

## 14th Marine Regiment

**T**he 14th Marines, with its headquarters in Dallas, Texas, is the Marine Corps' only Reserve artillery regiment. It's the largest artillery regiment in the Marine Corps with five artillery battalions in 19 sites across the country. Structured to mirror the active counterparts, the regiment stands *At the Ready* to augment and reinforce the active forces and assume the role of force artillery headquarters during any contingency.

Through 1995, the regiment pursued its goals of total force and joint training, digital command and control at all levels and honing basic artillery skills. In February, the regimental headquarters along with a command element from 2d Battalion, headquartered in Fort Worth, Texas, conducted a joint CPX/air-mobile exercise with the 1st Cav Div Arty at Fort Hood, Texas. In March, 5th Battalion, headquartered in Long Beach, California, participated in the 11th Marines Desert Firing Exercises (DESFIREXs) at

Twenty-nine Palms, California. In April and then again in October, the 3d Battalion, located in Philadelphia, Pennsylvania, supported the 10th Marine Regimental FIREX Express Sword at Fort Bragg, North Carolina. In June, 4th Battalion deployed from its home in Bessemer, Alabama, to participate in CAX 7-95. 2d Battalion followed by supporting CAX 8-95.

In July, the regimental headquarters along with the 1st and 5th Battalions and Combat Service Support Detachment-46 deployed to Fort Sill, Oklahoma, to conduct the joint CAX High Impact AT-95. Validating the force artillery headquarters concept, the regimental combat operations center integrated artillery fires, CAS and rocket fires, including six sorties of

F/A-18s from Marine Air Group-41 and 30 rockets fired by B/3-9 FA (MLRS) from III Corps Artillery. During the exercise, 1st and 5th Battalions underwent combat readiness evaluations.

In 1995, the regiment worked toward integrating seamlessly with active the forces, pursuing aggressive training goals and high standards to be ***At the Ready!***



2d Battalion, 14th Marines fire a M198 during CAX 8-95.



# Field Artillery Commanders and Command Sergeants Major

As of 1 November 1995

## Active Army

### Training and Doctrine Command

#### US Army Field Artillery School and Fort Sill

**BG Rigby, Randall L.**  
Commandant/CG

**CSM Perry, William J., III**  
Fort Sill

**COL Heilman, William P.**  
Acting Asst. Commandant

**COL Heilman, William P.**  
Green, Gary R.  
30th FA Regiment

**LTC Smith, Ricky E.**  
Cruz, Arthur E.  
2d Bn, 2d FA

**LTC Palmatier, Bruce T.**  
CSM Hawkins, Joseph A.  
1st Bn, 30th FA

**LTC Beley, Douglas G.**  
SGM Howard, Glenn, Sr.  
3d Bn, 30th FA

**COL Costello, Thomas J.**  
CSM Causby, Mal E.  
FA Training Center

**LTC Jordan, John J.**  
CSM Meyer, Dennis  
1st Bn, 19th FA

**LTC Madden, Michael T.**  
CSM Drummond, Walter L.  
1st Bn, 31st FA

**LTC O'Sullivan, John M.**  
CSM Adams, Paul C.  
1st Bn, 33d FA

**LTC Nolan, Daniel A., III**  
CSM Marable, Joseph L.  
1st Bn, 78th FA

**LTC Quirici, Russell E.**  
CSM Niccum, William W.  
2d Bn, 80th FA

**LTC Doerr, Jeffrey L.**  
CSM Kraus, Lawrence H.  
3d Bn, 321st FA

**LTC Aswell, Paul L.**  
CSM Daliz, Rosa S.  
95th AG Bn

### Forces Command

#### III Corps

**BG Dodson, Michael L.**  
CSM Young, Richard A.  
III Corps Arty

**COL Engel, William F.**  
CSM Cunningham, Jackie L.  
17th FA Bde

**LTC Vangjel, Peter M.**  
CSM Nelson, George H.  
5th Bn, 3d FA

**LTC Grabowski, Richard A.**  
CSM Chappell, David B.  
1st Bn, 12th FA

**LTC McGuire, Mark A.**  
CSM Evans, Kenneth L.  
3d Bn, 18th FA

**COL Taylor, Joe G.**  
CSM Underwood, Johnny W.  
75th FA Bde

**LTC Graham, Mark A.**  
CSM Inman, Paul M.  
1st Bn, 17th FA

**LTC Nizolak, Joseph P., Jr.**  
CSM Hall, Steven A.  
5th Bn, 18th FA

**LTC Boatner, James G.**  
CSM Jackson, Richard M.  
6th Bn, 27th FA

**COL Hahn, Daniel A.**  
CSM Cates, David L.  
212th FA Bde

**LTC Blum, Robert M.**  
CSM Shady, Robert C.  
2d Bn, 17th FA

**LTC Hall, Russell J.**  
CSM Odom, Gene  
2d Bn, 18th FA

**LTC Perry, Jeffery J.**  
CSM Kelly, John E.  
6th Bn, 32d FA

**COL Swartz, Leonard G.**  
CSM Dinkel, Larry H.  
214th FA Bde

**LTC Hampton, David R., Jr.**  
CSM Bean, Walter L.  
3d Bn, 9th FA

**LTC Skidmore, John W.**  
CSM Stockton, Galen V.  
5th Bn, 17th FA

**LTC Moughon, James C., III**  
CSM Hairston, Adam T., Jr.  
4th Bn, 27th FA

**LTC Burns, David C.**  
CSM Brown, Freddy L.  
19th Maintenance

**LTC Dennis, Kathleen R.**  
CSM Daniel, David R.  
47th Combat Support

#### XVIII Airborne Corps

**BG Ryneska, John J.**  
CSM Archbold, Cecillio M.  
XVIII Abn Corps Arty

**COL Decker, Robert L.**  
CSM Dugan, Joseph A.  
18th FA Bde

**LTC Grates, Christopher J.**  
CSM Dixon, Donald L. E.  
3d Bn, 8th FA

**LTC Riojas, Jose D.**  
CSM Melvin, Richard L.

5th Bn (AA), 8th FA

**LTC Barron, Michael C.**  
CSM Quandt, David T.  
3d Bn, 27th FA

**LTC Warner, Monroe P.**  
CSM McPherson, Paul  
1st Bn (Abn), 39th FA

#### Division Artilleries

**COL Odierno, Raymond T.**  
CSM Duncan, Gary A.  
1st Cav Div Arty

**LTC Flynn, Edward L.**  
CSM Stephens, Andrew J.  
1st Bn, 82d FA

**LTC Halverson, David D.**  
CSM Ortiz, Migual A.  
2d Bn, 82d FA

**LTC Conneran, Thomas J.**  
CSM Tooson, Aubrey D.  
3d Bn, 82d FA

**COL Adair, Lawrence R.**  
CSM Lewis, Harold E.  
2d AR Div Arty

**LTC Jauron, Lester C.**  
CSM Sherman, Ernest, Jr.  
9th Bn, 1st FA

**LTC Formica, Richard P.**  
CSM McLawhom, Linwood E., Jr.  
1st Bn, 3d FA

**LTC Hernandez, Rhett A.**  
CSM Shelly, Earl L.  
1st Bn, 14th FA

**LTC Klemencic, John V.**  
CSM Clayton, Larry W.  
4th IN Div (Mech) Arty

**LTC Gross, John D.**  
CSM Ellingson, Thomas D.  
3d Bn, 29th FA

**COL Perkins, Elbert N.**  
CSM Strong, Lamar  
10th Mtn Div (L) Arty

**LTC Bartell, Arthur M.**  
CSM Griffin, William H.  
1st Bn, 7th FA

**LTC Russell, Theodore S., Jr.**  
CSM Watkins, Don B.  
2d Bn, 7th FA

**COL Wood, John R.**  
CSM Lopes, Lucio O.  
24th IN Div (Mech) Arty

**LTC Morgan, John W., III**  
CSM Horsley, Johnny L.  
1st Bn, 41st FA

**LTC Allen, Charles B.**  
CSM Nelson, Jerry  
3d Bn, 41st FA

**LTC McGraw, Donald C., Jr.**  
CSM Porter, Ronnie

4th Bn, 41st FA

**COL Spohn, Edward A., III**  
CSM Thompson, Ronald  
82d Abn Div Arty

**LTC Cerrone, James A.**  
CSM King, Dennis M.  
1st Bn, 319th FA

**LTC McFarley, George, Jr.**  
CSM Taylor, Michael R.  
2d Bn, 319th FA

**LTC Argo, Reamer W., III**  
CSM Hopkins, Charles D.  
3d Bn, 319th FA

**COL Ervin, Kent E.**  
CSM Speeks, Rickey D.  
101st Abn Div (AA) Arty

**LTC Gilmore, Mark R.**  
CSM Brodeur, Albert J.  
1st Bn, 320th FA

**LTC Rogers, Ronnie G.**  
CSM Wong, Derrick G.  
2d Bn, 320th FA

**LTC Bagby, Byron S.**  
CSM Boyd, George M.  
3d Bn, 320th FA

#### Separate Units

**LTC Flake, Jackson L., III**  
CSM Scott, Leroy  
1st Bn, 5th FA

**LTC Peterson, Leo S.**  
CSM Wilson, Donald M.  
4th Bn, 5th FA

**LTC Collins, Glen C.**  
CSM Tolles, Burr  
1st Bn, 29th FA

**COL Leigh, Joseph J., Jr.**  
CSM Walker, Jimmy L.  
210th FA Bde  
(I Corps Arty)

**COL Taylor, Douglas E.**  
MSG Hammonds, J. D.  
TEXCOM Fire Support Dir

**LTC Dow, Robert A., Jr.**  
1SG Rodriguez, Inocencio  
Fort Chaffee

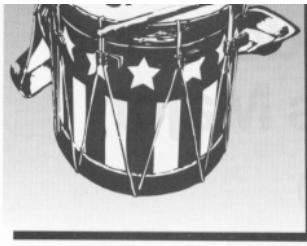
### United States Army Europe

#### V Corps

**COL Tetu, William J.**  
CSM Kermod, William J.  
V Corps Arty

**COL Maples, Michael D.**  
CSM Ostos, Joseph M.  
41st FA Bde

**LTC Konkus, Timothy G.**  
CSM Roddy, Patrick J.  
1st Bn, 27th FA



### Division Artilleries

**COL Thrasher, Alan W.**  
CSM Harris, Sherman W.  
1st AR Div Arty

**LTC Corpac, Peter S.**  
CSM Evans, Doris, Jr.  
2d Bn, 3d FA

**LTC Hammond, Jeffery W.**  
CSM Stewart, Quenten H.  
4th Bn, 29th FA

**COL Smith, Robert L.**  
CSM Foster, Thomas H., III  
3d IN Div (Mech) Arty

**LTC Moore, Lance A.**  
CSM Woods, James T.  
3d Bn, 1st FA

**LTC Bergner, Kevin J.**  
CSM Castillo, Ivan A.  
5th Bn, 41st FA

### United States Army Pacific

### Division Artilleries

**COL Hartsell, Lynn**  
CSM Purdy, Karl L.  
2d IN Div Arty

**LTC Zipp, Bernard F.**  
CSM Christian, Fred L., Jr.  
8th Bn, 8th FA

**LTC Cardenas, Eduardo**  
CSM Schmidt, Warren A.  
1st Bn, 15th FA

**LTC Lingamfelter, Lee S.**  
CSM Porter, Raymond L.  
6th Bn, 37th FA

**COL Tighe, Dennis W.**  
CSM Williams, Anthony J.  
25th IN Div (L) Arty

**LTC Hall, Dewayne P.**  
CSM Broadwater, William B.  
3d Bn, 7th FA

**LTC Brinn, Rufus T.**  
CSM Freeman, Lesley, Jr.  
1st Bn, 8th FA

**LTC Lewis, Allen D.**  
CSM Cox, Hubert L.  
2d Bn, 11th FA

### Separate Units

**LTC Turner, Frank D., III**  
CSM Martin, Jerry D.  
2d Bn, 8th FA

**LTC Strong, John L.**  
CSM Winston, Willie J.  
4th Bn, 11th FA

**LTC Hawkins, Walter L.**  
CSM Strudiant, Lash L.  
1st Bn, 37th FA

### Army National Guard

### I Corps

**COL(P) Baysinger, Howard E., Jr.**  
CSM Boyington, Richard L.  
I Corps Arty

**LTC Nelson, Dale G.**  
CSM Williams, Brock H.  
1st Bn, 140th FA

**LTC Strong, Robert L.**  
CSM Christensen, Kent B.  
1st Bn, 145th FA

**LTC Wilson, Patrick D.**  
CSM Walbeck, William B.  
2d Bn, 222d FA

### Brigades

**COL Raphael, John D.**  
CSM Tassone, Vincent J.  
43d FA Bde

**LTC Kelly, Edward V.**  
CSM Duddie, Joseph, Jr.  
2d Bn, 192d FA

**COL McCall, Daryl K.**  
CSM Watts, Charles W.  
45th FA Bde

**LTC McBride, James L.**  
CSM Lynn, William R.  
1st Bn, 158th FA

**LTC Redelsperger, John C.**  
CSM Ahrens, Lewis E.  
1st Bn, 171st FA

**LTC Haught, Floyd D.**  
CSM Bennett, Larry P.  
1st Bn, 189th FA

**COL Nevin, Harold J.**  
CSM Yenchesky, James H.  
57th FA Bde

**LTC Schiller, James A.**  
CSM Weller, Gary P.  
1st Bn, 121st FA

**LTC Gapinski, David D.**  
CSM Hannah, Bruce J.  
1st Bn, 126th FA

**COL Ryan, James F.**  
CSM Iannelli, Paul A.  
103d FA Bde

**LTC Nuttall, James W.**  
CSM Paquette, Robert L.  
1st Bn, 103d FA

**COL Taylor, Robert E., Jr.**  
CSM Abraham, Daniel R.  
113th FA Bde

**LTC Fuller, Tony R.**  
CSM Ingram, Larry G.  
4th Bn, 113th FA

**LTC Swett, Frank M., Jr.**  
CSM Ellington, Orman B., Jr.  
5th Bn, 113th FA

**COL Wilkerson, Terry G.**  
CSM Kidd, Ernest T.  
115th FA Bde

**LTC Dunn, Gary J.**  
CSM Willis, James L.  
1st Bn, 49th FA

**LTC Hermanson, Patrick M.**  
CSM Vamer, Marvin S.

1st Bn, 190th FA

**COL Griffey, Bobby G.**  
CSM Coy, Eldon L.  
135th FA Bde

**LTC Henry, Walter E.**  
CSM Fleetwood, Edward  
1st Bn, 128th FA

**LTC Wilson, George W.**  
CSM Green, Roger B.  
1st Bn, 129th FA

**COL Carpenter, Jasper**  
CSM Dermon, Robert E.  
138th FA Bde

**LTC Curtin, Michael J.**  
CSM Hoffman, William F.  
1st Bn, 623d FA

**COL Pennington, James R.**  
CSM Fagala, Robin F.  
142d FA Bde

**LTC Ross, G. Michael**  
CSM Kelly, Clarence H.  
1st Bn, 142d FA

**LTC Moore, Russell A.**  
CSM Bull, Jack R.  
2d Bn, 142d FA

**COL Whipple, Frank W.**  
CSM Humey, Richard J.  
147th FA Bde

**LTC Schlingen, Daniel L.**  
CSM Aiken, Robert J.  
1st Bn, 147th FA

**LTC Bray, Robert T.**  
CSM Logan, Richard L.  
2d Bn, 147th FA

**COL Geddings, Friendly R.**  
CSM Smith, James D.  
151st FA Bde

**LTC Gordon, Ronnie E.**  
CSM Herndon, Charles R.  
3d Bn, 178th FA

**LTC Richardson, Henry B., Jr.**  
CSM Ward, Franklin P.  
4th Bn, 178th FA

**COL Perry, Gerald L.**  
CSM Chino, Lara  
153d FA Bde

**LTC Hutton, Billy J., Jr.**  
MSG(P) Morris, William E.  
2d Bn, 180th FA

**COL Crowder, Ronald G.**  
CSM Rowan, Thomas D.  
169th FA Bde

**LTC O'Hara, Patrick M.**  
CSM Holt, Larry D.  
1st Bn, 157th FA

**LTC Hladkyj, Y. R.**  
CSM Dehn, William A.  
2d Bn, 157th FA

**COL Moore, William R.**  
CSM McDaniel, John C., Jr.  
196th FA Bde

**LTC Marshall, Herschel W.**  
CSM Pratt, John F.  
1st Bn, 115th FA

**LTC Miller, Lonnie R.**  
CSM Stevens, Barrett M.  
2d Bn, 115th FA

**LTC Prince, Calvin F., Jr.**  
CSM Turner, William B., Jr.

3d Bn, 115th FA

**LTC Jones, Walter M.**  
CSM Gentry, Gary J.  
1st Bn, 181st FA

**LTC(P) Murphey, Lawrence H.**  
CSM Crotto, Gregory H.  
197th FA Bde

**LTC Aubin, John P.**  
CSM O'Brien, John B.  
1st Bn, 172d FA

**MAJ(P) Guise, James R.**  
CSM Starr, John D.  
2d Bn, 197th FA

**COL Winter, Brian D.**  
CSM Flye, Jerome E.  
209th FA Bde

**COL Farris, Joe P.**  
CSM Cowley, Gerald R.  
631st FA Bde

**LTC Willingham, Joe D.**  
CSM Cummins, Ancle W.  
1st Bn, 114th FA

### Division Artilleries

**COL Richar, William C.**  
CSM Sheard, James J., Jr.  
28th IN Div (Mech) Arty

**LTC Golden, Paul D.**  
CSM Houston, David J.  
1st Bn, 107th FA

**MAJ Gerstenlauer, David L.**  
CSM Nett, David L.  
1st Bn, 108th FA

**LTC Ruotolo, Leonard J.**  
CSM Sauer, John J., Jr.  
1st Bn, 109th FA

**COL Stevens, Wayne S.**  
CSM Sparkman, Miles E., III  
29th IN Div (L) Arty

**LTC Holweck, Ralph D.**  
CSM Forraster, Clarence  
2d Bn, 110th FA

**LTC Troy, William P.**  
CSM Halfacre, Howard E.  
2d Bn, 111th FA

**LTC Bramlitt, Carl W.**  
CSM Glazener, Edwin H.  
1st Bn, 246th FA

**COL Warnock, Tracy T.**  
CSM Peterson, Leslie D.  
34th IN Div (Mech) Arty

**LTC Malicki, Gregg H.**  
CSM Goodwin, Randy C.  
2d Bn, 123d FA

**LTC Nash, Michael P.**  
CSM Wog, Richard H.  
1st Bn, 125th FA

**LTC Zieska, Kenneth W., Jr.**  
CSM Beranek, Steven W.  
1st Bn, 151st FA

**LTC Jipp, Randall A.**  
CSM Peters, David B.  
1st Bn, 194th FA

**COL Kelley, Aaron D., Jr.**  
CSM Rudder, John L.  
35th IN Div (Mech) Arty

**LTC Wright, Frank H., IV**  
CSM Althouse, Michael D.  
1st Bn, 127th FA



**LTC** **Nicholas, Robert M.**  
CSM Suplee, James L.  
2d Bn, 138th FA

**LTC** **McCormick, Gary L.**  
CSM Terrell, Eldon J.  
1st Bn, 168th FA

**COL** **Peterman, Roger D.**  
CSM Osborne, John D.  
38th IN Div Arty

**LTC** **Peters, Mark R.**  
CSM Wierman, Michael L.  
1st Bn, 119th FA

**LTC** **Kambic, Matthew L.**  
CSM Dillon, Terry  
1st Bn, 134th FA

**LTC** **Combs, William B.**  
CSM Nicholson, Jerry D.  
3d Bn, 139th FA

**LTC** **Bucklew, Keith J.**  
CSM Parsons, Jackie P.  
2d Bn, 150th FA

**COL** **Kelley, William J., Jr.**  
CSM Andrews, Gary W.  
40th IN Div (Mech) Arty

**LTC** **Landrith, Gary S.**  
CSM Duran, Jesse  
1st Bn, 143d FA

**LTC** **Kramer, Jeffrey J.**  
CSM Pointer, John W.  
2d Bn, 144th FA

**LTC** **Helton, Edward E.**  
CSM Randall, Jerry E.  
3d Bn, 144th FA

**COL** **Leite, Abel C.**  
CSM Beirne, John E.  
42d IN Div (Mech) Arty

**LTC** **Delaney, Michael J.**  
CSM Engler, Paul D.  
1st Bn, 101st FA

**LTC** **Finck, William H.**  
CSM Szymborski, Stanley C.  
1st Bn, 112th FA

**LTC** **Hislop, Kenneth D.**  
CSM Newman, Frank T., Jr.  
3d Bn, 112th FA

**LTC** **Gidansky, Martin**  
CSM Adinolfi, Albert  
1st Bn, 258th FA

**COL** **Powers, Christopher J.**  
CSM Dean, Danny  
49th AR Div Arty

**LTC** **Chapman, Jimmy H.**  
CSM Rigsby, Hulen T., III  
1st Bn, 133d FA

**LTC** **Villarreal, Pedro G.**  
CSM Talbot, Joseph E.  
3d Bn, 133d FA

**LTC** **Timmerman, Thomas G.**  
CSM Benner, Gerald E.  
4th Bn, 133d FA

### Separate Units

**LTC** **Kelly, Gary E.**  
CSM Hoopes, William L.  
3d Bn, 49th FA

**LTC** **Eaton, Clark J.**  
CSM Whitney, Gerald D.  
1st Bn, 86th FA

**LTC** **Martin, Mabry E.**  
CSM Travis, Ronald K.  
1st Bn, 113th FA

**LTC** **Lindsley, Daniel M.**  
CSM Marshall, Ben A.  
2d Bn, 114th FA

**LTC** **Welch, Jerold P.**  
CSM Dooley, Gary L.  
2d Bn, 116th FA

**LTC** **Alford, David R.**  
CSM Danley, Dwight L.  
3d Bn, 116th FA

**LTC** **Smith, Perry G.**  
CSM Jackson, Charles R.  
1st Bn, 117th FA

**LTC** **Gable, Charles L.**  
CSM Snyder, Pugh K.  
3d Bn, 117th FA

**LTC** **Nessmith, Charles R.**  
CSM Allen, Thomas G.  
1st Bn, 118th FA

**MAJ(P)** **Disher, Gregory R.**  
CSM Ambrose, Leo L.  
1st Bn, 120th FA

**LTC** **Crane, Damian K.**  
MSG(P) Middleton, William E., Sr.  
2d Bn, 122d FA

**LTC** **Foster, John S.**  
CSM Bahr, Ronald E.  
2d Bn, 130th FA

**LTC** **Acosta, Thomas W., Jr.**  
CSM Smith, Robert G.  
1st Bn, 141st FA

**LTC** **Weaver, Ronald L.**  
CSM Forsman, Joe V.  
2d Bn, 146th FA

**LTC** **Flynn, Fred V., Jr.**  
CSM Youngren, Walter A.  
1st Bn, 148th FA

**LTC** **Cleaves, Arthur W.**  
CSM Rolfe, Randall G.  
1st Bn, 152d FA

**LTC** **Morelli, Dominic A.**  
CSM Gliedman, Jeffrey A.  
1st Bn, 156th FA

**LTC** **Bray, Gary D.**  
CSM Bates, John B.  
1st Bn, 160th FA

**LTC** **McAuley, John M.**  
CSM Stevens, George E.  
1st Bn, 161st FA

**LTC** **Rivera, Agustin**  
CSM Otero, Luis  
1st Bn, 162d FA

**LTC** **Rivera, Edwin I.**  
CSM Lopez, Alcides  
2d Bn, 162d FA

**LTC** **Lynch, Stephen L.**  
CSM Mattingly, James R.  
1st Bn, 163d FA

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CSM Sexton, Jimmie R.  
1st Bn, 178th FA

**LTC** **Borrmann, Donald W.**

**CSM** **Gates, James A.**  
1st Bn, 180th FA

**LTC** **Meyers, Berri K.**  
CSM Young, Robert L.  
1st Bn, 182d FA

**MAJ(P)** **Holland, Richard E.**  
CSM Harman, John E.  
1st Bn, 201st FA

**MAJ** **Daniel McCormack**  
CSM Abraham, Piedra  
1st Bn, 202d FA

**MAJ(P)** **Brackin, John L.**  
CSM Powell, Larry N.  
5th Bn, 206th FA

**LTC** **Webb, Charles R.**  
CSM Hewell, Gerald M.  
1st Bn, 214th FA

**MAJ(P)** **Webber, Craig A.**  
CSM Smith, Joseph A.  
2d Bn, 218th FA

**LTC** **Spear, Bruce D.**  
CSM Makuakane, Jack K.  
1st Bn, 487th FA

### Army Reserve

#### Brigades

**COL** **Bugge, Jimmie C.**  
CSM Rutherford, Barry C.  
428th FA Bde

**COL** **Serra, Philip M.**  
CSM Manno, Richard  
479th FA Bde

#### Training Brigades

**COL** **Bradford, Jerry J.**  
CSM Carter, Garry L.  
402d Bde (Tng) (FA)  
95th Div (Tng)

**MAJ** **Hatfield, Mark C.**  
CSM Coleman, Eddie  
1st Bn, 89th FA

**LTC** **Wolfram, Walter T.**  
CSM Anders, William E.  
3d Bn, 89th FA

**LTC** **Pike, David S.**  
1SG Lowe, George J.  
4th Bn, 89th FA

**LTC** **Centracco, Robert M.**  
1SG Donahue, Robert F.  
5th Bn, 89th FA

**LTC** **Tetreault, Steven L.**  
CSM Carter, Garry L.  
402d Tng Spt Bn

#### Separate Units

**LTC** **Maun, Joseph M.**  
CSM Harden, Frank W.  
7th Bn, 1st FA

**LTC** **Smith, Steven W.**  
CSM Vacant  
4th Bn, 17th FA

**LTC** **Drewel, Charles A.**  
CSM Frazier, Jimmie L.  
3d Bn, 75th FA

**LTC** **Scanlan, John J.**  
CSM Ward, Cecil M.  
3d Bn, 83d FA

**LTC** **Veggs, Ivan V.**  
CSM Short, Charles E.

3d Bn, 92d FA

**COL** **Zabecki, David T.**  
CSM Vacant  
313th Rear Tac Ops Ctr

### Marines

**Col** **Sachtleben, James L.**  
SgtMaj Seymour, Gerald L.  
10th Marines

**LtCol** **Lovely, James M.**  
SgtMaj Huerta, Ernest A.  
1st Bn, 10th Mar

**LtCol** **Darling, Rodell C.**  
SgtMaj McIntosh, Wylie R.  
2d Bn, 10th Mar

**LtCol** **Garner, James M.**  
SgtMaj Bartley, Milton L.  
3d Bn, 10th Mar

**LtCol** **Chavez, Rocky J.**  
SgtMaj Cruz, Anthony A.  
5th Bn, 10th Mar

**Col** **Palermo, Anthony M.**  
SgtMaj Patri, Michael J.  
11th Marines

**LtCol** **Rudder, Philip C.**  
SgtMaj Deas, Joseph B.  
1st Bn, 11th Mar

**LtCol** **Baird, Stephen W.**  
SgtMaj Nacoste, Lawrence  
2d Bn, 11th Mar

**LtCol** **Kruse, John E., Jr.**  
SgtMaj Pacheko, Alex P.  
3d Bn, 11th Mar

**LtCol** **Lindsey, Forrest R.**  
SgtMaj Madero, Michael A.  
5th Bn, 11th Mar

**Col** **Mazzara, Andrew F.**  
SgtMaj McHenry, Robert, Jr.  
12th Marines

**LtCol** **Vietti, Kevin A.**  
1stSgt Sokup, C. E.  
1st Bn, 12th Mar

**LtCol** **Saylor, Bennett W.**  
SgtMaj Kent, Calton W.  
3d Bn, 12th Mar

**Col** **Gido, Paul A.**  
SgtMaj Baker, Johnny B.  
14th Marines

**LtCol** **Kaminski, T. J.**  
SgtMaj Bricca, Anthony J.  
1st Bn, 14th Mar

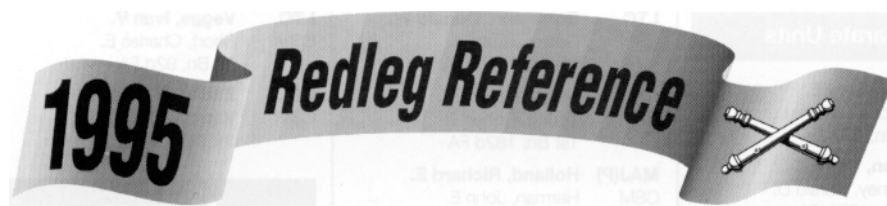
**LtCol** **Poole, Kim T.**  
SgtMaj Davis, James K.  
2d Bn, 14th Mar

**LtCol** **Mears, James A.**  
SgtMaj Wright, Arthur G.  
3d Bn, 14th Mar

**LtCol** **Colella, Thomas V.**  
SgtMaj Burt, Albert, Jr.  
4th Bn, 14th Mar

**LtCol** **Bloom, Peter W.**  
SgtMaj Carrillo, Carlos, Jr.  
5th Bn, 14th Mar





The following is a list of articles and selected items from "Registration Points" (RP), "On the Move" (OM), "View from the Blockhouse" (VB), "Incoming" (INC), "Redleg Review" (RR) and "From the Gun Line" (FGL) appearing in *Field Artillery* during calendar year 1995. The entries are categorized by subject and listed chronologically by title and edition.

### Unit Reports

- "Marne Thunder: FA in OOTW and the Div Arty METL," (3d IN (Mech) Arty) Feb
- "Hells Fires Deep: The DOC—An Integrated Approach," (2d AR Div Arty) Feb
- "Kingfish Battle Notes: RAIDS—Fire Coordination for Aviation in the Deep Battle," (101st Abn Div Arty) Feb
- "Proactive Fires: Leveraging Technology to Defeat Artillery High-Payoff Targets," (4th IN Div Arty) Apr
- "Deep Operations in the Big Red One—Winning Early, Winning Deep," (1st IN Div Arty) Jun
- "Operation Uphold Democracy: The 10th Mountain Div Arty in Peace Operations," Jun
- "A Force Protection Package for Friendly Artillery Forward," (4th IN Div Arty) Sep-Oct
- "Silhouettes of Steel," (Reports by US FA Corps Arty and Div Arty) Nov-Dec

### Training

- "Maneuver Shooters: Eyes for the Battlefield," (INC) Feb
- "Joint Fire Support—Training for the Future," (Interview with MG(S) Leslie M. Palm, CG, Marine Corps Air Ground Combat Center) Feb
- "Army MLRS Support for Marines," Feb
- "IFSAS Sustainment Training for the National Guard," Feb
- "The Challenge: Re-Training FISTers to Operate the M981 in Heavy Divisions," (INC) Apr
- "Proactive Fires: Leveraging Technology to Defeat Artillery High-Payoff Targets," Apr
- "Deep Operations in the Big Red One—Winning Early, Winning Deep," Jun
- "FA Fighting Forward: Paladins in the Victory Division," (Interview with MG Joseph E. DeFrancisco, CG, 24th IN Div) Sep-Oct
- "FSE Leaders: Training the Core Competencies," Sep-Oct
- "A Technique for Employing CAS," Sep-Oct
- "A Force Protection Package for Friendly Artillery Forward," Sep-Oct
- "Developing the Brigade Scheme of Fire Support," Sep-Oct
- "USAFAS Curriculum Revisions," (VB) Sep-Oct

### Doctrine and TTP

- "Combined Operations Future," (OM) Feb
- "MLRS Doctrine and TTP—Getting it Right," (INC) Feb
- "Hells Fires Deep: The DOC—An Integrated Approach," Feb
- "Kingfish Battle Notes: RAIDS—Fire Coordination for Aviation in the Deep Battle," Feb
- "A Primer on the BCE," Feb
- "Future Fires for Force Projection," (OM) Apr
- "Attack Helicopter Battalion FSO: Fire Support Planner or Executor," (INC) Apr
- "Stay Hot, Shoot Fast: An Evolving Concept in MLRS Tactics," Apr
- "Proactive Fires: Leveraging Technology to Defeat Artillery High-Payoff Targets," Apr
- "Preparation for Force Projection: The Intermediate Staging Base," Apr
- "Terrain-Trajectory Diagrams for Firefinder in Korea," Apr
- "Kingfish Battle Notes: Fundamental Errors in Fire Coordination Graphics," Apr
- "On the Threshold," (OM) Jun
- "Ascendancy of Fires—The Evolution of the Combined Arms Team," (Interview with GEN (Ret) Glenn K. Otis, Former CG of CENTAG and CINCUSAREUR) Jun
- "Deep Operations in the Big Red One—Winning Early, Winning Deep," Jun
- "Troop-Leading Procedures for the Battery Orders Process," Jun
- "The Problem with the OPAREA," (INC) Sep-Oct
- "The Paladin Battalion at the NTC—A Commander's Perspective," Sep-Oct
- "The Paladin Platoon Leader at the NTC," Sep-Oct
- "Developing TTP for Theater Missile Defense," Sep-Oct
- "A Technique for Employing CAS," Sep-Oct
- "A Force Protection Package for Friendly Artillery Forward," Sep-Oct
- "The IPB Process for Operations Other Than War," Sep-Oct
- "Developing the Brigade Scheme of Fire Support," Sep-Oct

- "Who Should Coordinate Fires in the Battle Interdiction Area?" Sep-Oct
- "Fires for Division XXI: State of the Branch 1995," Nov-Dec
- "Deep Attack and CAS—Joint Roles and Missions," Nov-Dec
- "Shaping Battlespace—More than Just Deep Attack," Nov-Dec

### Personnel/Force Structure

- "National Guard FA: A Decisive Force for Strategic Victory," Apr
- "Army Selects Enhanced Readiness ARNG Brigades," Apr
- "A Modest Proposal: A CSS Unit for Corps FA Brigades," Apr
- "Army Science Board Study: How Much Field Artillery is Enough?" Jun
- "A Force Protection Package for Friendly Artillery Forward," Sep-Oct
- "Fires for Division XXI: State of the Branch 1995," Nov-Dec
- "Field Artillery Training Command Directory," Nov-Dec
- "Active Army FA Regiment Reflagging Plan," Nov-Dec
- "FA Assignments Branches," Nov-Dec
- "US FA Units Worldwide," (Maps) Nov-Dec
- "US FA Commanders and Command Sergeants Major," (Battalion and Higher) Nov-Dec

### Leadership

- "NCO Development Program—A Career Commitment to Excellence," (FGL) Apr
- "Senior Fire Support Conference Dates Set," (INC) Apr
- "TIPS for Leaders," (FGL) Jun
- "Leadership and TRADOC XXI," (Interview with GEN William W. Hartzog, CG of TRADOC) Jun
- "Vision and Willpower: The Essence of Leadership," Jun
- "21st Century Coup d'Oeil: Developing Commanders for Force XXI," Jun
- "Troop-Leading Procedures for the Battery Orders Process," Jun
- "Choosing the Hard Right Over the Easy Wrong," Jun
- "The Making of a Leader," Jun
- "The Death of Captain Henry Waskow," (RP) Sep-Oct
- "The Paladin Platoon Leader at the NTC," Sep-Oct
- "Check Fire!—Change in Senior Fire Support Conference Dates," Sep-Oct

### History

- "The Relationship Between FA and Maneuver During the Relief of Bastogne," Jun
- "Orlando Ward and the Gunnery Department: The Development of the FDC," Jun

"Fire Support at the Battle of Chickamauga," Jun  
 "The Death of Captain Henry Waskow," (RP) Sep-Oct  
 "Steel Wind: Colonel Georg Bruchmueller and the Birth of Modern Artillery," (RR) Sep-Oct

### Equipment and Technology

"Joint Laser Interoperability," Feb  
 "IFSAS Update," (VB) Feb  
 "Information Note #1: Graphical Firing Tables Update," (VB) Feb  
 "BCU and LCU Solutions to the M825 Smoke Problem," (VB) Feb  
 "Future Fires for Force Projection," (OM) Apr  
 "Projecting America's Military Might," (Interview with LTG H. Hugh Shelton, CG, XVIII Abn Corps) Apr  
 "Ammunition Resupply: PLS at the NTC," Apr  
 "UAV Support for FA Operations," Apr  
 "Terrain-Trajectory Diagrams for Firefinder in Korea," Apr  
 "Running ARSS on DOS Higher than 5.1," Apr  
 "FA Fighting Forward: Paladins in the Victory Division," (Interview with MG Joseph E. DeFrancisco, CG of the 24th IN Div) Sep-Oct  
 "The Paladin Battalion at the NTC—A

Commander's Perspective," Sep-Oct  
 "The Paladin Platoon Leader at the NTC," Sep-Oct  
 "AFATDS—The FA's Doorway to the Digital Battlefield," Sep-Oct  
 "Fires for Division XXI: State of the Branch 1995," Nov-Dec

### Joint and Combined Operations

"Combined Operations Future," (OM) Feb  
 "Joint Fire Support—Training for the Future," (Interview with MG(S) Leslie M. Palm, CG, Marine Corps Air Ground Combat Center) Feb  
 "Army MLRS Support for Marines," Feb  
 "Combined Operations and the Korean Culture," Feb  
 "The German FA Today and Tomorrow," Feb  
 "French Artillery School Trains French and Allies for Liaison Duties," Feb  
 "MLRS Training for the Israeli Defense Force," Feb  
 "Operational Firepower and the Universal Joint Task List," (INC) Apr  
 "Who Should Coordinate Fires in the Battle Interdiction Area?" Sep-Oct  
 "Deep Attack and CAS—Joint Roles and Missions," Nov-Dec

### Contingency Operations

"Marne Thunder: FA in OOTW and the Div Arty METL," Feb  
 "Put Out the Fire: Countering Mortars in Operations Other Than War," Feb  
 "Projecting America's Military Might," (Interview with LTG H. Hugh Shelton, CG, XVIII Abn Corps) Apr  
 "Fire Support for a Force Projection Army," Apr  
 "Preparation for Force Projection: The Intermediate Staging Base," Apr  
 "Fire Support for Power Projection: A Special Operations Perspective," Apr  
 "Operation Uphold Democracy: The 10th Mountain Div Arty in Peace Operations," Jun  
 "FA Fighting Forward: Paladins in the Victory Division," (Interview with MG Joseph E. DeFrancisco, CG of the 24th IN Div) Sep-Oct  
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