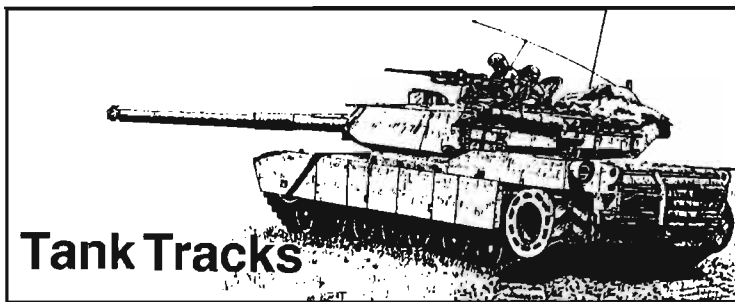


# ARMOR



100 HOURS TO VICTORY!



When Hannibal met the Romans on the field of Cannae in the summer of 216 B.C., he established the standard and definition of the ultimate victory. The classic double envelopment became the dream of all battlefield commanders for the next 2,000 years.

But for modern times, since the invention of the internal-combustion engine, we have a new standard for the ultimate victory. The 100-hour war has given us complete and irrefutable vindication of AirLand Battle tactics, techniques, and procedures; good and thorough training; application of technology to the battlefield; the use of combined arms; and -- most significantly for the Armor Force - - the value of mobility, speed, firepower, and shock effect.

Some will say that gizmology and gadgetry won the Gulf War, as if tankers suddenly awoke one day to find a battalion of M1A1s resting in the motorpool. These are the same people who cannot set the clocks on their home VCRs. They forget that a human being is behind or in every piece of equipment and must know how to use it. They forget that somewhere along the line someone in uniform said that to do X on the battlefield, we need Y with the capability to do Z.

Some will say that we faced a third-rate foe. Only a few weeks ago the hue and cry was about the battle-hardened Iraqis, the guys

who were acclimated to the conditions and knew the desert, the guys with more than 5,000 tanks, the guys who were not afraid to use chemical weapons, the guys who had a deep-seated conviction that Kuwait belonged to them, the guys who...

You have to deal in capabilities. We rendered him third-rate with a good plan, great leadership, and marvelous execution. History books are stuffed with examples of armies beating better equipped foes because they had the better plan, or better leadership, or better execution. Our planners and leaders ensured this would not be the case this time.

The commanders of DESERT STORM played the battlefield and their assets like a finely-tuned orchestra, each instrument hitting the right note at the precise moment in the score.

This was not as easy as it seems -- to orchestrate air, sea, and ground forces from many different nations, speaking several languages, with different equipment and different methods of operation. The allied forces of DESERT STORM simply overwhelmed the enemy, and, in the end, spoke a common language -- VICTORY.

And that's the name of that tune.

— PJC

By Order of the Secretary of the Army  
CARL E. VUONO  
General, United States Army  
Chief of Staff

Official:  
THOMAS F. SIKORA  
Brigadier General, United State Army  
The Adjutant General

# ARMOR

*The Professional Development Bulletin of the Armor Branch PB-17-91-2*

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ARMOR (ISSN 0004-2420) is published bimonthly by the U.S. Army Armor Center, 4401 Vine Grove Road, Fort Knox, KY 40121.

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March-April 1991, Vol. C No. 2

## Features

- 7 **Preparing for the Storm**
- 11 **Knowing Where You Are...**  
by Captain David D. Howard
- 14 **M1A1 NETT in Southwest Asia**  
by Major Rick J. Edmond and Captain Kermit E. Steck
- 16 **Planning the Deliberate Attack**  
by Captain John Scudder
- 21 **The Triumph and Tragedy of Major General Maurice Rose**  
by Dr. Ralph C. Greene
- 30 **After Landing in Normandy, Spearhead Led the Way**  
ARMOR Staff
- 34 **Speed and Power: The 4th AD's Mobility Rolled Through Europe**  
ARMOR Staff
- 38 **Sniper Tank!**  
by Captain Pete Mattes and Sergeant First Class (P) Frank Monroe
- 41 **The Combined Arms Task Force:  
Shaping the Future of Armored Forces**  
by Lieutenant Colonel Craig B. Whelden and Captain Robert Kmiecik
- 44 **Disengagement - Avoiding the Point of No Return**  
by Major Charles C. Otterstedt and Major Steven J. Mullins

## Departments

- |   |                          |    |                          |
|---|--------------------------|----|--------------------------|
| 2 | <b>Letters</b>           | 6  | <b>The Driver's Seat</b> |
| 2 | <b>Contacts</b>          | 50 | <b>Bustle Rack</b>       |
| 5 | <b>Commander's Hatch</b> | 53 | <b>Books</b>             |

# LETTERS

## On Brigade Reconnaissance

Dear Sir:

Major Thomas' article, "Employing a Brigade Scout Platoon," while right on the mark concerning the requirement for a brigade reconnaissance element, failed to recognize the fact that such units already exist in Light Infantry Brigades (Separate). The brigade is assigned one light cavalry troop with combat elements identical to those of the ground troop of an LID cavalry squadron, plus organic CS and CSS elements appropriate for a unit of its size and mission. While in no way is this the

perfect TOE for the mission, the integration of the eight- or ten-vehicle scout platoon, along with the required improvements to the HMMWV noted by Lieutenant Deal in his article in the same issue, would make it far more capable than the one platoon organization forwarded by Major Thomas.

One platoon is simply not capable of accomplishing all of the missions that would be given to a brigade reconnaissance unit. Its lack of logistic support would also handicap such a platoon enough to interfere with mission accomplishment. Where would this platoon be attached? In the

brigade HHC, like the scout platoons of maneuver battalions? Having served in an armor battalion scout platoon, I can say that belonging to an HHC as a reconnaissance element is unsatisfactory. Such companies are already huge and spread throughout the BSA, combat trains, UMCP, and TOC. Platoon sergeants of battalion scout platoons spend much of their time arranging for the logistical support of their units, because the company is much too large for the first sergeant and executive officer to handle.

At brigade level, things would be at least twice as difficult, because most of the

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(Note: Fort Knox Defense Switch Network (DSN) prefix is 464. Commercial prefix is Area Code 502-624-XXXX).

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**MAILING ADDRESS:** ARMOR, ATTN: ATSB-AM, Fort Knox, KY 40121-5210.

**ARTICLE SUBMISSIONS:** To improve speed and accuracy in editing, manuscripts should be originals or clear copies, either typed or printed out in near-letter-quality printer mode. Stories can also be accepted on 5-1/4" floppy disks in Microsoft WORD, MultiMate, Wordperfect, Wordstar, or Xerox Writer (please include a printout). Please tape captions to any illustrations submitted.

**PAID SUBSCRIPTIONS:** Report delivery problems or changes of address to Ms. Connie Bright, circulation manager, (502)942-8624.

**UNIT DISTRIBUTION:** Report delivery problems or changes of address to Ms. Mary Hager, DSN 464-2610; commercial: (502)624-2610. Requests to be added to the free subscription list should be in the form of a letter to the Editor-in-Chief.

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(The Armor Hotline is a 24-hour service to provide assistance with questions concerning doctrine, training, organizations, and equipment of the Armor Force.)

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brigade HHC is even more removed from the AO of a brigade reconnaissance unit. If heavy brigades of the Army are to have HMMWV-mounted reconnaissance elements, let them be separate organizations large enough to do the job, with enough logistic support for sustained operations.

On a related item, Lieutenant Deal's article, "The Missing Link: Making the HMMWV Scoutworthy," was excellent. After having served as a scout in both M996 and M1025 HMMWVs, I have to agree 100 percent with the changes recommended by Lieutenant Deal. Not only does the windshield glare like a full moon, it also makes blackout driving without scarce NVGs extraordinarily difficult. During cold weather, the necessary running of the defroster increases internal noise and heats the windshield up so that it stands out like a beacon when viewed through a TIS, and its distinctive vertical emplacement makes ID extremely easy for enemy gunners. The lack of skid plates on an off-road vehicle of the HMMWV's caliber is almost criminal. The single most important addition to a scout HMMWV would be the inclusion of the VIC-1 intercom, but without CVCs. A headset designed to cover only one ear and to fit into the current Kevlar would be more appropriate, allowing the crew one uncovered ear to listen. (The lack of an intercom on current scout HMMWVs forced me to purchase a pair of voice activated radios similar to those currently in use at fast food retailers. These Radio Shack products allow me to communicate with my driver from the weapons station without yelling at the top of my lungs. While this system is adequate for talking to my driver, I still cannot hear radio traffic while the vehicle is moving, unless the volume is turned all the way up. And even then, only one person can have the hand mike at a time, because there is only one hand mike jack when operating through the Vinson J-box.) Scouts must be able to communicate quickly and effectively to be of any use to the commander.

The only things that Lieutenant Deal failed to address in his article were the driver and passenger seats, lack of noise insulation for the engine, and the run-flat tire system.

Both the driver and passenger seats should be replaced. Not only are the present seats uncomfortable, they offer the occupants zero protection from anything more powerful than a child's slingshot. The addition of high-backed, armored seats, similar to those used for helicopter pilots in Vietnam-era Hueys,

would be an excellent addition (so would chest protectors for the gunners).

The engine on the HMMWV, while quiet compared to an operating CFV, is still much too loud for scout use, especially when the cooling fan engages. At night on an OP at the NTC, one can hear the engines of HMMWVs for a long way off, but one never knows if it is an OPFOR VISMOD BRDM, an OC, or a fire marker team. During an actual conflict, the enemy will not have this problem! The engine must be insulated for better noise discipline, similar to the German Luchs.

The final problem area is the pneumatic tires, with their magnesium run-flats. While this system may be perfectly adequate for the HMMWV of a battalion commander (from which he is not going to fight), or a signal battalion RATT rig, it is woefully below par for a reconnaissance vehicle which will spend almost all of its time off road, with people shooting at it! My current troop suffered multiple flat tires during operations over desert terrain liberally laced with basalt formations. While annoying and expensive during peacetime training, such occurrences during mounted operations during actual hostilities would interfere with mission accomplishment.

Though the new version of the HMMWV proposed by Lieutenant Deal is well thought out and relatively inexpensive (compared to a CFV), acquisition of such a vehicle may prove difficult given the current mood in both houses of Congress toward new systems. However, many of the changes suggested can be accomplished at local DS units, with limited expenditures of funds.

I am extremely happy to see that members of the armor community are thinking of new and innovative ways to better accomplish our mission, without needless spending of scarce defense funds.

JAMES B. COUCH  
SGT, ORARNG  
Troop F/116 Cav  
Portland, Ore.

### CRD "Reinvents the Wheel"

Dear Sir:

After reading "The Combat Reconnaissance Detachment in the Meeting Engagement and Defense" (July-August 1990), I must strongly disagree. The concept is based on an erroneous understanding of

both Soviet and U.S. doctrine and organizational structure.

First, if you step back from the fancy titles of Soviet Combat Reconnaissance Patrol (CRP) and Forward Security Element (FSE), you should notice that the Soviets are using what we call "traveling overwatch." A platoon is leading for the lead company, which is in turn leading for the battalion, etc. The intent, like our own, is to develop the situation at the lowest level, allowing the commander freedom to maneuver.

Second, the proposed Combat Reconnaissance Detachment (CRD) is flawed. Company XO's, and especially the battalion commander and S3, need their tanks to maneuver and be at key points where they can influence the action. Also, putting the HHC commandant in command is ludicrous. He already has a critical, full-time job supporting the task force.

Third, the professed effectiveness of the CRD is valid only IF the scouts find both the Soviet CRP and FSE and avoid detection, and IF the CRD manages to ambush both of them, in turn, and IF the FSE and Soviet battalion main body fail to fix and annihilate the unsupported, overextended CRD itself. (That's a lot of "IFs"!)

Fourth, logistics through the mortar platoon is equally ludicrous. The mortar platoon sergeant also already has a full-time job. He also lacks ammo haul capability for main gun and TOW missiles, not to mention the fuel needed for Abrams tanks.

Fifth, the scout platoon, required to be far in advance of the CRD, is totally unsupported, while the entire battalion, and hence, the brigade, is delayed one hour in crossing the LD.

I propose a much sounder alternative: Use one of the four maneuver companies in the battalion in traveling or bounding overwatch, LIKE YOU'RE SUPPOSED TO, and quit trying to "reinvent the wheel."

CHESTER A. KOJRO  
St. Robert, Mo.

### Scouts Need the New Bradleys

Dear Sir:

This is a follow-up on 1LT Kenneth L. Deal Jr.'s article in the November-December 1990 issue. Our country and its allies are in a state of readiness out in the deserts of Saudi Arabia. The multi-nation-

al forces are certain to rely on the massive reconnaissance that the scouts will be sending back to their commanders. The scouts have to go out first, for we are the battlefield intelligence. We have to send back information on enemy positions, military installations, troops, and any other critical targets, therefore, scouts are the eyes and ears of the army. To be a good scout, and to stay alive, a scout's job requires a great deal of sneak and peek activity, which brings me to the reason for this letter. The Bradley Cavalry Fighting Vehicle (CFV-M3) is not a very reliable vehicle to go to war in. This is due to several deficiencies within the vehicle which make it very difficult for scouts to sneak and peek without being heard or seen. It's too big, loud, and does not have the equipment needed for either chemical or desert environment. The CFV-M3s are constantly breaking down back home. The desert is much more harsh than home. After our deployment to Saudi Arabia, we hear of our infantry brothers receiving brand new Bradleys.... Shouldn't the scouts be the ones to get the new Bradleys with the NBC protection that the M3A2 has, if scouts have to have Bradleys at all? In this type of environment, in order for scouts to get in there and sneak and peek, we are going to need HMMWVs. We agree with the experts in matching sections of HMMWVs with sections of the M3-CFVs for their thermal sighting capabilities and tank-killing firepower. This gives the task force a formidable platoon for the recon/counter-recon battle. If they have to spend money to build the vehicles that scouts need, that's what they need to do. We need these vehicles out here. A scout's life saved means thousands of other lives saved, and accurate information sent back to the commanders.

HHC, 1/8 Cavalry Scout Platoon  
OPERATION DESERT SHIELD

### **NBC Story Failed To Follow Chemical Doctrine**

Dear Sir:

This correspondence is in response to CPT Dennis M. Verpoorten's article on chemical reconnaissance printed in the November-December 1990 issue of ARMOR. CPT Verpoorten's article contains significant errors in chemical doctrine.

The following manuals contain information on NBC reconnaissance and chemical equipment used during NBC reconnaissance: FC 3-19, NBC Reconnaissance;

FC 3-3, Contamination Avoidance; FM 3-101, Chemical Staffs and Units; FM 3-4, NBC Protection; FM 3-100, NBC Operations; and FM 3-6, Field Behavior of NBC Contamination. USACMLS is also in the process of revising and incorporating all pertinent information on NBC reconnaissance contained in FC 3-19, FM 3-3, FM 3-100, an FM 3-101 into the new FM 3-19 (coordinating draft - dated 24 August 1990), NBC Reconnaissance. The New FM 3-19 (CD) contains our current and improved concepts for conducting NBC reconnaissance on the battlefield.

USACMLS is currently using the information contained in FM 3-19 as the primary source document for training the NBC reconnaissance platoon packages enroute to Saudi Arabia in support of OPERATION DESERT SHIELD. FM 3-19 (CD) was released on 24 August 1990 to our forces in Saudi Arabia in response to the current threat to our forces operating in that area. We are fully aware that FM 3-19 is not in its final preparation stage at this time, but it does contain our basic concept of operations, current doctrine, and current procedures for conducting NBC reconnaissance.

JAN R. ROBERTS  
COL, CM  
Director of Training  
U.S. Army Chemical School  
Ft. McClellan, Ala.

### **Leaders Must Challenge "Flawed Concept" of LIDs**

Dear Sir:

After reading "A New Day for Armor or the Last Glimmer of Sunset?" (September-October 1990), I conclude that not only Armor, but the Army is in a malaise. The reason is because our leadership sold its soul when it unquestioningly accepted the myth of "Light Forces" and "Rapid Deployment" at the expense of combat power: The Light Infantry Division (LID).

The LID was constrained to 10,000 soldiers and its goal was for deployment by 500 sorties. Both figures were arbitrary, not mission related. The LID can barely sustain its own meager forces and cannot hope to sustain even light armor. Any attempt would surely strain and break the air supply link.

Certainly, airlift is a tremendous capability for limited high payoff operations. But consider this: All the C5As in the world could not match the 10,500-ton cargo capacity of a single WWII era "Liberty" ship. The reality is that REAL war is

won by sealift and heavy forces. If it isn't a REAL war, we can afford the luxury of a short delay in arriving. Getting our soldiers killed in a rush is hardly a worthwhile objective. Remember always: The title "Low Intensity Conflict" refers to the enemy situation. It is not a restriction on what we choose to deploy.

Yes, there are roles for light armor. We could create armored airborne units for seizing key objectives in support of the ground maneuver of heavy forces. But this is at the expense of, not reinforcement of, the airborne infantry. The 82d would probably be trimmed to the equivalent of two brigades, one armor, the other infantry. Also, light armor brigades could become organic to heavy and light divisions. This is an economy of force compared to heavy armor, but is a net increase in logistics and size of both.

The article is correct that our leaders must demonstrate courage, but it must be to challenge a flawed concept. Until we restore the Light Infantry Division (LID) to the former, balanced, Infantry Division (Light), with its organic tank and mechanized battalions, we are merely fooling ourselves.

CHESTER A. KOJRO  
St. Robert, Mo.

### **Tank Destroyer Patch Lives On In ARNG Helicopter Regiment**

Dear Sir:

I was pleased to see the article in your January-February issue on tank destroyers of WWII. It was well-written and informative. I was even more pleased to see a picture of our unit patch on your front cover. I am a member of the 1st Battalion, 238th Aviation Regiment, an attack helicopter battalion of the Michigan Army National Guard. Last year, one of our staff officers researched the origin of our tank-busting heritage, and through his efforts we procured an original tank destroyer patch. We adopted this patch, with some modification, as our own. We wear it on our flight uniforms, and it is proudly displayed throughout the unit. I thought it might interest your readers to know that these tough, fighting units have not been forgotten. Their tradition is being carried on, albeit in a different kind of vehicle, and with much improved doctrine.

MARK A. COSGROVE  
CPT, Aviation, MIARNG  
Grand Ledge, Mich.

# COMMANDER'S HATCH

*MG Thomas C. Foley*  
*Commanding General*  
*U.S. Army Armor Center*

## **The Combat Arm of Decision - 100 Hours to Victory**

Chief of Armor Sends:

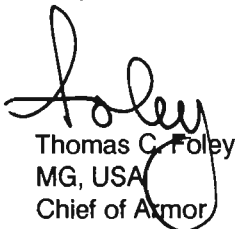
With the announcement of the liberation of Kuwait and the cessation of hostilities, I would like to take this opportunity to express my appreciation to you for your outstanding performance over the past seven months in support of Operation Desert Shield/Storm that culminated in the lightning ground campaign.

To all the Army and Marine Corps armor units that deployed to the Gulf and fought so superbly, I salute you. The tankers and scouts, and all other soldiers who make up our Armor Force today, are the best this country has ever produced. Our equipment is unstoppable, and our training is second to none. No one can ever argue with the results.

To the units that did not deploy, you can be proud of your readiness and dedication. Your support to families left behind by soldiers deployed helped to keep morale high, and your ability to continue operations with reduced manning levels provided the support necessary to bring the conflict to an end. Each soldier, by taking pride in top performance, and accepting nothing less than excellence, provides the Armor Force with the strength and audacious warrior spirit that makes our branch great and the centerpiece of the mobile armored warfare combined arms team.

To the schools, TDA installation support agencies, and family support structure groups across CONUS, in Europe, and the Pacific, who provided the support that was so vital for victory, I would like to say thank you for your long hours of hard work and dedication.

Every member of the Total Armor Force can be proud of the outstanding professionalism displayed during Operation Desert Storm. I am. We have a strong Armor Force that once again has proven its worth on the battlefield. I am also confident that you will continue with the same commitment to excellence in the coming days and weeks as we continue to meet the many challenges facing us. Keep that audacious warrior spirit, and congratulations to each of you. Forge the Thunderbolt!

  
Thomas C. Foley  
MG, USA  
Chief of Armor

# DRIVER'S SEAT

*CSM Jake Fryer  
Command Sergeant Major  
U.S. Army Armor Center*



## Stabilize the Crew

### Scenario 1

The organization was participating in a Tank Table XII Platoon Battle Run when SGT X returned to the unit from emergency leave. The unit leadership made the necessary moves between tank crews to put SGT X back into his gunner position on the 23 tank. SPC Y left the gunner's seat of the 23 tank and went back to his driver's seat on the 24 tank. SPC Z left the driver's seat and went back to the loader's seat on the 24 tank. All this made the TC of the 24 tank, the platoon sergeant, very happy because he no longer had to "hot seat" his loader from another platoon, especially on this most important event — Tank Table XII B.

### Scenario 2

2LT B, having recently arrived in a regimental cavalry squadron, has learned that he will replace 2LT A, who served for seven months as the 1st platoon leader of the tank company. 2LT A has earned his spurs and has been identified to become a scout platoon leader in a cavalry

troop — all in the name of professional development.

### Scenario 3

Two weeks before level 1 gunnery, the first sergeant "scrounged" a PLDC seat for SPC M, a gunner for tank 21. The platoon leader, the tank platoon sergeant, and the first sergeant were receptive and favorably endorsed SPC M's attendance at PLDC for career enhancement.

The preceding scenarios could, and probably do, happen in every unit, at least it's happened in every armored and cavalry unit I've been assigned to — but is it right? These examples raise a few very touchy questions!

- Do leaders and soldiers know local policies and SOPs?

- Are we fair to small units? platoons? sections?

- When we move one person, how many crews do we affect? How have we affected the attitude of the displaced soldier?

- Have the TC and gunner negotiated the proper gates before live fire? Before a tactical ex? Before battle?

- Have lower tables been executed before progression to higher ones?

- Are the instinctive and reflective actions normally associated with the tank crew or section prevalent?

- What's acceptable: two-man crew or three-man crew, two-tank platoon or three-tank platoon because of unavailable manpower?

- Are we training safely?

- What's the maintenance distribution for the reduced crew?

Most of us Armor leaders have grown up accepting the reduced crew and platoon manning levels as normal standards. Either the personnel replacement system is not doing what it is supposed to, or we leaders are not making prudent decisions. We need to come to grips with this important factor.

"STABILIZE THE CREWS"





Tanks and APCs of the 24th ID arrive in the Gulf.

## Preparing for the Storm...

*General Thomas Kelly, Joint Staff Director of Operations, called the deployment to Saudi Arabia the equivalent of moving the entire city of Richmond, Va. halfway around the world.*



ARMY TIMES PHOTO



In the days following the Iraqi invasion of Kuwait, light forces waited for the arrival of the 24th ID's tanks and Bradley Fighting Vehicles, to "heavy up" the defense. Before the STORM was over, many of these vehicles would be occupying Iraq.



ARMY TIMES PHOTO



ARMY TIMES PHOTO



ARMY TIMES PHOTO

## Tuning Up...





ARMY TIMES PHOTO

## The 82d Airborne: Instant Armor



The 82d's Sheridans and paratroopers arrived in the Gulf quickly to back up the American commitment to contain Saddam Hussein. Many of these Vietnam-era vehicles rolled in the streets of Panama only last year.





## Marine Armor

Marine M60s prepositioned on ships in the Indian Ocean were able to deploy quickly to Saudi Arabia. At left, a Marine unit prepares to begin its first live-fire gunnery. The M60s below have reactive armor mounted.

Marine forces on the ground were later involved in the breaching of the Kuwaiti border defenses and heavy fighting during the sweep north, culminating in a bitter tank-on-tank battle at Kuwait City's International Airport. Those who remained on ships in the Gulf forced several Iraqi divisions to wait for an amphibious invasion that never came.





The Saudi desert has few of the reference points visible at the NTC.

## NEW AIDS TO DESERT NAVIGATION

# Knowing Where You Are.....

by Captain David D. Howard

To navigate, calculate distances, interpret maps, and recognize terrain at a high rate of speed is a skill that the armored force leader must learn early and hone, to properly direct forces. The ability to position and maneuver forces to obtain the advantage on the enemy is the key to any mission accomplishment.

In the early stages of our deployment on Operation Desert Shield, the 1st Cavalry Division recognized that navigation and controlling movement in the Saudi Arabian desert terrain would be a challenge. Although we train on relatively flat terrain at Fort Hood and have experience in the Mojave Desert at the National Training Center, the terrain and vastness in Saudi is much different and more



1st Cav trooper checks position using Trimpack device.

difficult for navigation. There is no Tiefert Mountain in our area of operations. In many areas, maps of any scale are unavailable and 1:250,000 scale maps are the most prevalent.

The maps that were available were vague, with many inaccuracies: trails had been rerouted, terrain features (dunes) had moved, and some criti-

cal features were not even noted. The desert was barren, with few or no terrain features for reference.

To assist in desert navigation, the division requisitioned Trimpack Global Positioning System (GPS) and Loran navigational devices. The Trimpack model global positioning device (or Small Lightweight GPS Receiver, SLGR) is a handheld, battery-powered navigation receiver, which receives data from global positioning satellites. We get three-dimensional fixes when tracking four or more satellites, or two-dimensional when only three satellites' signals are received. The receiver does require line-of-sight access to the satellite signals. The Trimpack can calculate positions in latitude/longitude, the Universal



LORAN device is in use by 1st Cav in Saudi Arabia

Transverse Mercator coordinate system, and the Military Grid Reference system. It can figure velocity and time, and way points can also be programmed to assist with enroute navigation. The Trimpack is powered by a rechargeable NiCad or lithium battery, or powered by a vehicle DC power supply. The system may be outfitted with an optional external antenna for use inside vehicles. Up to this point, the Trimpack has been proved to be a reliable receiver.

The other position locating device in use by the 1st Cavalry Division is a commercial receiver that operates on the Loran positioning system. The Loran system uses ground based positioning beacons to triangulate a position to the hand-held receiver. The receiver has the ability to program way points and figure velocity, but the Loran system cannot register altitude. The receiver must be within the range of three locating beacons to receive an accurate position and is susceptible to interference from other radio signals.

The model in use in Saudi Arabia gives location in latitude and longitude, which requires the operator

to use a conversion table to convert to the military grid system. The division is also using a military model of Loran receivers. Before deploying, the division received enough of both systems to outfit the cavalry squadron and the battalion, brigade, and division command posts.

Upon arrival of the assault command post and advance party, recon parties began reconnaissance of the area of operations. During those reconnaissance missions, the positioning devices demonstrated their worth. The ability to navigate and establish positions and exact boundaries quickly was astounding. In fact, the recon parties could precisely identify terrain features not recorded on the maps and pass them back to the G-2 for updating maps. Also, only a few reconnaissance elements were needed due to the speed in which areas could be navigated in a given amount of time using the positioning devices. When the main body elements began occupation of their positions, the ability to precisely know their "part of the goose egg" and position forces accordingly allowed for a quick occupation with very few adjustments of boundaries.

As the division established positions, the positioning devices continued to aid in operational planning and comparison of what was portrayed on graphics to actual terrain. Helipads at all command posts were recorded using these navigational aids. Both are comparable with the Doppler Navigational System, which is in many helicopters. Knowing exact locations assisted our aviators tremendously, especially during night NVG flights. Distances in the desert were deceiving, as we found out on terrain walks. Ranges we thought were four kilometers by sight, the positioning device determined to be eight kilometers. Updating of maps with exact locations of previously uncharted terrain features continued, which assisted units that were without locating devices.

Positioning devices assist the company and battalion commanders to maneuver their forces. Proper dispersion of forces, establishment of link-up and passage points, and coordination between flank units on each axis of advance and defensive boundary are improving execution time and accomplishment of missions within the units. Use of the positioning device is allowing the frontline leaders to have better control of their forces.

The future use of positioning devices would help the commander maneuver forces quickly without having to question whether forces are actually in the correct position. The speed and accuracy of the system would assist to direct fast moving armored forces to key points to influence the battle. To



1st Cav trooper checks his position on vehicle-mounted SLGR.

know the terrain and to use it to your advantage is still important. When forces are rapidly deployed to an unfamiliar area, they would not be as dependent on trying to locate themselves using the terrain, but would be able to focus more on their objectives. Battlefield obscuration and limited visibility would not be such a hindrance. Sand storm obscuration was quite prevalent.

The reconnaissance forces would also benefit by being able to pinpoint enemy locations accurately. The reconnaissance section, knowing its exact location, could calculate the exact placement of enemy forces. This would give the commander a better picture of the close battle and the ability to call for indirect fire, attack helicopters, and close air support (CAS). Another benefit of the location devices is in the ability to trace the actual forward line of troops (FLOT), which again would assist in battle coordination.

Combat support and combat service support units could take advantage of position locating devices.

Many of these forces do not have the communications to "ask for directions" once they leave their support area. With the use of the locating device, the support unit could quickly find linkup points, conduct resupply operations, and minimize the time combat forces would be out of action.

Navigation training and map reading without the locating device would still be a requirement. Soldiers and leaders should not become so dependent on locating devices that their navigation skills diminish. Just as armored forces train on degraded gunnery operations, so we will still require navigation without devices.

Development of an automatic locating/reporting system needs to become a reality. The technology is available today. All platoons, combat and combat support, should have positioning devices. The armor force needs a system that would portray force locations for use by the commander in tactical decision making.

There is a great advantage in the use of position locating devices, which the 1st Cavalry Division is experiencing — an advantage in use now, and which could be expanded in the future.

Captain David D. Howard received his Regular Army commission as a Distinguished Military Graduate from South Dakota State University. A graduate of AOBC, IOAC, and the Air/Ground Operations School (AGOS), he has served as a tank platoon leader, executive officer, and battalion maintenance officer with 3-35 Armor, 1st AD, Bamberg, FRG. He served as assistant G-3 operations officer and assistant to the secretary of the general staff, 1st Cavalry Division in Fort Hood, Texas and Saudi Arabia. He is currently commanding a tank company in the 1st Cavalry Division in Saudi Arabia.



## M1A1 NETT in Southwest Asia

*When the Army decided to upgun two divisions already deployed to DESERT SHIELD, training them in theater became a challenge*

By Major Rick J. Edmond and Captain Kermit E. Steck

In the summer of 1990, the Army deployed some CONUS-based tank battalions equipped with the M1 tank in support of OPERATION DESERT SHIELD. The battalions were well trained in 105-mm gunnery, but after evaluating the large Iraqi armor threat facing the U.S. Armor force, DA made the decision in September to upgrade the deployed forces to the M1A1.

The upgrade would provide the U.S. force with a larger 120-mm main gun, an overpressurization system to combat the Iraqi chemical threat, and improved armor protection to enhance crew survivability. The mission to plan and execute the training of the DESERT SHIELD armor force went to the Armor Center's New Equipment Training Division. The scope of the mission was to train the 1st Cavalry Division, augmented with the 2d AD Tiger Brigade, and the 24th ID (Mech), augmented with the 197th Separate Infantry Brigade.

The training was conducted in Saudi Arabia at the port of Damman. The intent of the mission was nothing new to the New Equipment

Training (NET) Division, which had been providing M1A1 rollover training to CONUS tank battalions for the past two years, but the concept of deploying a NET rollover team to a potential combat area to conduct this training was a monumental task. In addition, the training was to start NLT 29 November and be completed before 1 January 1991.

From August to October 1990, M1A1 tanks were prepared for shipment to Saudi Arabia at POMCUS sites in USAREUR. The Army tasked the Materiel Fielding Team (MFT), based in Vilseck, Germany, to receive the tanks in Damman. The MFT was augmented with over 600 civilians from the Anniston Army Depot, Ala. The mission of the MFT was to off-load the M1A1 tanks and upgrade them for issue to the armor battalions of the 1st Cav and the 24th ID.

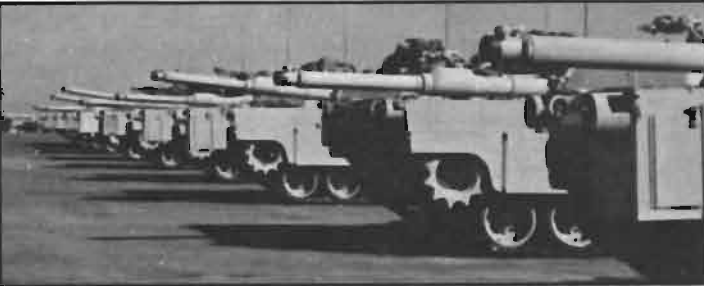
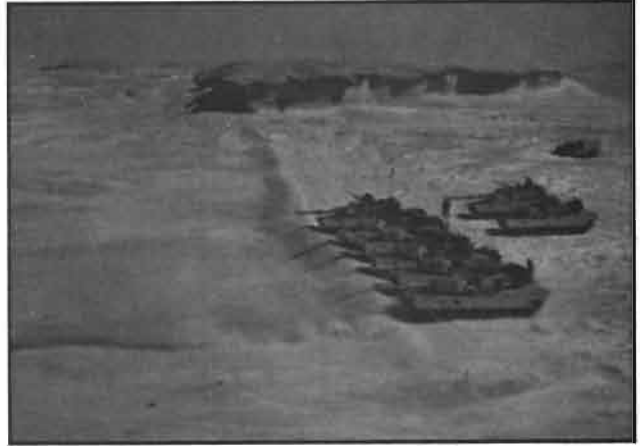
The upgrade included prepping the tanks in accordance with 10/20 standards, issuing ASL/PLL, and even painting the tanks desert sand CARC paint.

While the tanks were being prepared in USAREUR for shipment, the NET Division made the necessary preparations to deploy a NET team capable of teaching two tank companies simultaneously. In order to complete the large scope of this mission, the NET assembled its standard M1A1 Rollover NET Team and augmented the team with 47 NCOs and one officer from the 194th Separate Armored Brigade at Fort Knox.

The Rollover NET Team had to redeploy from Fort Carson, draw equipment, and rapidly train the additional members assigned to the team, all in 10 working days. In addition to teaching 19K skills, the rollover program of instruction (POI) called for upgrading M1A1 skills of both organizational and DS/GS support elements.

The volatility of the 120-mm round made maintaining and loading the 120-mm breech a very important training factor. Eight hours of the two-day POI were devoted to the loading, construction, cleaning, and maintenance of the 120-mm breech





and main gun. We stressed safety at all times, during both the 19K and maintenance phases of training.

After preparation, the rollover team left Fort Knox on 27 November on two C141B aircraft, arriving in Damman the following day at 2300 hrs. Team members immediately started preparing the Damman port for an M1A1 rollover NET. Less than seven hours later, the M1A1 NET began training two companies of the 2d Battalion, 8th Cavalry, 1st Cavalry Division.

In order to understand the southwest Asia rollover, it is important to outline the process by which a battalion upgraded its tank fleet from M1 to M1A1. Once a battalion arrived at the port, it turned in its M1 tanks to the MFT, and drew M1A1s. The battalion then proceeded to the M1A1 NET facility and conducted training at a rate of two companies every two days, for a total of four days per battalion trained.

After the completion of NET, the battalion moved back to the desert and conducted calibration and TT VII gunnery, with master gunner support from the rollover team. This process worked for the 1st Cavalry Division, but changed significantly for the 24th ID.

Early in December, the rollover team received the mission to rollover the 24th ID (M) and the 197th Separate Infantry Brigade simultaneously with the 1st Cavalry Division and complete this mission before 25 December 1990. This increased the training pace from two companies to three companies per day (two 1st Cav companies and one 24th ID company).

The MFT was unable to issue the 24th ID M1A1 tanks until after 23 December. Thus, the NET of the 24th ID was conducted on 15 static tanks provided by the MFT. The concept was to issue the M1A1 tanks to the 24th ID after the NET. The MFT provided an M1A1 push package to the division's desert location. The entire NET of both the 1st Cav and the 24th ID was completed on 23 December 1990. This significant event was accomplished with an additional augmentation of instructors from USAREUR.

The pace was hectic, but the USAARMC NET proved that two heavy divisions, each with three brigades, could be rolled over from M1 to M1A1 in just over 26 days. This effort is directly related to the professionalism and spirit of the noncommissioned officers who made up the NET rollover effort. The significant contribution the USAARMC NET team made,

coupled with the 120-mm main gun, the NBC system, and the improved chance of survivability, was evident in the visible boost in morale the DESERT SHIELD soldiers got when they received their new tanks.

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CPT Kermit E. Steck was commissioned in Armor in 1985 from Officer Candidate School, Fort Benning, Ga. He served as platoon leader, company XO, and BMO of 4-37 AR, 1st ID at Fort Riley, Kan. He graduated from the Armor Advanced Course in 1989, and is currently team chief of the M1A1 Rollover Team.

# Planning The Deliberate Attack

*The question of whether infantry or tanks lead in attacking is determined by the character of the ground and of the enemy resistance. Whenever the ground permits tanks to advance rapidly, even with the certainty of a loss from minefields, they should lead. Through dense woods or against prepared positions or unlocated anti-tank guns, infantry leads, followed closely by the tanks, which act as close supporting artillery. But irrespective of the foregoing, some tanks must accompany the infantry when they reach the objective. These tanks are for the purpose of removing enemy weapons which emerge...*

*— General George S. Patton  
in "War As I Knew It"*

by Captain John Scudder

One of the greatest challenges facing a modern tank team commander is the planning, preparation, and execution of a deliberate attack mission. Primarily focusing on the team's response once it comes in contact with the enemy at the objective, many units fail because commanders are overwhelmed by an overabundance of individual and collective task requirements. As a result, the intricate detail necessary to execute successful actions on the objective are neglected as the team succumbs to enemy fire. Additionally, many tank team commanders do not understand the specificity involved in preparing their units for a com-

bined arms assault. Commanders fail to designate guidelines for the integration of tank and infantry once the unit meets the opposition. Unfortunately with this occurrence, tanks receive priority attention, the infantry is forgotten, and the team launches a piecemeal assault against

a mutually supported enemy.

In order to be successful in war, a tank team must be able to mass its combat power against the enemy's weak point. Following the AirLand Battle tenet of synchronization, the commander must combine his



SFC Jody  
Harmon  
27 Jan 91

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armor and infantry forces as well as other combat multipliers (such as indirect fire, close air, and air defense) to destroy the enemy on the objective. Thus, the purpose of this article is to discuss some essential elements that are often neglected in the planning, preparation, and execution of a tank team in a deliberate attack. With emphasis on actions on the objective, this paper will offer some command and control techniques as well as review the specifics in consolidation and reorganization. We will focus on a modern tank team composed of ten M1 Abrams tanks, four Bradley Fighting Vehicles (BFVs) and three six-man infantry squads.

### Planning for the Deliberate Attack

Doctrinally, the Army prescribes the use of troop leading procedures tied in with the decision-making process in order for commanders to develop a sound attack scheme of maneuver. Inherent in this system is the Commander's Estimate of the Situation and the application of METT-T (mission, enemy, terrain, time, and troops available).

In analyzing METT-T, the commander must look at the **mission** in terms of the task and purpose of the operation. He must delineate between the specific tasks in the operation order (OPORD), the implied tasks deduced from this analysis, and the inherent tasks that are routinely prescribed by SOP (e.g., refueling, coordination, etc.). He must also determine the limitations or constraints that may prevent the unit from accomplishing the mission. Finally, the commander should restate the mission so that it fits the team's required task and purpose for a deliberate attack.

Because our doctrine gives us a handy acronym with METT-T, one might think the next segment of our

analysis might be the enemy situation. However, with deductive reasoning the next logical element in our planning analysis is **time**. Time is probably the commander's greatest constraint. He evaluates it early to determine how much he will need to plan and issue the OPORD to his subordinates. Our doctrine prescribes the use of the backward planning sequence so the commander can budget his time and comply with the "1/3-2/3" rule. In other words, this practice gives the commander one-third of the time to prepare an order, while subordinate units receive two-thirds of the time. Yet, the commander must not get strictly tied to the planning phase in his time analysis: he must consider many factors in both the preparation (e.g. rehearsal time) and execution time (e.g. smoke coverage, counterattack reaction, artillery preparation, etc.).

Altering the METT-T acronym once again, deductive reasoning would point our analysis toward **terrain** because the commander cannot analyze the enemy or his own situation without this element. Undeniably, terrain is classified "neutral" in that the force that best understands it will succeed on the battlefield. Thus, to make life simpler for commanders, our doctrine advocates the use of another acronym in probing the use of terrain: **OCOKA: Observation and fields of fire; Cover and concealment; Obstacles; Key terrain; and Avenues of approach.**

However, the commander cannot mindlessly accept a list of words without placing them in a logical order that will assist him in his estimate process. When applying this acronym to terrain, the commander must first consider obstacles as "anti-avenues of approach" because, after they are determined by looking at slope, the weather's impact, and possible locations for manmade obstacles, they will reveal **avenues**

**of approach.** In this way, the commander considers mounted, dismounted, and air approaches that work for his unit and the enemy. Next, the commander looks at areas that dominate avenues of approach and provide a marked advantage to those who control it: **key terrain**. Key terrain may be high ground, roads, or intersections that control or deny approaches by fire or friendly occupation. This fact evolves into the study of **observation and fields of fire** in which each avenue of approach is specifically categorized by how well it can "see and shoot." Continuing our analysis, the commander can further define what terrain is key, he can rank-order the most desirable terrain, and finally conclude with an exploration of **cover and concealment**.

Therefore, as a result of our deductive reasoning, we offer a new acronym in order to assist the team commander in his analysis of terrain: "OAKOC." Readjusting the acronym order to follow the discussion above, the commander is now provided a well-thought-out process that can strengthen his decision-making ability.

Once the commander has answered the mission, time, and terrain in his METT-T formula, he now tackles the **enemy** problem. It is common knowledge that many company/team leaders totally accept the task force S2's intelligence analysis when they prepare their OPORD. This can be a dangerous practice because many S2s neglect essential information that will assist commanders and keep soldiers alive on the objective. Given this ominous fact, the team commander must be his own intelligence officer. He must determine how the enemy would doctrinally act and relate this to the terrain. This situational template should reflect obstacles, vehicle positions, unit frontages, dismounted strongpoints, maximum engagement lines for direct and in-

direct weapon systems, and resulting fire sacks in the objective area. All in all, the commander must further develop the S2 templated overlay by adding graphic information that will increase his unit's chances of survival.

The final element of METT-T is **troops available**. Once the commander has received his mission and measured it by the specific criteria discussed, he must check his unit's capabilities in order to determine what needs compensation. When planning a deliberate attack, the team commander must determine what combat, combat support, and combat service support systems should be applied to the objective area. This is the point when he ultimately combines the training and maintenance abilities of his tank and infantry forces. With this accomplished, the commander can apply the deductions from his METT-T analysis to develop well-thought-out courses of action that allow him to formulate a concrete plan.

### **Preparation for The Deliberate Attack**

Aside from falling short in their planning efforts, many company/team leaders are not aware of the importance of preparation for the attack. Often, once the OPORD is issued, commander's wait until mission execution before they become seriously involved. As the minimum, the commander must reconnoiter the battle area, rehearse necessary movements, and supervise combat inspections. Reconnaissance is vital because it forces the commander to check his planned axis of attack and verify his situational template. Through reconnaissance, he can observe enemy positions, spot obstacles, discover covered routes into or around these locations, and emplace specific dismount or support-by-fire locations. As the most important preparation

tool available to the commander, thorough reconnaissance prevents a deliberate attack from becoming a movement to contact.

Rehearsals are another fundamental element in a successful deliberate attack. Although many commanders believe that mission briefbacks from platoon leaders will suffice, rehearsals ensure that tank commanders and squad leaders won't botch up a relatively simple plan. One remedy is to brief back the OPORD on a detailed sandtable model and then conduct mounted rehearsals on terrain similar to the objective. If time is scarce, focus on the numerous actions on the objective that involve moving tanks into support-by-fire positions and the orderly dismounting of infantrymen. The key to success is to rehearse with precision, emphasizing coordination and cooperation between tanks and dismounted elements on the objective.

In rehearsing the coordinated effort between tanks and infantry, every infantry soldier must understand he has the duty to talk to the tanks and convey information about the objective and the enemy that occupies it. The infantry are the eyes for the assaulting tanks and the support-by-fire element. Designated arm and hand signals should be agreed upon and rehearsed.

The final preparation effort is a complete precombat inspection (PCI). In addition to boresighting crew-served weapons, the team commander charges his NCOs with checking his soldiers' ability to go to war. However, despite a complete command followup, commanders fail to supervise infantry PCIs. Primarily focusing on the infantry's ability to dismount, commanders sometimes fail to check load plans, breach kits, (e.g. bangalore torpedoes, grappling hooks, rope serviceability, VS-17 panels, and marking devices), ammunition requirements, crew-served weapons to be

unloaded, and soldier speed when leaving the carrier. As a result, once the inevitable order to dismount is given, our infantry often replicates "Spanky and the gang" as they "spill" onto the objective.

### **Deliberate Attack Execution**

Because tank teams normally move adequately before enemy contact, we will primarily concern ourselves with a unit's actions on the objective. This segment aims to assist commanders by outlining the detailed execution necessary in a successful team assault. Next, we will offer some command and control techniques, concluding with what should happen when units consolidate and reorganize on the objective.

Assuming the team reaches the objective unscathed, and the enemy is identified, the commander immediately orders his fire support officer (FIST) to request immediate suppression to kill, confuse, and blind the enemy. Simultaneously, the lead tank platoon will move to its support-by-fire position in order to cover the team's assault. At this point, I recommend that the executive officer ("fighting XO") move to join his platoon in order to add additional firepower and give the support element control to the second-in-command.

The commander then identifies the route by which he will lead the assault element as it bypasses kill sacks and attempts to strike at the enemy's flank or rear. When he decides to begin the assault, the commander orders the assault tank platoon to lead the BFV-mounted infantry. At the same time, he will shift indirect fires to isolate the enemy at the point of attack and will guide mutually supporting direct fire. Once the assault tank platoon reaches an enemy position it cannot destroy, or runs into terrain it cannot move through, the in-

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fantry platoon can assault dismounted. At this point, the commander must maneuver his vehicle assault element to create an assault line in which tanks and BFVs mass direct fire support for dismounted infantry.

As the dismounts move within the objective area, they will destroy enemy infantry and force enemy vehicles to leave their original positions. As this happens, control and coordination between mounted and dismounted forces becomes paramount. The good news is that enemy vehicles will move unprotected from their original fighting positions and can be destroyed by antitank direct fire from several different directions. This "pick-and-shovel" method involves dismounted forces prying enemy combat vehicles from their fighting positions, while tank and TOW fire destroy them on the move. But it is not enough for the infantry to arduously sweep the objective while the tanks and BFVs "sit back" in a support-by-fire role. An example of active supporting fires can be articulated using **set-go drills** in which dismounted infantry and supporting elements constantly communicate while leading each other to the enemy.

**Infantry squad:** "BMP dug in 200 meters to our west."

**Support element:** "Wait, I cannot see you."

**Infantry squad:** "Roger, I'll adjust my position."

**Support element (after 1 minute):** "I now see you. Where is the position of the enemy?"

**Infantry squad:** "200 meters to the west."

**Support element:** "Roger, set."

**Infantry squad:** "Moving in to assault now."

**Infantry squad (minutes later):** "Engaging, BMP pulling out of position."

**Support element:** "BMP acquired... Engaging now."

The key to this example is that both the infantry and supporting element must see each other in order to take immediate advantage of the tactical situation. A recurrent theme is infantry forcing the enemy to evacuate its fighting position only to have the support element not in position or not alert to capitalize on this window of enemy vulnerability.

Continuing the attack on the objective, if the commander has close air support available, he can request A-10 gunships to destroy the retreating enemy. If the unit must breach an obstacle, dismounts secure the far side by clearing a footpath using grappling hooks and wire cutters, call for indirect smoke to obscure enemy observation, and place antitank fires on any enemy that can engage friendly breaching operations.

Next, the remaining infantry squads breach the obstacle (if necessary, with assistance from the tankers) using explosives or grappling hooks to physically remove surface laid mines. Once the obstacle is reduced, the infantry marks a lane, using engineer tape, colored smoke, and recognition panels at the entrance of the breach site. The mounted assault element then comes forward, while the XO adjusts the position of the support-by-fire location.

Once the objective is taken, consolidation and reorganization begin as the infantry remounts, and the assault element occupies defensive positions, scanning for enemy flanking fire or counterattack. They develop range cards, determine target reference points (TRPs), and develop a team direct/indirect fire plan. The first sergeant moves the trains forward to evacuate casualties. Platoon sergeants turn in status reports on all classes of supply, to include personnel and equipment.

This will hasten cross-leveling and replacement resupply.

## Techniques for Command and Control

As Samuel Huntington proclaimed, the purpose of a professional officer is to manage violence. To do this, our doctrine provides us with control measures to help us safely maneuver forces on the objective. However, some commanders disregard these necessary instruments designed to save soldier lives. Repeatedly, units reach the objective only to become lost, shoot each other, or be killed by a repositioned enemy that could have been destroyed earlier. In this section, I will offer some command and control techniques that will "save the force" on the objective.

Initially, the commander must devise a tactical plan that includes easy to understand graphic control measures. Our doctrine provides and recommends control measures on the objective that will maintain the force and avoid the fratricide of dismounted infantry. In the case of our supporting fires, the support-by-fire tank platoon must treat the objective like a defensive engagement area.

The platoon leader has control measures such as TRPs, engagement areas, and no-fire areas in order to enhance fire control. In the example of our assault element, both tank and infantry platoon leaders should receive detailed offensive control measures that include checkpoints, platoon phase lines, and platoon objectives. In this sense, commanders should not complain about complex overlays; separate overlays can suffice for platoon maneuver.

Next, the tactical plan should include specific signals on the objective. In other words, paragraph five of the OPORD must give more in-

formation than the position of the task force commander or the succession of the chain of command. The company/team leader cannot rely solely on FM communication — radio nets can be jammed. Detailed visual and pyrotechnic signals are required. Some examples include: an illumination artillery round assists in land navigation; aircraft recognition panels distinguish friendly vehicles on the objective; a green star cluster signals the deployment of dismounted infantry and that fires must be shifted; green smoke indicates an obstacle is encountered; violet smoke means the obstacle is breached; and a white parachute flare is launched once the objective is secure.

Finally, the tactical plan must address the greatest command and control challenge: tank and infantry teamwork on the objective. Unfortunately, our doctrine has become somewhat obsolete with the advent of the M1 tank and the Bradley Fighting Vehicle. First, the M1 tank has no external telephone to help dismounted infantry communicate with tank commanders. Second, because of safety restrictions, dismounts may no longer move behind a tank without the danger of being burned. Finally, many of our "how-to-fight" manuals have failed to review the arm and hand signals necessary for tanks and infantry to communicate on the ground and in MOPP 4.

However, with the proper plan and a detailed rehearsal, the tank team commander can overcome these problems when radio communication breaks down. For safety purposes, and if the situation demands it, the commander may elect to require dismounts to assault between tanks. Finally, while consolidation occurs, he may decide to use wire to "hot-loop" vehicles in their occupation of hasty defensive positions.

## **Consolidation and Reorganization**

Our discussion of the deliberate attack would be inadequate without covering consolidation and reorganization, the most critical phases of the attack. Many commanders feel the urge to rest on their laurels, pat themselves on the back, and congratulate their unit on a job well done. At about the time the team reaches this point of inattention, the enemy counterattacks and the unit is subsequently destroyed. We can overcome this temptation by focusing our efforts to eliminate the enemy and prepare for future operations. Army doctrine states that when a unit consolidates on the objective, it must eliminate the enemy, prepare for a counterattack, and continue the mission. This is a time when leadership becomes paramount. The commander must start the intricate planning cycle again, concentrating on troop-leading procedures and the decision-making process. Challenged with a mission to either defend the previously taken objective or continue the attack, the commander must remotivate his unit, regain the initiative, maintain the momentum, and destroy the enemy. He must also concentrate on his use of dismounted infantry. At a minimum, the infantry should continue sweeping the enemy positions, rounding up prisoners, set LP/OPs out forward at night for early warning, and assist with overall security between vehicles.

In the reorganization phase, leaders must ensure that subordinates replace key leaders; man key weapon systems; evacuate KIAs and WIAs; report losses, ammunition expenditure, fuel status, and vehicle conditions; redistribute supplies, equipment, ammunition, and personnel; restore communication with units out of contact; perform maintenance checks and emergency repairs; and continue refueling and

rearming as METT-T allows. Again, tank-infantry cooperation should be stressed during this phase: infantrymen can help the tankers by carrying tank rounds and assisting them in the redistribution of tank ammunition. By following this process, a commander can get his act together before his next mission. However, unless he applies forceful leadership and his unit has a desire to succeed, all effort to defeat the enemy will be wasted.

## **Conclusion**

Judging from experience at the National Training Center, tank team commanders are not specific enough in planning and executing a deliberate attack. As leaders, we have neglected a complete understanding of the deliberate attack from its inception to essential tasks on the objective. Soldier lives can be jeopardized by both friendly and enemy fire unless leaders fully understand and specifically plan the details of the deliberate attack. We owe our subordinates the confidence that we can plan and violently execute any deliberate attack mission.

Captain John Scudder is a 1979 graduate of the U.S. Military Academy. He has served as a tank platoon leader, tank company XO, and support platoon leader with 2-33 Armor, FRG; S3 Air, HQ company commander, tank company commander, and battalion S3 with 1-77 Armor at Ft. Carson; and as a tank team observer-controller and S3 observer-controller with Operations Group, NTC. He has a masters degree in public administration from Golden Gate University and has attended AOB, AOAC, Ranger School, Airborne School, and CAS<sup>3</sup>. He is currently assigned to the 3d Armored Division.

# The Triumph and Tragedy of Major General Maurice Rose

by Dr. Ralph C. Greene

When the Japanese attacked Pearl Harbor, LTC Maurice Rose was chief of staff of MG George Patton's newly formed 2nd Armored Division at Fort Benning. Patton was impressed by the 41-year-old WWI veteran's bearing and ability. Rose, too, had been a cavalryman, and wore outdated, glistening riding boots, breeches, and a belt pistol holster. Both had prophesied that tanks would be preeminent in battle. There the resemblance ended. Rose was taller, slimmer, and more handsome. His commanding voice shrouded inner irritation.

When MG Ernest ("Old Gravel Voice") Harmon took command of the 2nd ("Hell on Wheels") AD, he retained Rose as chief of staff. The North Carolina maneuvers raised Rose's reputation as a redoubtable leader.

Operation TORCH landed Patton's Western Task Force, including "Hell on Wheels," in Morocco on November 8, 1942. The overwhelmed French surrendered on the 11th, but the 1st AD ("Old Ironsides") of the Center Task Force was defeated with heavy losses at Kasserine, Tunisia, in blunting Field Marshal Erwin Rommel's western thrust. Patton replaced its commanding officer on April 5, 1943, with Harmon, who brought Rose with him.

Realizing German tanks' superiority in armor and firepower, Rose suggested to General Harmon, "We'll have to outmaneuver them, sir."



"But how? Our Lees are slow as hell, and our Shermans are all going to the Limeys," replied Harmon.

"Task forces, sir. Small task forces are the answer. Combat commands are too unwieldy. But a small task force can move quickly... in direct combat, we hit them from the sides

or rear where their armor is weakest." He drew formations on a sheet of paper. "Speed and more speed is the solution."

In the assault on Mateur, about May 3rd, he drove to a demoralized battalion reserve and asked why it was static. Told that it could not

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support the attack because of heavy enemy shelling, he immediately set an example by walking toward the front. The encouraged troops rallied, braving artillery and machine gun fire, and Mateur fell. This feat won him the Silver Star and promotion to full colonel.

On May 7, Harmon launched his armor to break Afrika Korps resistance before Bizerte. Its defenders signaled, "Our armor and artillery have been destroyed; no ammunition and fuel, we shall fight to the last." A German envoy in a white-draped, horse-drawn wagon asked for an armistice. Harmon insisted, "Unconditional surrender with no attempt to escape by sea or sabotage equipment." Rose, in a jeep flying a white flag, crossed enemy lines though fire and mines. Twenty minutes later, he reported: "General Krause accepts unconditional surrender. This was the first capitulation of a major Axis force, in WWII — 40,000 Germans and Italians.

The North African campaign's ruthless winnowing tested and developed leaders. Maurice Rose was a preeminent example. On June 2, he was promoted to brigadier general by TORCH's commander-in-chief, Dwight Eisenhower.

On July 9, Operation HUSKY landed Patton's Seventh Army on 70 miles of southern Sicilian littoral — Truscott's 3rd ID and the 2nd AD defeating the elite Hermann Goering Panzer Division. Rose's CCA slashed over winding roads, mountain passes and rivers to Sicily's north coast and won the vital port of Palermo.

In November, the 2nd AD went to England to prepare for OVERLORD. Tidworth Barracks, on Salis-

bury Plain, afforded relative luxury. The barren fields surrounding Stonehenge allowed ample room for intensive training. Assigned to Lieutenant General Omar Bradley's First Army, "Hell on Wheels" crossed the channel in stages to Omaha Beach from June 7 to 10. Early on June 13, an Ultra flash from Bletchley (the British decoding center) disclosed that a panzer division was moving swiftly for an attack on Carentan, which had been won by the 101st Airborne "Screaming Eagles" on June 12. They lacked heavy weapons to blunt a tank thrust, which could have split the American forces between Utah and Omaha Beaches. Bradley launched a counterattack that included Rose's CCA.

"At the hour for attack," Sergeant Don Marsh remembers, "the 101st troopers held fast in their foxholes... General Rose, alone, in his 'pink' riding breeches, polished boots and tank jacket, walked up, ignoring danger... He came upon an airborne captain and demanded, 'Get your men out of their holes and moving forward. We're attacking, and I mean right now!' The troops successfully counterattacked, buoyed by CCA." Rose's daring was rewarded by the capture of German documents disclosing that an armored counterattack was not expected so soon after the landings. He had splashed ashore only three days earlier, and his audacity arguably saved the beachhead.

This victory put the 2nd AD in the natural fortresses of the *bocage* country (hedgerow-bordered pastures), restricted terrain for armor. Improvising bulldozer attachments, Rose's tanks chewed eastward through the almost impenetrable walls of deep-rooted trees and shrubs.

Sergeant Marsh added, "Our headquarters was dug deeply behind a hedgerow to escape detection. Movement was minimum from our foxholes. Nevertheless, the general put his field tent and his canvas chair in front of us... Rose rejected the old cliché, 'Discretion is the better part of valor.' He motivated us by respect and fear: His troops knew that he would never give an order that he would hesitate to carry out himself. He prodded his task force leaders to keep moving...he and his staff rode the razor's edge of the attack."

Fighting toward St. Lo, which fell on July 18, CCA pierced enemy strongholds under heavy fire.

Bradley's 1st Army delivered its second blow, COBRA, on July 24. After a tragic short bombing killed hundreds of forward troops, including LTG Leslie McNair, CCA moved southwest. German defenses had been demolished. Over 1,000 were killed, the survivors dazed, and only a few armored vehicles remained in operation. Collins threw his VII Corps — 1st ID, 2nd AD, and 3rd AD 197 into the fight. The 2nd AD, led by CCA, drove south. Rose was determined to break out of the Cotentin Peninsula regardless of fatigue, casualties, or darkness. Despite exhaustion after fighting for 24 hours, his stern order remained: "Keep going!"

CCA's fighting dash until midnight, over poor roads and through hedgerows, destroyed the formidable Panzer Lehr Division, while losing fewer than 200 men. The troops then were roused after only two hours of sleep, with cries of "Climb aboard, we're moving out!" Rose repeated, "When you've got the enemy on the run, keep him



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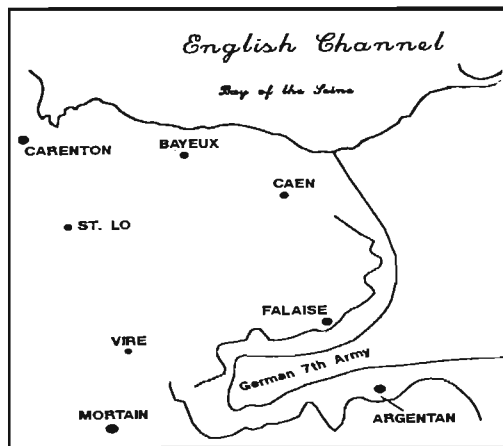
on the run!" Speed reduced casualties.

*Chicago Daily News* Correspondent Robert Casey joined CCA west of St. Lo. "The region looked like the moon. Rose stood in a field pitted with craters and fringed with burned-out tanks. Suave and imperturbable, he greeted us cheerily. 'What did they do to you?' I asked. 'Plenty,' he said. 'And what do you intend to do about it?' He looked at me quizzically. 'My orders aren't changed. We're going to attack'."

Rose raced south, followed by the 3rd AD and the 1st ID. On August 1, CCA spearheaded the attack on Tessy-sur-Vire. A spokesman for a dispirited infantry company said, "The tanks could have had wooden guns." Their presence alone restored confidence, and the blazing town was cleared of the enemy by August 7.

The Americans overran Avranches, breaking out for Paris and Brittany. After the U.S. capture of Mortain, east of Avranches, on August 3, Ultra indicated a German counterattack to drive to the sea with over 150 heavy tanks. When fog cleared on the afternoon of August 7, Allied rocket-firing planes destroyed most enemy vehicles. Bradley wrote, "I had no better generals than Collins, Hobbs, Eddy, Brooks, and Rose. Their... experienced divisions made the attack suicidal for the enemy."

Collins and Bradley were disappointed by the unaggressive leadership of the 3rd AD's CO, MG Leroy Watson. On 7 August 1944 Rose replaced him, instilled new spirit, and authorized the SPEARHEAD insignia. COL Andrew Barr remembers, "He visited every sec-



tion... He was stern and aloof, but on occasions exhibited a sense of humor. Officers and soldiers were impressed by his no-nonsense, quick grasp of the tactical situation."

With Operation COBRA completed, Bradley pivoted northeast, forcing the Germans into a trap. Its upper jaw was the Canadians at Falaise. Rose pushed his revitalized Spearhead Division (lower jaw) to Argentan, 19 miles south of a juncture with the Canadians. They were stopped by a strong force of German tanks and dive bombers and surrounded by heights where the Germans made a desperate counter-attack. The Spearhead tanks fought artillery and armor at close range. Wrecked Shermans and Panzers littered the roadsides and fields amidst the bodies of hundreds of GIs and German soldiers.

Rose's center held, and his speedier armor outflanked the German tanks and infantry. Fanatic SS troops swarmed from the hillsides, firing machine pistols and automatic rifles at Rose's Shermans. They fell in rows, barely impeding the attackers. After the capture of Argentan, Falaise fell to the Canadians on August 17, narrowing the gap to 12 miles. German fire held the trap's northern jaw open. Rose rallied his staff officers, cooks, clerks, and drivers to close the southern jaw, but the Germans resisted ferociously. Most of the exhausted forces of

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Feldmarshall Gunther Von Kluge's armies were still trapped in the "kessel" and were slaughtered as they fled between Argentan and Falaise.

They poured through until the gap was shut on August 19. Some 30,000 to 50,000 escaped. The Allies took 50,000 prisoners, and 10,000 German bodies lay in the "killing zone." Von Kluge, suspected of being involved in the July 20 assassination attempt on Hitler, took cyanide.

Bradley praised Rose's daring, awarding him the Distinguished Service Medal. The Germans, too, realized that they faced an adversary rivaling Patton, and matching Rommel. He had built up the 3rd AD's morale, taught it how to fight, and welded it into a marvelous combat machine.

Pausing a few days on the Seine, the 3rd AD thrust toward Belgium. COL Ernest DeSoto wrote. "We were advancing through village after village in France. A jeep stopped alongside my halftrack; in it were Doyle Hickey, CO of CCA, and Rose. Mortar fire fell nearby. Rose and Hickey took out their maps and spread them on the hood... An infantryman called, 'Who the hell are those damn generals?' I told him, and he replied, 'That's the first time I ever saw a goddam general this close to the front.' Collins (frequently) ordered Rose to get back with the division, but he was always forward."

Along the Mauberge-Mons road, the 3rd AD caught Germans in bright moonlight. Tank guns shelled them mercilessly. Vehicles were often destroyed with a single shot. Survivors surrendered in droves.

Retreating through Mons to the Siegfried Line, the surprised Germans found Rose ahead of them. They rushed headlong into his road blocks. General Collins wrote, "On September 2, I drove to Rose's CP south of Mons. He was getting reports of enemy on his left rear... Rose warned me not to linger as he expected to get hit. I told him to hold tight... After I left... his division was in a wild melee reminiscent of the 2nd Armored's breakout in Normandy." The 3rd AD killed or captured over 25,000 by the end of the Mons action on September 5, dealing the German VII Army a crippling blow. Rose's feat was rewarded by his promotion to major general.

Rose made a sharp northeast turn from Mons. The 3rd stormed along the Meuse and captured Liege. SGT Larry Maffia remembers, "During our drive through Belgium, our reconnaissance battalion was 10-12 miles ahead of the tanks. I was in an armored car, (but) General Rose was often ahead in his jeep. He avoided casualties by passing opposition."

A 3rd AD task force fought up the east bank of the Meuse on September 12, routing the SS house by house to reach the formidable West Wall — a double row of obstacles barring the historic route of invasion to and from Germany. The next day, the task force took the German village of Roetgen, making Rose the first commander since Napoleon to invade Germany from the west. Before dusk, a breach was made in the rock, steel, and concrete Siegfried Line.

Rose called to his correspondents, "I'll see you in Aachen," and disappeared in the smoke. "Rose," wrote Casey, "rode with the advance units,

unprotected, and luck rode with him. When we got to a hot spot, he was ahead of us. We developed deep affection and admiration for him. He had the modesty of a great man, the calm fearlessness of a fighter, and the uncanny instincts of a genius. Rose emerges as an authentic hero. There was no smarter commander of armor nor more... considerate leader."

The *New York Sun's* W.C. Heinz revealed, "The unit which spearheaded the American drive from the Seine to the border of the Reich was the 3rd AD of the First Army... its fighting guys asked me why everyone was writing about the Third Army, and not about the 3rd AD... (Censorship allowed writing about armies but not about divisions)... they showed letters from home remarking what a wonderful job Patton and his boys were doing. 'We're the guys who took Soissons and Chateau Thierry!' these G.I.s would shout angrily. 'We read that it was the Third Army. What's wrong with you writers?' The Spearhead Division brought the blitzkrieg back to the land of its birth at a speed its inventors never thought possible... Rose would stand in a jeep about 60 feet behind the tanks... You don't see many generals up there."

Medieval Aachen, Charlemagne's capital, with narrow, winding streets and heavy stone buildings, held great psychological importance to Hitler. Almost surrounded, the Germans resisted fiercely, but surrendered on October 21: the first major German city captured.

In November, Bradley bogged down in the brutal battle of the Huertgen Forest. The winding trails were too narrow and the trees too thick for tanks. In three weeks, Col-

lins advanced but six miles. Despite 35,000 casualties, he had not reached the Rhine. The 3rd AD faced stubborn resistance, some of its task forces losing half their tank strength.

Since September, Hitler had planned to split the Allies. Undetected by Ultra intercepts, his three new panzer armies assaulted the American weak point in the Ardennes on December 16. With the 3rd AD running short of fuel and supplies, Rose, uncharacteristically cautious, held up his advance. He ordered, "Impress every individual that we must stay right here, or there will be a war to be fought all over again, and we won't be here to fight it."

Christmas dawned bright and clear. American fighter planes bombed and strafed the Germans, who had failed to enlarge their penetration. The Bulge was broken on January 3, when Collins' VII and Ridgway's XVIII Airborne Corps counterattacked from the north, led by the 2nd and 3rd ADs through a snow-covered minefield.

Rose drove the 3rd AD to the Rhine, nine miles south of Cologne, during the first week of February. With CCB were a few of the new M26 Pershing tanks with 90-mm guns, a match for Panthers and Tigers. Germany's Queen City was WWII's greatest ruin. The Germans blew up the great Hohenzollern bridge, the key to the heart of Germany, before it could be taken.

General Collins wrote "... (Rose) met me outside his CP, located in an exposed house at the very end of a small town. 'Maurice,' I said, 'do you always have to have your CP in the last house in town?'

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He drew himself up as he replied, 'General, there is only one way I know to lead this division and that's at the head of it!'"

By March 7, the city was in our hands... We had come over 600 miles from Utah beach and captured 140,000 prisoners..."

Some of Rose's men predicted his death because of his determination to be first at the point of maximum enemy resistance. They remembered that he drove his jeep across a bridge suspected of being mined before he would allow his tanks to cross. (But they also remembered that he would fine them \$60 for fraternizing with a German civilian and \$10 for not wearing a steel helmet.)

Sergeant Willard Smith recalled, "I first saw General Rose up front at the Battle of Mons. He wore cavalry boots, had two stars on his helmet and on his jeep. I thought, 'What is that idiot doing here?' We were killing Germans by the hundreds and he was sightseeing. I developed great admiration for him when I realized the way he led his troops. (He) knows what the hell is going on! Around Stolberg, the General zoomed up. He asked, 'Why is your platoon exposed and what are you trying to do?' I told him, 'We're keeping two bunkers closed and shooting Germans out of these farm buildings.' He said, 'Give them hell, and good luck!' and drove off. We had plenty of bull sessions about General Rose."

Sgt Frank Woolner wrote, "...The General was a hell of a good commander. He dressed like Patton but... didn't chew out or scream at soldiers. He had 'big balls.' He never hesitated to go where the hot iron was flying... Shortly before

Rose was killed, he gathered a scratch group of soldiers and led them into a wooded section where German soldiers had holed up. All the enemy surrendered... Not a shot was fired... This often happened... the general taking the place of a non-com or shavetail. Rose was never guilty of that German bromide: 'To become an old soldier, stay far from battle....'"

Occasionally, we would see Rose with the higher brass... He was neat as wax with fruit salad displayed. "Lightning Joe" Collins, Bradley, and Ike usually dressed very soberly..."

The 3rd AD crossed the Rhine on pontoon bridges south of Bonn on the 25th, and blasted eastward to Marburg. On March 28, two American armies began a giant pincer movement to encircle the Ruhr. LTG William Simpson's Ninth Army was the northern hook, LTG Courtney Hodges' First Army (including the VII Corps, 104th ID, and 3rd AD) the southern.

For two weeks, the 3rd AD battled eastward. Four correspondents entered Rose's headquarters in a parlor of a German home. Thomas Henry of the *Chicago Sun* wrote, "Rose's face was pillowed in his arms on the table... Rising wearily, he pointed to a map on the wall. From this village (Marburg), the projected line of advance turned north almost at a right angle..."

'Its precisely Mons all over again — the same movement and the same object.' He referred to his phenomenal dash across Northern France which won him promotion... 'When do you expect to reach Paderborn?' we asked... 'I've just told General Collins that we would be in Paderborn at midnight tomorrow.'

By next midnight, the 3rd AD had pushed almost 100 miles across country — the longest fighting armored movement in history.

The tanks started at first light in four columns. They rolled through woodlands...and white-flagged villages. Groups of Russian, French, and Italian slave workers came out of hiding..."

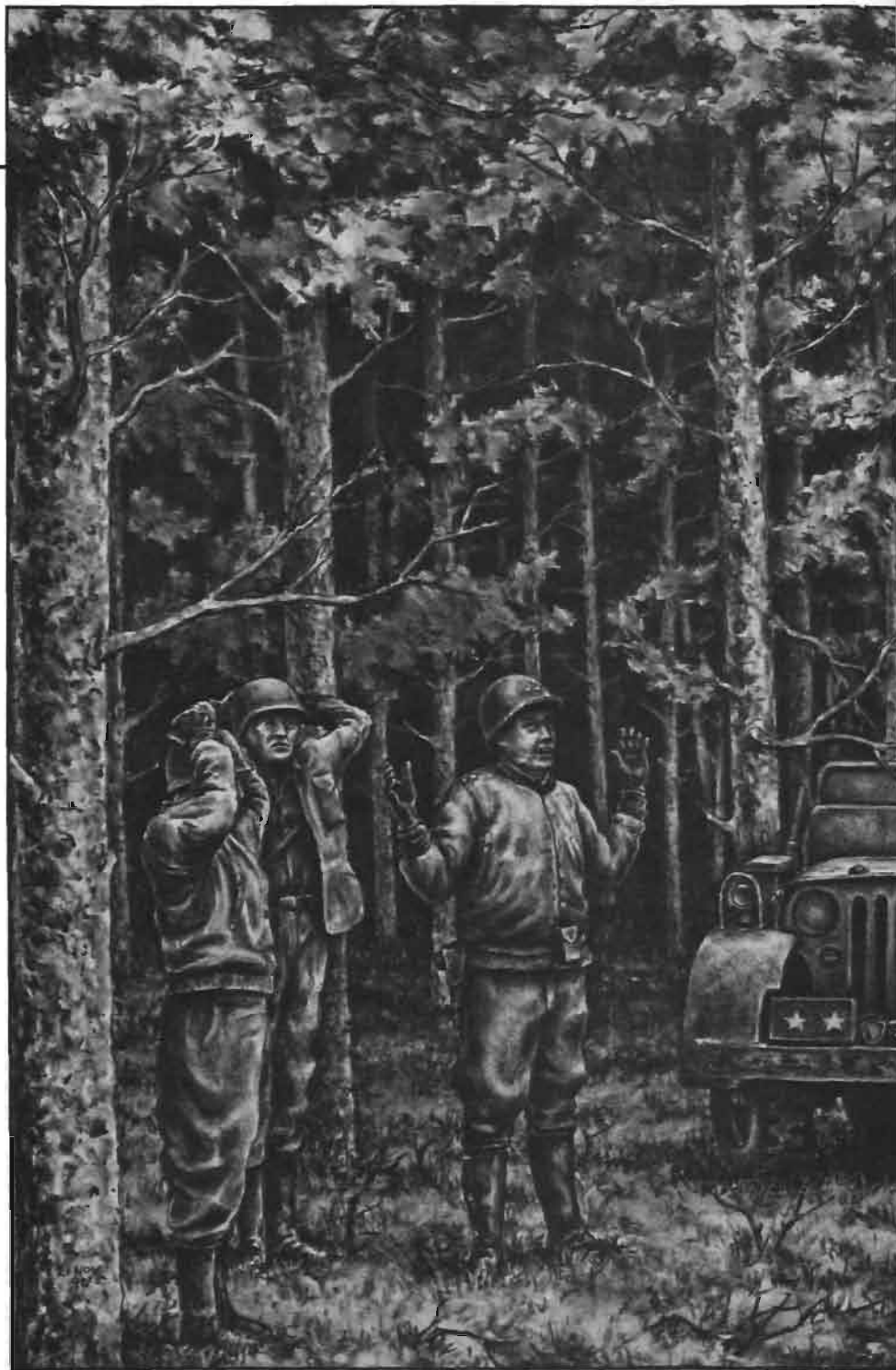
In the van of the drive to Paderborn, Rose, with his aide, Major Robert Bellinger, and his driver, T/4 Glenn Shaunce, passed a stone wall-bordered cemetery. He suddenly cautioned Shaunce: "Look, Jerries!" He was first to spot a group of 20 Germans scurrying across the road ahead. "Stop!" he ordered, grasped a submachine gun, and jumped from the jeep, calling, "Follow me!" He charged after the enemy, who had taken cover behind the wall. When he saw them, he pressed the trigger, but the gun jammed. He threw it away, and jerked his pistol from his belt holster, shooting a German who aimed his rifle at him. A second jeep stopped behind them and COL Frederic Brown and his driver joined the firefight. The remaining six of Rose's 11-man escort, in two motorcycles and an armored car, drove up. Twelve Germans had surrendered, several had been killed, and the rest escaped. He supervised loading the prisoners into his vehicles and, covering those in his jeep with his pistol, took them to a POW compound. This skirmish was perhaps the only time during WWII that a division commander personally stormed an enemy position, routed them, and took prisoners. A GI whispered, "The Old Man is stretching his luck. One day it's gonna run out."

The 90-degree north "end run" turn of the 3rd AD tanks surprised

the Germans. Startled defenders manning guns at crossroads were crushed. Most towns were bypassed, to be mopped-up later. Third AD vehicles reached Hamborn, south of Paderborn, on the morning of March 30. As Rose left his headquarters, a sergeant remarked, "There goes the division point." During the afternoon, combat turned furious. Paderborn, where the blitzkrieg was born, was a large SS Panzer training center. The instructors fought with skill and fervor with about 60 Tiger and Panther tanks.

Chief of Staff COL John Smith was following CCB, which was fired on by concealed German tanks at a sharp left curve, destroying a number of Shermans and halftracks. Rose was forward of this point and aware that he was isolated. He had been trailing a task force led by COL John Welborn on a secondary road, with panzers in its rear and front and German infantry in the woods. At dusk, small arms and tank fire had cut Rose off from Welborn. Rose radioed Smith to take the Germans under fire. It was his final command. Smith could get no reply to his coded call signal.

Rose rode in his jeep with Shaunce and Bellinger. Following him were two jeeps, one driven by COL Brown, LTC Wesley Sweat with other men in an armored (radio) car, and two motorcycles. When the German shells struck, Rose's vehicle was slightly ahead of their impact point. Desiring to join TF Welborn's leading elements near Hamborn, he decided to "make a run for it." They tore north through an open field and then west to the road on which he assumed Welborn's column was progressing. They were blocked by a disabled



Pershing tank. Because there were no tracks going north, they concluded that it had been leading when it was knocked out, and that the remainder of the column had used an east-west road in order to enter the main north-south road to Paderborn. A German force was known to be astride the first road,

north of the Pershing. To avoid being "mousetrapped," Rose's small company detoured south to the narrow, winding, east-west connecting road. COL Brown led the way.

Climbing a slight uphill curve, Brown saw a large tank rolling toward them. In the dusk, its outline resembled one of Welborn's Persh-



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*"A young German soldier in the tank turret, motioned with a machine pistol for the occupants to dismount with their arms up, while shouting frantically in unintelligible German. Resistance seemed useless."*

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ings. "That's one of Jack's new tanks!" he exclaimed. As he passed, he was alarmed by its twin exhausts. "Holy shit, a Tiger, get off the road!" he shouted. Three others followed. Brown swerved, and scraped his jeep past the Tigers. Rose was less fortunate. The third tank slewed, pinning his vehicle to a tree.

Bellinger later reported, "A young German soldier in the tank turret, motioned with a machine pistol for the occupants to dismount with their arms up, while shouting frantically in unintelligible German. Resistance seemed useless. Then the German screamed something about 'Pistollen!' The only reply (according to

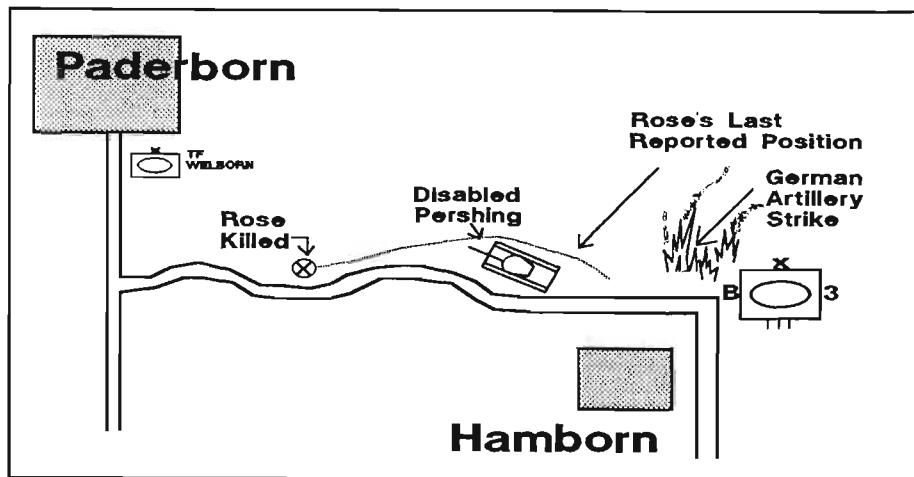
Shaunce) was Rose saying, 'No versteh! No versteh!' (Maurice Rose was the son and grandson of orthodox rabbis and was raised in a Yiddish-speaking household. It is likely that he would have grasped German military commands. The unreliability of witnesses is illustrated by BG Doyle Hickey's statement

after his investigation, "General Rose answered in English saying that he did not understand...")

"Shaunce and I carried our handguns in shoulder holsters, and we could drop them without lowering our arms. General Rose, with his automatic in a belt holster, dropped his arms, presumably to remove his belt. The tank commander, evidently thinking he was reaching for his pistol, fired a burst, killing the general instantly."

Bellinger and Shaunce hit the ground and scrambled close to the tank, where they could not be seen by its crew. They crawled into the dense woods, and hid, disclosing themselves to 3rd AD patrols in the morning.

COL Smith reported, "After being unable to raise General Rose by radio for over an hour, I directed a search." SGT Arthur Hausechild recalls, "On the morning of March 31, Sergeant Owen and I found the



body of the general... on the ground near his jeep, his helmet with bullet holes beside him, and his pistol in his holster with the flap buttoned down. As we were in a vulnerable position... we each took a leg, dragged the body downhill, and placed it on our jeep. When a lieutenant who stopped us found out that the body was that of the general, he scolded us severely for 'having no respect.' Since we had been on the move for 24 hours without rest, we were in no mood for a tongue lashing and told him so in rather colorful terms. He vowed to charge us with insubordination, but nothing came of it."

COL Brown revealed, "General Rose once stated to me that he would never be taken prisoner as long as he had a chance to defend himself or fight back. That was his personal concept of the duty of a soldier and he instilled it into his troops. The almost 100,000 Germans we captured (in the drive to Paderborn, compared to) the relatively few we lost, paints the picture."

The Spearhead had closed the Ruhr (later named Rose) pocket, trapping 325,000 Wehrmacht troops. Their general, Walter Model, shot himself. The envelopment of the Ruhr sealed the doom of Germany.

As news of the killing of General Rose spread, tributes poured from many sources. General Eisenhower, on April 1, wrote to Mrs. Virginia Rose: "... Your late husband was not only one of our bravest and best, but was a leader who inspired his men to speedy accomplishment of tasks that to a lesser man would have appeared almost impossible... He was out in front of his division, leading it in one of its many famous actions, when he met his death. I hope that your realization of the ex-

## ...A Remarkable Series of Firsts

General Rose was the first American to accept the surrender of a major German stronghold, Bizerte. His 3rd AD rang up a remarkable series of firsts: to cross the Belgian border, September 2, 1944; to fire a shell into Germany, September 10; to cross the German border and capture a German town, Rotgen, September 12; to breach and pierce the Siegfried Line, Sep-

tember 13-15; to shoot down an enemy plane from German soil, September 18, to capture a major German city - Cologne - September 18. It made the greatest one-day fighting advance in the history of warfare - 91 miles, March 29, 1945.<sup>47</sup> It was cited by the German High Command as the best trained armored division in the U.S. Army and the most feared by them.

traordinary worth of his services to our country will help you in some small way to bear your burden."

General Collins said, "Maurice Rose was the top armored commander... More than any man in the world he deserves credit for bringing this war to a conclusion at least five or six months sooner than it would have been otherwise. Secretary of War Henry Stimson and Generals Marshall, Bradley, and Hodges echoed these eulogies.

In Fort Knox, Rose Terrace and Rose Hall bear his name, as does a school in Belgium and a rifle range in Berlin. In 1948, a troop transport was christened USAT Rose. The cornerstone of the Rose Memorial Hospital in Denver was laid by General Dwight Eisenhower on August 31, 1948. The 3rd AD Association presented \$30,000 and General Rose's helmet, which now is on display in the Patton Museum.

General Rose's decorations include the Distinguished Service Medal; Distinguished Service Cross; Legion of Merit with one oak leaf cluster; Silver Star with two oak leaf clusters; Bronze Star with one oak leaf cluster; Purple Heart, WWI; one oak leaf cluster to Purple Heart, WWII; Belgian Fourragere; French Legion of Honor (Croix de Guerre with Palm); Belgian Croix de Guerre with Palm.

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*Note: Ranks of military personnel mentioned are those at time of service with General Rose.*

Dr. Ralph C. Greene, a graduate of the University of Kansas and the Washington University medical school, served in the U.S. Army Medical Corps from 1942-1945. He was trained as a pathologist - a doctor who studies the causes and progress of disease - and taught pathology at the medical schools of the University of Tennessee, University of Massachusetts, and at Northwestern University, where he retired in 1982. He has practiced his specialty on the staffs of hospitals in Pennsylvania, West Virginia, Massachusetts, Wisconsin, and Illinois, and is the author of numerous articles in the medical journals. Now retired, he lives in Chicago.

# After Landing in Normandy, Spearhead Led the Way

*Forged to Win in Europe  
During WWII, It Won Again  
Against Iraq's Best*

As the U.S. VII Corps raced from Normandy through Northern France and Belgium toward Germany, the 3d Armored Division earned its nickname the hard way. MG Collins, commanding the VII Corps, repeatedly told MG Rose, "You will spearhead the attack." Third Armored earned the sobriquet by being the first American unit to enter Belgium and the first to enter Germany, leading the fight across Europe.

The 3d Armored began with the no-less-colorful slogan of "Bayou Blitz" when it began its honor-studded career at Camp Beauregard, Louisiana, on April 15, 1941. Within two months, the entire division had transferred to Camp Polk, Louisiana, where the original cadre of some 600 officers and 3,000 enlisted men from the 2d Armored Division joined thousands of new recruits. Forging a combat-ready unit became more difficult when 3,000 men transferred to the fledgling 7th, 8th, and 11th Armored Divisions, then being



formed. While training, the 3d Armored moved around the United States, as it would move through Europe in combat. It moved to Camp Young, California, for desert training in July 1942; to Camp Pickett, Virginia, in November; and to a cold and snow-covered Indiantown Gap (Pa.) Military Reservation in January 1943. The Spearhead finally shipped out on September 5, 1943, to a then-secret destination.

Only after embarkation did the soldiers of the 3d Armored learn that

they were to land in England to prepare for the assault on Germany. After nine months of training, the first major elements of the division landed at Omaha Beach on June 23, 1944. It was divided into two spearhead columns: Combat Command "A," under BG Doyle Hickey; and Combat Command "B," under BG John J. Bohn. Combat Command "A" was the first to see action, as it entered combat against the Villiers-Fossard salient northeast of St. Lo on June 29, attached to the 9th Infantry Division. CCB was blooded

## World War II Campaigns of the 3d Armored Division

*Normandy  
Northern France  
Rhineland  
Ardennes-Alsace  
Central Europe*



after crossing the Airel Bridgehead on 7 July, attached to the 30th Infantry Division. The unit secured the Haut-Vents crossroads by the 11th. On July 16, the two combat commands were united under 3d Armored control at St. Jean de Daye and became the spearhead of VII Corps, commanded by MG J. Lawton Collins.

Third Armored was in the forefront of the fighting from the breakthrough near St. Lo to the Mayenne River, some 60 miles away. The attack was so swift and coordinated that, near Brecey, soldiers of the 36th Armored Infantry Regiment, under LTC Leander Doan, caught German soldiers lolling under shade trees, drinking wine.

On August 13, the 3d Armored attacked through Domfront to close the Falaise Gap, capturing Ranex after a hard battle on the 15th. It fought through Fromenthal on the 16th and 17th of August, and on the 25th, Combat Command "B" crossed the Seine River below Paris on a pontoon bridge constructed by the 23rd Armored Engineer Battalion. The division covered the 40 miles separating the Marne and Aisne rivers in just two days, capturing Meaux, the farthest point of the German advance in the First World War. The Aisne bridges were secured intact, and soon after the columns of 3d Armored forces crossed them, they were ordered to turn north, toward Belgium. The Spearhead crossed the Belgian border on September 2, the first American forces to arrive there. But the fighting around Mons was intense. An estimated 30,000 German troops attempting to retreat to the Siegfried Line were mauled by 3d Armored and the following 1st Infantry Division. The 3d Armored

alone captured more than 10,000 enemy soldiers, including the crew of a German Mark V Panther tank, which a Combat Command "A" military policeman, directing traffic at night, directed into an American bivouac area.

There was no rest for the weary fighters of the Spearhead. The division raced through Namur and Liege to Eupen, a town on the German border, covering more than 90 miles in one week. Units of the reconnaissance company of the 33d Armored Regiment were the first American troops to enter Germany as Task Force Lovelady captured Roetgen on September 12. Just ahead were the formidable defenses of the Siegfried Line, Germany's "West Wall" of antitank ditches and dragon's teeth protected by pillboxes. In a triumph of combined arms action, the division penetrated the enemy's last fixed line of defense in two days, although at great cost. By the close of fighting on the 15th, with the second line of the West Wall breached, only 100 of the division's original 400 tanks were still operational.

Third Armored had dashed from the Seine River to the Siegfried Line in 18 days. It paused, exhausted from the intense fighting, to refit and rest as the First Army prepared for the final assault on Germany.

When the winter offensive was finally launched on November 16, its objectives were the very heart of Germany: the Rhine River and Cologne. Mud, mines, and antitank guns slowed the advance, and the front stabilized along the Roer River by the middle of December. The 3d Armored settled in to wait for the planned spring offensive.

#### World War II Commanders of the 3d Armored Division

**MG Alvan C. Gillem, Jr.**

*April 1941-January 1942*

**MG Walton H. Walker**

*January 1942-August 1942*

**MG Leroy H. Watson**

*August 1942-August 1944*

**MG Maurice Rose**

*August 1944-30 March 1945*

*(Killed in Action)*

**BG Doyle O. Hickey**

*March 1945-June 1945*

**BG Truman E. Boudinot**

*June 1945-July 1945*

**BG Frank A. Allen, Jr.**

*July 1945*

**MG Robert W. Grow**

*July 1945-November 1945*

#### The Bulge

The German Ardennes offensive, General Field Marshal Gerd von Rundstedt's last bold gamble, shocked the Allies and caused a rapid redeployment of the Spearhead. Combat Command "A" was attached to the V Corps to assist in the defense of Eupen, where it engaged German paratroopers who had attacked near the Eupen-Malmedy road. Combat Command "B", with the 30th Infantry Division, fought the 1st Panzer Division near Spa. Fighting reached a peak on Christmas Eve, when the entire division — cooks, drivers, maintenance men, and clerks included — fought off bitter attacks. By the end of December, the enemy breakthrough in the Ardennes had been halted, and a new VII Corps offensive was planned for January 3.

Bad weather neutralized American air superiority, while ice and snow slowed the offensive, but the division fought through to the Ourthe River by January 19 and seized Gouvy and Beho on January 22.

## The Rhineland

After a month's rest at Stolberg, the Spearhead pointed east, out of the Elle River bridgehead, on 26 February, and gained a bridgehead the next day over the Erft River.

### Tanker of Tankers:

*SSG Lafayette G. Pool,  
and "In the Mood"*

One of the proudest pages in the proud history of the 3rd Armored Division is the one devoted to SSG Lafayette G. Pool, who commanded his Sherman tank, "In the Mood," to a combat record unequalled in the history of the Armored Force. SSG Pool led his task force in 21 full-scale attacks and is credited with the destruction of 258 enemy vehicles and the capture of 250 prisoners of war before being wounded near Munsterbusch, south of Aachen.

Pool, a one-time sectional Golden Gloves champion, who turned down a chance to box at the nationals because his unit needed him, was in the ranks at the activation of the division in Louisiana in 1941, when it was known as "Bayou Blitz." His crew — T/5 Del Boggs, loader; CPL Wilbert "Red" Richards, driver; CPL Willis Oller, gunner; and PFC Bert Close, assistant driver — played a large role in the earning of the title "Spearhead" for the division. Ace of Aces, SSG Lafe Pool was the point of the Spearhead in its charge across Europe.

After reaching the Rhine on March 4, 3d Armored assaulted Cologne on the 5th of March with the support of the 104th Infantry Division (See "Armor Takes Cologne," *ARMOR*, Sep-Oct 88, p. 32).

Defenses crumbled by the 7th, and MG Collins, commander of VII Corps, congratulated the division for "spearheading the VII Corps, the leading First Army troops, to the Rhine."

### The Final Drive

The 3d Armored attacked over the Rhine on the 25th of March, reaching the Lahn River at Marburg on 28 March. The division commander, General Rose, assisted personally in the capture of a dozen prisoners of war, herding them in with his .45 pistol (See related story on page 21 of this issue). Swinging sharply north to close the Ruhr pocket, the Spearhead covered more than 90 miles in a single day, surprising and disorganizing the enemy defense. The Battle of Paderborn, from 31 March to 1 April, closed the pocket, but cost the division its gallant commander.

BG Hickey led the division on to the Weser River on 7 April, and the Mulde River on 15 April before assaulting Dessau on 21 April, having spearheaded VII Corps across 175 air miles of Germany in three weeks. On April 25, the 3d Armored was relieved by the 9th Armored, of Remagen Bridgehead fame, and deactivated on November 9, 1945 in Aalen, Germany.

### Fort Knox

In 1947, the Department of the Army decided to rename replacement training centers after wartime

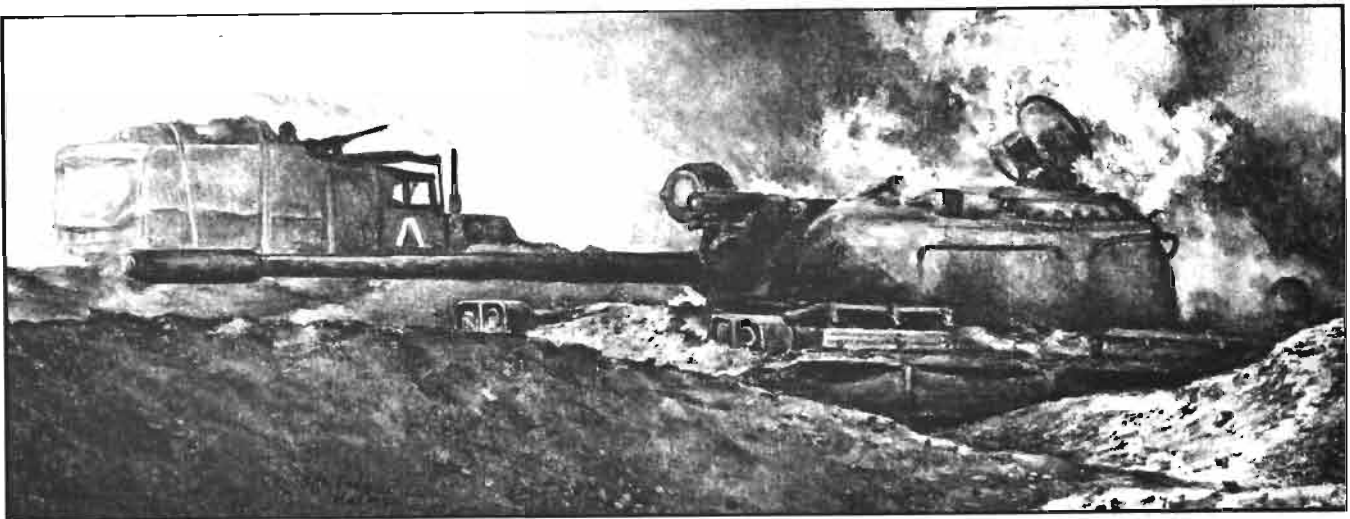


divisions that had distinguished themselves in combat. It was appropriate, then, that the replacement training center at Fort Knox was named after the 3d Armored, one of the most distinguished armored units of the Second World War. The Spearhead served in the important role of teaching armor soldiers and leaders the fundamentals of their service from July 15, 1947 to June 14, 1955, when the division was reorganized tactically under the command of MG John M. Willems. It met the challenge of becoming combat ready by May 1, 1956.

### Germany Once More

The first major elements of the Spearhead returned to Germany on May 12, 1956. Assistant division commander, Robert W. Porter, Jr., told his troops, "You come not with orders to participate in battle, but with a NATO-assigned mission to preserve peace in Europe and in the world." For nearly 35 years, the proud Spearhead division has fulfilled this important mission in Germany, serving with the determination, courage, and elan that have characterized soldiers of the 3d Armored Division since its formation 50 years ago.

This article was prepared from Shelby Stanton's *Order of Battle: U.S. Army in World War II* and the unit history, *"A History of the 3d Armored Division."*



## The 3d AD Fought Saddam Hussein's Toughest Troops Through Rain and Wind of DESERT STORM

The most recent chapter in the glorious combat history of the 3d Armored Division was written in the sands of the desert in southern Iraq last month.

As this issue was in preparation, President Bush had ordered a cessation of hostilities and elements of the 3d AD, fighting with other heavy divisions of the VII Corps, had completed one of the most difficult missions of the war, the destruction of Iraq's once-vaunted Republican Guards, an armored and mechanized force that had been the pride and cutting edge of Saddam Hussein's army.

The 3d AD was one of the U.S. and allied heavy divisions sent on what General H. Norman Schwartzkopf, CENTCOM commander, called the equivalent of a football team's "Hail Mary" play, a lightning rush north, skirting the western border of Kuwait, to find and destroy Guards divisions in northern Kuwait and southern Iraq.

As the cessation of hostilities began, news reports had the 3d AD engaging the Guards' "Medina" Division" in southeastern Iraq and

preparing to fight the Guards' "Hammurabi" Division dug in near Basra, an Iraqi city that had been the administrative headquarters of Saddam Hussein's forces in occupied Kuwait.

The 3d AD attack began on the afternoon of February 24th, when the VII Corps moved through the Iraqi defense breached by the 1st ID. The U.S. 1st AD, the 3d AD, and the British 1st AD swept through the barriers and plunged north to attack the Guards, concentrated 50-70 miles away. To their left, the 82d Airborne Division and a force of French armor screened the flank. The 101st ABN and the 24th ID were meanwhile racing toward Nasiriyah, on the Euphrates River, to cut off the retreat to the west.

According to news reports, the 3d AD was part of the force that engaged and destroyed the Guards' Tawalkana Division on the 26th. The battle against the Republican Guards was described in press reports as not so much a series of short actions, but a 42-hour tank melee in driving rain and sand storms. The VII Corps divisions

then turned east to tighten the trap. The remaining functional Iraqi units were unable to move west because of the approaching allied heavy armor, and could not get across the Euphrates to the north because of Air Force interdiction of the bridges.

Hundreds of Iraqi vehicles, including tanks, trucks, artillery, and confiscated Kuwaiti vehicles were attempting to leave Kuwait in the final hours before hostilities ceased. They were trapped between the armored divisions and the forces pressing into Kuwait from the south and west. The escaping vehicles, moving along a superhighway flanked by a minefield and a ridge, were trapped on the road and hammered by fighter-bombers as they attempted to escape north to Basra.

Although it was impossible to reach armor field commanders prior to our printing deadline, press accounts told of 3d AD units in decisive battles with the Iraqis. One company destroyed 40 tanks and other vehicles, according to a pool report, which noted that SGT Glen Wilson's M1A1 was responsible for five of the armored vehicles.



Above, 4th AD tanks on the defensive near Bastogne. Below, the face of 4th AD's SGT Hobart Drew reflected the division's frantic pace.

**50th Anniversary - 4th Armored Division**

**Speed and Power -  
The 4th AD's Mobility  
Rolled Through Europe**



*"The accomplishments of this division have never been equaled. And by that statement, I do not mean in this war; I mean in the history of warfare. There has never been such a superb fighting organization..."*

*-General George S. Patton*

Activated 50 years ago, April 15, 1941, at Pine Camp, N.Y., the 4th Armored Division trained in the United States for 32 months before shipping out for the European Theater. This training prepared it for fighting in any terrain and climate. The division trained in wintry northern New York State; came south for the Tennessee Maneuvers in fall, 1942; participated in the first California Maneuvers at the Desert Training Center; and was later stationed at Camp Bowie, Texas, before leaving

through the port of Boston, Mass., on the way to England.

Six months later in July, 1944, the unit entered combat in France after landing at Utah Beach. Led by its legendary and well-loved commander, MG John S. ("P") Wood, it brought with it a remarkable esprit de corps. "We felt that we were destined for greatness, much the same feeling that a college football team must have when it senses the national championship," said Albin F. Irzyk, a college football star who went on to serve as a junior officer in the 4th AD when it landed at Normandy.

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| <p><b>World War II Campaigns<br/>of the 4th Armored Division</b></p> <p><i>Normandy</i></p> <p><i>Northern France</i></p> <p><i>Rhineland</i></p> <p><i>Ardennes-Alsace</i></p> <p><i>Central Europe</i></p> |
|--|

Irzyk fought with the 4th through five European campaigns, led the 8th Tank Battalion in the relief of

**World War II Commanders  
of the 4th Armored Division**

**MG Henry Baird**  
*April 1941-May 1942*  
**MG John S. Wood**  
*May 1942-December 1944*  
**MG Hugh J. Gaffey**  
*December 1944-March 1945*  
**MG William M. Hoge**  
*March 1945-June 1945*  
**BG Bruce C. Clarke**  
*June 1945-July 1945*  
**BG W. Lyn Roberts**  
*July 1945-September 1945*  
**MG Fay B. Prickett**  
*September 1945-Redesignation*

the German effort to stem the advance failed, although the 4th took heavy losses in some phases of the battle.

Mud, rain, and terrain then forced a change in tactics. The speed of the early exploitation slowed, and the 4th slogged along in support of the infantry. By November, the tankers of the 4th AD were attacking and counterattacking against German armored units at Fonteny, Rodalbe, across the Saare River to Romelfing, Baerendorf, and Wolfskirchen. Then General Wood was relieved of command, replaced

Bastogne, and retired a brigadier general.

In his tribute to the unusual qualities of his division, which appeared in the July-August 1987 issue of *ARMOR*, BG Irzyk credited Wood with inspiring his tankers with a winning spirit and a sense that they were something special. Although MG Wood was later relieved in December 1944 in a controversial and still mysterious incident, his troopers continued to think of him as their spiritual leader, and of themselves as Wood

had inspired them in their long months of training.

"He had taught us to believe in ourselves, to feel that we could do anything, that we were the very best, a different breed," Irzyk wrote.

*"The sensational success of General Wood's 4th Armored Division had exploded the nightmare of static warfare that had haunted the Americans so long in the Cotentin..."*

*-Official U.S. Army History*

The 4th fought as it was trained. Arriving in France slightly more than a month after D-Day, when momentum had halted, and the Germans appeared to be containing the invasion, the 4th led a breakthrough to the critical town of Avranches, allowing the Allies to spill south into the Brittany Peninsula and opening the way east to LeMans, Chartres, and Paris.

After securing several French seaports that had been important German U-boat bases, the 4th turned east and helped turn the stalemated war of position into a war of maneuver worthy of the Wehrmacht in 1940. Leaving

Lorient, in Brittany, one combat command of the division slashed 264 miles in 34 hours.

General Wood employed the division like cavalry, Irzyk remembered. As the southernmost unit of the XII Corps, itself the southernmost corps of Patton's Third Army, Wood used fighter-bombers to guard his flanks and moved quickly. Wood used mission-type orders, delivered to scattered units by jeep or spotter planes, to sketch his tactical intentions. Irzyk said it was not unusual to get a simple overlay with an arrow indicating direction and a crayoned goose egg indicating the objective. In a few cases, the division moved beyond its maps.

The advance stopped near Luneville on September 13, 1944, when two columns of German armor jumped the 4th AD advance guard to begin the nine-day battle of Arracourt. The 4th's Shermans, outgunned by German Panthers, moved quickly for flank and rear shots, making up in maneuver and marksmanship what they lacked in sheer firepower. When it was over,

*MG John S. Wood, the legendary wartime commander of the 4th AD, was widely credited with giving the men of the division a sense that they were special. He was relieved from command at the height of the division's early successes after Normandy.*





by Patton's chief of staff, MG Hugh J. Gaffey, and the morale of the division plummeted.

The reason for the replacement of General Wood seems to be that he was tired and sick and needed a rest. And so did the division itself: it had lost hundreds of its most experienced soldiers in hard fighting and its equipment was worn. It was to rest and refit, replaced by the 12th AD after the battle of Bining on 5-6 December.

About two weeks later, the call came again. "We were alerted for a move north where, according to confused reports which reached us, some sort of a German breakthrough had occurred," said BG Irzyk. The breakthrough, of course, was the German Ardennes offensive, intended to smash to the channel ports and cut the Allies in two. Now, the battle was against time as the 4th moved out over

*"It has been an honor and a privilege for this division to serve alongside the 4th Armored Division. If we are ever in a tight spot again, it is our hope that the 4th Armored Division will be sent to get us out...."*

*-MG Maxwell D. Taylor,  
CG, 101st ABN Div.*

wintery roads, its lead combat command moved 161 miles in 22 hours.

After linking up with the 10th AD in the Bastogne area, the 4th AD pushed toward the encircled city, fighting sharp actions in Martelange, Chaumont, and Bigonville, the last town taken the day before Christmas in the worst European winter in 20 years. CCR of the 4th AD pushed through Assenois to Bastogne and entered the city on the 27th.

The next phase of the 4th's campaign in Europe was the push into Germany. The division breached the Siegfried Line defenses along Germany's western border in a drive toward Bitburg. The rapid advance halted at the west bank of the Kyll River at the end of February, and about a week later, continued again toward the Rhine. In this drive, the 4th AD covered 55 miles in 48 hours, becoming the easternmost division on the Western Front. The rapidity of the advance prevented German resistance from organizing, and kept alive the division's reputation for high speed in the exploitation. March was a series of quick drives and river crossings — over the Kyll, the Moselle, the Nahe, the Rhine, and the Main — as the spearhead division of Third Army plunged into Germany's heart.

On the 4th of April, the battle-hardened men of the division came

upon a new horror, the Ohrdruf Nord concentration camp, the first to be liberated by U.S. forces. The camp was south of Gotha, in Thuringia. "They had seen death many times, in many different forms, as well as every imaginable type of wound," Irzyk remembered. "But what they saw here shocked, stunned, and silenced them."

On the move again, the 4th AD began its final drive of the war, through the villages and towns of Hesse and Thuringia toward the Czech border. But near Chemnitz (renamed Karl Marx Stadt after the war) the division received orders to stop, apparently as the result of an agreement between the Western Powers and their Soviet allies. This was as far east as any U.S. force would go in the European Theater.

A final thrust took the 4th south to Czechoslovakia, where it was located at the end of the war. There, the men linked up with the Russians and later moved to designated areas for the early months of the occupation. In May, 1946, the division was redesignated the 1st Constabulary Brigade, responsible for keeping order in occupied Germany.

Irzyk noted that the odometers of the 4th AD's command post vehicles had registered more than 3,000 miles in their sweep across Europe. "No other division moved so fast, ranged so far, or covered so much ground," said Irzyk, noting that the combat miles covered by the battalions in the 295 days since Normandy nearly doubled the mileage of the command vehicles, which had only to keep up.

According to "The History of the 4th Armored Division," the unit took more than 90,000 prisoners in

*"One of its heroes, Creighton Abrams, would later become the Army's Chief of Staff. Another, Bruce Clarke, later commanded both the 4th and 1st Armored Divisions, and U.S. Army Europe."*

10 months of combat, killed 13,641 of the enemy and wounded 8,426 more.

Three of its members earned Medals of Honor. Twenty-five were awarded DSCs and one the Distinguished Flying Cross. There were two Distinguished Service Medals, ten Legions of Merit, 802 Silver Stars, 3,031 Bronze Stars — and 2,796 Purple Hearts. The 4th was the only armored division to receive a Presidential Unit Citation as a division, and only the second division in the history of the Army to be so honored. One of its heroes, Creighton Abrams, would later become the Army's Chief of Staff. Another, Bruce Clarke, later commanded both the 4th and 1st Armored Divisions, and U.S. Army Europe.

After the war, the unit was formally deactivated April 26, 1946, at Camp Kilmer, N.J. Then, in May,

the division was redesignated as the 1st Constabulary Brigade, responsible for keeping order in occupied Germany. On May 20, 1949, the 1st Constabulary Brigade was deactivated; and concurrently converted and redesignated as Headquarters, 4th Armored Division. The 4th was reactivated on 15 June 1954, at Fort Hood, Tex., to serve as a peacekeeping force during the Cold War. The division participated in Exercise Blue Bolt, a test of armor power in the nuclear age, in March 1955.

In 1956, the division's mission changed to a replacement training division for advanced artillery, infantry, and armor trainees — 25,000 4th Armored Division soldiers served with units worldwide. In 1957, the division was ordered to Germany to replace the 8th Infantry Division, the replacement unit for 2d AD, which returned to Fort Hood. Once again, the 4th would help preserve peace, this time as

part of the North Atlantic Treaty Organization shield.

The division reformed under the Reorganization Objective Army Division (ROAD) plan in 1963.

The 4th Armored Division deactivated on 10 May 1971 in Germany.

Sources for this article include *Order of Battle, U.S. Army World War II*, by Shelby Stanton; *History of the 4th Armored Division*; "The Name Enough Division," by BG Albin F. Irzyk, Ret., in the July-August 1987 issue of *ARMOR*; and BG Irzyk's "The Mystery of Tiger Jack," which appeared in the January-February 1990 issue.

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*Below, a 4th Armored Division column of Sherman tanks moves along an autobahn past burning German vehicles as it drives into Germany during March, 1945.*



# Sniper Tank!

by Captain Pete Mattes and Sergeant First Class (P) Frank Monroe

Long-range engagements and the development of sniper tank crews have long been elusive goals of the armored force. Current tank gunnery doctrine (FM 17-12-1 w/C3, Tank Combat Tables) recommends that engagements begin at 1500 to 2000 meters if the tactical situation permits. This recommendation is based on considerations of probability of hit (Ph), probability of kill (Pk), the effects of the dirty battlefield, and limited on-board ammunition. There may be situations, however, that require crews to engage targets at extended ranges of 3000 to 4000 meters. This suggests a need for sniper tanks and the techniques to train them.

In December 1990, the Weapons Department, U.S. Army Armor School, set out to evaluate a variety of long-range gunnery methods and compare their effectiveness. The goal was to determine if one technique could provide a significant advantage over the others and be useful to commanders whose situation requires long-range engagements. This article provides an overview of this evaluation and describes two of the techniques: the re-engage method and half-target-form adjustment.

● **Re-engage** — The current U.S. Army doctrine of re-lasing to determine a new ballistic solution following a miss. The gunner always relays center of visible mass.

● **Half-Target-Form Method** — After a miss, the crew either uses its own sensing or receives one from a

wingman and adjusts the lay of the reticle by half of the target form, as necessary.

## Long Range Gunnery Evaluation

The test of the techniques consisted of three parts. The first phase, shot at Ft. Knox, involved firing 105-mm training sabot ammunition (M724A1) at half-size T-72 frontal targets at a range of 2500 meters. Its purpose was to serve as a "proof-of-principle" to establish the procedures for each technique and lay the groundwork for further testing. Because service ammunition was not fired, the results had no affect on our final recommendation.

The primary test occurred at Drinkwater Valley Live-Fire Complex at the National Training Center, Ft. Irwin, Calif., during January 1991. This phase consisted of firing 105-mm service sabot (M392A2) at 2900-, 3400-, and 3900-meter targets (H-1, T-72 frontal). After firing more than 350 rounds, the different methods demonstrated varying success at each range band. The reengage technique was equal to or better than the others through 3400 meters, which validated our current doctrine of re-engaging at established planning ranges. However, beyond 3400 meters, the half-target-form adjustment produced considerably better results, achieving twice the hit rate as the re-engage method.

In order to verify these conclusions with 120-mm service ammunition, Yuma Proving Grounds,

Ariz., hosted the final phase. There, crews fired M829A1 service sabot at 3000- and 4000-meter targets using the re-engage method and half-target-form adjustment. The outcome supported the NTC results: at longer ranges, the half-target-form adjustment method produced better results.

The lessons learned during this evaluation can be useful to any unit that finds it necessary to conduct long-range gunnery. It is important to keep in mind that these techniques are primarily for stationary tanks firing at stationary targets. This is because the success of these engagements depends on the tank-to-target conditions (range and ammunition) remaining the same, as well as on accurate sensings.

To engage moving targets at these ranges is not recommended due to small target size, large lead offsets, and range changes. Changes in range and lead will make it extremely difficult for the gunner to take up a consistent sight picture or make half-target-form adjustments. Further, a moving tank should *never* attempt these engagements.

## Training Sniper Crews

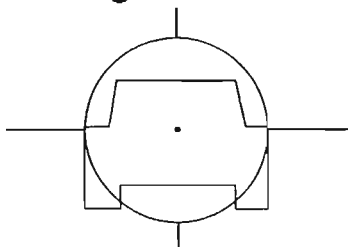
Commanders should recognize that not every crew can be successful at long-range gunnery. Commanders should carefully select sniper crews based on the following factors:

● The tank and crew have demonstrated a high degree of ac-



## Adjusting Fire with the Half-Target-Form Method

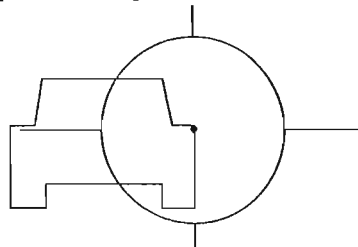
Initial Sight Picture...



3390 METERS

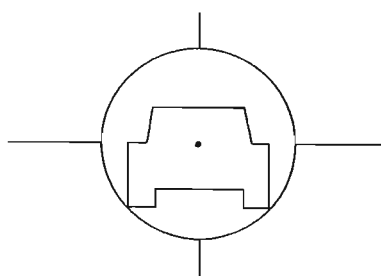
- Round Fired
- Sensing "DOUBTFUL LEFT"

...Subsequent Sight Picture



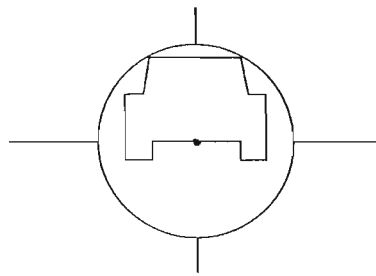
3390 METERS

Correction...Right Half Form



3940 METERS

- Round Fired
- Sensing "OVERLINE"



3940 METERS

Correction...Drop Half Form

curacy in shorter-range engagements.

- The crew has a thorough understanding of the fire control system and its operation.

- The crew has the knowledge and discipline to perform meticulous prepare-to-fire checks and frequent, precise boresighting.

- The tank must be prepared carefully in accordance with the Armament Accuracy Checks in Appendix A, FM 17-12-1 w/C3 (Appendix B, FM 17-12-3, w/C2) and the prepare-to-fire checks in the appropriate operator's manual:

M60A3 – TM 9-2350-253-10-1.

M1 – TM 9-2350-255-10-1.

M1A1 – TM 9-2350-264-10-1.

- Frequent and extremely precise boresighting is essential. Significant changes in ambient temperature, day/night, and overcast/sunny conditions may require boresighting as often as every two to four hours (depending on the suddenness of the change) to maintain optimum boresight. Do not use the muzzle reference system (MRS); check boresight using a muzzle boresight device (MBD).

Once the tanks are prepared and manned by qualified personnel, the crews must concentrate on three skills: sensing, sight-to-target relationship, and reticle lay. Sensings are critical to long-range gunnery but difficult to obtain for a lone firing tank. At the NTC test, even

after two relatively wet days, crew accuracy in sensing at 3900 meters was very erratic. There will be few instances when tank crews will be able to sense their own rounds in the event of a miss due primarily to local obscuration and weather. However, when the round strikes a target, the crew will normally observe the "splash" regardless of conditions or sight (daylight or thermal). A firing crew must concentrate on the target and make every effort to sense its own rounds. For those occasions when the crew cannot observe, a wingman or another designated tank must provide sensings. The firing tank and sensing tank should coordinate positions so that the firing tank's obscuration does not obstruct the sensing vehicle.

Crewmen in the sensing tank must understand the firing tank's fire plan to ensure they are sensing the correct target. Once the sensing vehicle has identified the correct target, the sensing crew must have the discipline to look at that target without being influenced by other tracers or shots by other tanks within their field of view. The sensing tank must be able to give clear and accurate sensings.

Heat shimmer and refraction will cause problems for both firing and sensing tanks. Tanks conducting long-range engagements should seek an elevated firing position to limit these effects. Usually, ten meters of elevation above the intervening terrain will negate the effects of refraction and help reduce the amount of heat shimmer.

Laser range finder (LRF) return selection is also crucial. At extended ranges, either all or a large portion of the target will be inside the GPS one-mil aiming circle (See figure 1). At those ranges, LRF beam expansion will spill over the target, giving incorrect returns. If the line of sight of the firing vehicle is unobstructed, first return logic should be used.

### **The Half-Form Adjustment Technique**

Because the margin for error is so small, the gunner of the firing tank must meticulously take up a center mass sight picture before lasing to the target. Once he fires, the gunner must maintain his sight picture and attempt to sense, if possible, making a mental note of the strike of the round. If the round hits the target, the gunner must keep in mind that it may require more than one hit to achieve the desired effect on the target. In this case, the crew should

fire again using the same sight picture.

If the first round was sensed as a miss, and the gunner has laid on and ranged to the target correctly, he should apply a standard correction as follows:

a. The gunner will make half-target-form adjustments based on the sensings received. These target-form adjustments may correct azimuth and elevation separately or together. (For example, a sensing of "OVER, LEFT" would result in a correction of down half form and right half form.)

b. The half-target-form adjustment allows crews to make a standard adjustment regardless of the target type or range. This is why it is critical that the gunner understand sight-to-target relationship.

c. As discussed earlier, at extended ranges (3000 to 4000 meters) the entire target will often fit inside the one-mil aiming circle of the gunner's primary sight (GPS). The half-target-form method will still leave the aiming dot on the edge of the target with the first adjustment, compared to the standard one-mil correction stated in current doctrine. At these ranges, a one-mil correction in azimuth or elevation will normally be excessive. By comparison, a half-target-form adjustment in elevation at 3500 meters applied to a T-72 frontal is about .32 mils.

d. If a subsequent round is a target hit, and the target still needs to be engaged, the gunner takes up the same sight picture. If the round is a miss, he continues to make additional half-form corrections in the appropriate direction.

e. Figure 1 shows sample sight pictures and half-target-form adjustments. This illustration looks through the GPS and depicts the actual target-to-reticle relationship at the ranges stated.

While this method of engaging at extended ranges was successful, it still does not provide the hit probability of engaging at closer ranges. Commanders should carefully consider the situation before employing sniper tanks, but to have a few designated crews trained and prepared will provide the commander flexibility in mission accomplishment that he would not otherwise possess.

Captain Peter J. Mattes graduated from the U.S. Military Academy in 1986. He served as a platoon leader, XO, and S3 air with 2-70 Armor, 1st AD. A graduate of the Armor Officer Basic and Advanced Courses, he is currently assigned to the Gunnery Training and Doctrine Branch, Weapons Department, U.S. Army Armor School.

Sergeant First Class Frank E. Monroe served with A-3-64 as a TC in CAT '85 and as a platoon sergeant in CAT '87. He participated in M1 operational testing in 1981, and has attended M1 master gunner course and ANCOG. He is currently a senior instructor/writer in the Gunnery Training and Doctrine Branch, Weapons Department, U.S. Army Armor School.

# The Combined Arms Task Force: Shaping the Future of Armored Forces

by Lieutenant Colonel Craig B. Whelden and Captain Robert J. Kmiecik

The Tenth U.S. Cavalry has long held the distinction of being unique. In the last century, it was one of two black cavalry regiments serving the U.S. Army during the Indian and Spanish-American Wars. It has been in and out of service throughout the 20th century, serving in the Philippines, joining General Pershing in his pursuit of Pancho Villa, in North Africa during World War II, Vietnam, and throughout the United States. In its recent rebirth as part of the newly reorganized 194th Separate Armored Brigade, it is now the largest and most powerful combined arms task force in the Army.

First Battalion, 10th Cavalry, Combined Arms Task Force (CATF) was recently formed as a direct result of the Army's downsizing effort. The 194th Separate Armored Brigade inactivated four battalions (1st and 2d Battalions, 10th Cavalry; 4th Battalion, 15th Infantry; 1st Battalion, 77th Field Artillery) and D Troop, 10th Cavalry.

At the direction of Headquarters, Department of the Army, these combat organizations combined on 28 September 1990, at Fort Knox, to form the CATF, which consists of three tank companies, two mechanized infantry companies, one artillery battery, and a beefed-up HHC. (See Fig 1)

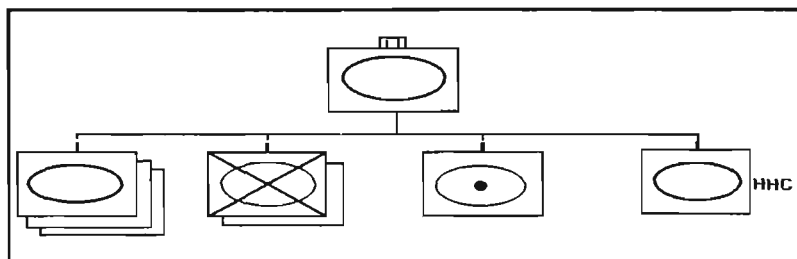
The formation of permanent task forces is not a new concept. The 8th Cavalry at Ft. Hood is organized into combined arms maneuver battalions (CAMBs), which have several years experience under their belt. The 8th Cavalry CAMBs were



formed by permanently cross-attaching one tank company with one mechanized infantry company. This did not significantly change the support or command and control structure, and the combat power remained relatively the same.

The CATF was formed with one of the brigade's tank battalions as a base organization. The addition of two mechanized infantry companies and an artillery battery, even with the deletion of a tank company, required a large shift in the support

**Fig. 1**  
**Organization of the Combined Arms Task Force**



structure in HHC. The combat power dramatically increased, as did the variety of missions the CATF could now perform.

### Developing the MTOE

In developing the MTOE for the CATF, care was taken to incorporate several L-series conventions. This was to avoid future changes as the Army transitions from its current J-series organization. These changes are most prevalent in the HHC. The task force mess section is consolidated, with a total of 26 cooks and five MKTs. The rank structure allows one mess team to be detached; typically, this would be for the artillery battery.

The support platoon has a platoon headquarters, a transportation section, three tank company Class III/V squads, and two infantry company Class III/V squads. The artillery battery maintains its own ammunition section, much like the battery in an ACR squadron.

The task force maintenance platoon is organized with a platoon headquarters, a maintenance administration section, a recovery support section, a maintenance/service section, three tank company maintenance teams, and two infantry company maintenance teams. The battery maintenance team, to include PLL and TAMMS clerks, remains organic to the battery. The recovery assets normally sliced to a battery are incorporated into the task force recovery support section.

In addition to the above changes, the S3 section was modified by changing the branch of the liaison officer from armor to infantry, adding an additional assistant operations sergeant, 11B40, and incorporating a fire support section. This provides a broader base of knowledge to train and conduct operations in a combined arms environment. The addition of a Bradley master gunner to replace the 11B40 assistant operations sergeant is planned when the CATF transitions from M113A2s to M2s in first quarter FY92. The S1 and S4 sections received additional personnel to assist in the management of the larger administrative burden caused by the increased size of the CATF. In all, the HHC has added 80 spaces to what we are all used to in a tank battalion HHC. Total authorized strength of the task force is 921 soldiers.

### CATF – Versatile, Lethal, and Flexible

The CATF is extremely flexible, capable of performing a wide range of reconnaissance and security missions. The combat power and organization most closely resemble that of a regimental cavalry squadron. The CATF's TACSOP (currently under development) provides a wide variety of task organizations, including formation of two tank-heavy teams, two mech-heavy teams, a tank company as reserve, and an artillery battery in support.

This somewhat parallels the squadron's organization of three line troops and a tank company. The total number of tanks is almost equal, with the squadron's 41 vs. the CATF's 44 (two of which are in the task force headquarters section).

The two infantry companies add a new dimension, and significantly increase both the CATF's combat power and its mission options. Infantrymen can be mechanized or dismounted. Until the infantry companies roll over to M2s this fall (projected first quarter, FY92), they have a combined total of 28 M113s, four ITVs, and can put 168 soldiers on the ground.

The artillery battery is structured much the same as a cavalry squadron's, with eight guns and only some minor differences in the battery support element and special weapons team. The HHC has a ten-HMMWV scout platoon and a standard six-tube, 4.2-inch mortar platoon.

When the CATF transitions to M2s and M1A1s, the addition of the Bradleys will dramatically increase its firepower. TOW missile systems will increase from four systems to 28. The Bradley's 25-mm cannon, and its increased mobility and speed will greatly improve the capabilities of the combined fighting team.

The ten-HMMWV scout platoon can screen the battalion's sector, but cannot, provide enough

*No doubt, in the aftermath of DESERT STORM, the Army will take another look at its ability to project forces on short notice. It must be able to deploy, in a matter of only days, a heavy force capable of operating anywhere in the world.*

coverage to adequately screen a brigade sector. However, the infantry companies' METL includes scouting roles and missions. This flexibility significantly increases our reconnaissance and security capabilities, and we can quickly transition from screen to guard to cover.

The CATF may actually be more suited for guard and covering force missions than a cavalry squadron. In covering force operations, the infantry can dig in and hold terrain. The CATF's greatest advantage over a cavalry squadron is perhaps its two organic infantry companies. Also, the size of the CATF allows it to do these missions easily for a light infantry or airborne division.

#### **As a Rapid Deployment Contingency Force**

The CATF can fit into most any scenario as a heavy contingency force. With pre-positioned POMCUS stocks, it could deploy by air anywhere in the world on very short notice. It has a mixed force structure capable of operating independently in any area with an established support base or a suitable host nation support apparatus.

The CATF would have been ideal as the first heavy force deployed to support DESERT SHIELD in those first precarious days after Saddam Hussein invaded Kuwait. As it was, the 82nd Airborne was on a razor's edge for weeks until the first elements of 24th ID arrived.

The CATF can easily detach a mechanized or armor company for independent missions, and still operate within standard Army doctrine as an armor heavy or balanced task force.

When it's not the first heavy force in theater, and joins a brigade or division, the CATF would likely detach its howitzer battery to an artillery battalion already in place. In all cases though, the unity of command within the CATF, derived from its permanent organization as a task force, gives it a decisive edge on the battlefield.

#### **The Future of Combined Arms Organizations**

When DESERT SHIELD began, the 194th Separate Armored Brigade was in the midst of reorganization and downsizing. As an XVIII Airborne Corps unit, it normally would have been one of the first of the heavy forces to deploy. As it was, the brigade was excluded from the Time Phased Force Deployment List (TPFDL) until January 1991 to allow adequate time to reorganize, and to train the new CATF to standards.

No doubt, in the aftermath of DESERT STORM, the Army will take another look at its ability to project forces on short notice. It must be able to deploy, in a matter of only days, a heavy force capable of operating anywhere in the world. Options include the pre-positioning of equipment throughout different theaters, on either coast, or on ships, as the Marines do.

The CATF has tremendous potential, especially in support of rapid deployment contingencies developed to support light forces. It has tremendous combat power, is self-contained, and flexible is enough to perform the full spectrum of offen-

sive, defensive, reconnaissance, and security missions. The 1st Battalion, 10th Cavalry (CATF) will be a good test-bed for combined arms organizations and operations. Stay tuned.

Lieutenant Colonel Craig B. Whelden is a 1973 Distinguished Military Graduate from Purdue University. He has served in command and staff positions at battalion and brigade level in the United States and Germany. He commanded a tank company and was a battalion S3 in the 1st Armored Division; and was a cavalry squadron S3 and brigade S3, also in the 1st AD. He served as company grade assignments officer in Armor Branch and on the faculty of the U.S. Army Armor School. He commanded a tank battalion in the 194th Separate Armored Brigade and currently commands Task Force 1-10 Cavalry. A graduate of the Armor Basic and Advanced Courses, and CGSC, he will attend the Army War College in August 1991.

Captain Robert J. Kmiecik is a 1985 graduate of Davidson College, N.C. He has served as S3 Air, 2-10 Cavalry, and as a tank platoon leader, scout platoon leader, S3 plans officer, and troop XO in 1/11th ACR. He received the AOAC 4-89 Award for Writing Excellence. Currently the S3 Air, TF 1-10 Cavalry, he is slated to command Company A of the task force in May 1991.



## Fire Support in Disengagement: Avoiding the Point of No Return!

by Major Charles C. Otterstedt and Major Steven J. Mullins

### The Issue

At the company level, our mechanized forces are proficient at engaging threat forces. We conduct battle drills; practice the use of direct fire weapons, fire support, and obstacles in engagements areas; and synchronize them against the enemy. But sometimes, company commanders forget to use fire support effectively when it comes time to disengage and move to a new position.

This happens for two reasons:

- Commanders don't adequately express their intent for fire support to a young lieutenant with much less experience.
- Commanders don't pay enough attention to the fire support tools

available when planning the disengagement.

When we conduct a delaying action, we usually perform a series of engagements at successive defensive positions. In these, the company/team plans the defense, prepares the position, and executes the plan. One of two things happens each time we occupy and defend from these positions. If things go according to our company or task force plan, we engage the enemy and then disengage at a predesignated time, or on signal. If things don't go according to our plans, the company may become decisively engaged and the position overrun.

If the enemy can see you as you withdraw your platoons to their new positions, he'll do his best to hit you. Here are some tools to help

you protect your unit as you disengage.

### Command and Control

**Commander's Guidance.** Use your FSO. He's grounded in the technical aspects of his trade, but isn't as experienced as you, so he needs clear guidance. Make him backbrief your intent. Tell him five things:

- Disengagement criteria.
- Final Protective Fires (FPF) location. (show him on the ground)
- Command and control of platoon disengagement.
- Routes between positions.
- Purpose of priority targets. (e.g. To support obstacles, to cover disengagement routes)

**Control Measures.** Make the best use of your control measures. Time-

ly reporting of platoon locations enables you and your FSO to keep fires timely and accurate. Situation Reports (SITREPs), for example, can help you keep those priority targets current. When you call for that priority target in front of BP 21 (see diagram), you don't want the rounds landing in front of your previous position.

Knowing where your platoons are also helps your FSO ensure quick, responsive fires. If he hasn't heard your platoons report successive phase lines as they pull rearward, he'll have to obtain clearance to fire each mission.

**FSO location.** The best spot for the FSO during the disengagement is where he can best see to engage his targets. Putting the FSO in your tank won't leave him free to coordinate fires for you. If he's in the loader's hatch, he won't be able to see your targets.

### Fire Support Tools

We stress that there is not a different set of tactics for each type of operation. It is merely the application of tools available to you. The following are some of the fire support tools you can use successfully to disengage from the enemy.

**Artillery.** Know where your artillery is on the battlefield. It may be important to know the direction of incoming rounds when you call them in at close ranges. If, for example, you plan to disengage when the enemy reaches one half of your direct fire range, there's not much room for error. Artillery gives you "area fires," and the largest projec-



tile error is always in its range (as opposed to its direction). That means that supporting fires originating from your left or right flank area are ideal for the closest fire support. Fires originating directly behind you, firing over your head, can have "probable errors in range" of plus or minus 27 meters.

**Mortars.** The same applies to your mortars. For the disengagement, plan to use the mortars principally for screening and obscuration smoke.

**Priority of Fires.** Understand what "Priority of Fires" (POF) really means. Know if you have priority of artillery or mortars. If you have POF, the Fire Direction Center (FDC) will fire your Call For Fire before other calls. This is critical if

you plan a particular target to support that last platoon in your team in withdrawing as the enemy approaches. Those few seconds will determine if they successfully withdraw or become decisively engaged. They can't afford a busy signal.

You're clearly not "out of luck" if you don't have POF for artillery or your mortars. You'll still get support. You just might not be the first to receive fire. In that case, don't plan your disengagement to hinge on split-second timing. This is one reason why you must maximize use of all your assets.

**Priority Targets.** Use them to support your obstacle plan, screen the enemy, cover withdrawal routes, etc. Remember, if you have a priority



target, it means that a *minimum* of two artillery or three mortar tubes will lay on that target whenever they're not firing a mission. However, the purpose of the priority target dictates the number of tubes used for the target. For instance, obscuring an enemy Observation Point (OP) with smoke may need only two tubes of artillery, while preventing the enemy from breaching an obstacle may require a battery of eight tubes firing numerous volleys.

Use the priority target throughout the depth of your sector. Just remember that as the battle progresses, someone has to tell the tubes when to shift to the next priority target. Through your initial guidance and SITREPS, your FSO will know when to shift them. Additionally, you should always have the priority target on the next likely target, such as one along your route to the next position.

**FPFs.** Many people misunderstand them. They're a specific type of

priority target. Don't use them merely to disengage. You have much more efficient ways to do that, and more plentiful assets. TC 6-71, *Fire Support Handbook for the Maneuver Commander*, says that FPFs are "...desperation fires. Don't call for them unless all else has failed." That FPF will deprive several others of fire support for its duration.

**Targeting.** Use artillery to cover your obstacles. While disengaging, you'll definitely want targets on your positions and along your withdrawal routes. Above all, know when to fire them. Designate trigger points to ensure timely execution. It's better to place fires between you and the enemy than behind him. When covering your route, it's important to put time and space between you and the enemy. "Dry run" the execution of the trigger points during your rehearsals.

### Special Munitions

**Smoke.** You have several delivery methods of smoke at your disposal

to help you disengage. Beyond the smoke grenades on the M1 and M2 and the smoke you can create using your vehicle engine exhaust system, the FSO can provide smoke from your mortars or artillery. It's even better to consider using prepositioned smoke pots. Bear in mind, however, that there are probably four other company commanders who have the same thought in mind as they pull out from their positions.

You should ensure your FSO always knows how much smoke to realistically expect from his indirect fire weapons. If he repeatedly promises you all the smoke you want or doesn't know how much the mortars and artillery have, demand that he find out. If you aren't linchpin in the task force's battle, or if the TF S3 has made other plans for the available smoke, don't count on a lot of it.

**Family of Scatterable Minefields (FASCAM).** Remember, there are several types of FASCAM, of which artillery is only one. If your TF S3 and commander want to make maximum use of artillery for suppressive fires and close support, they'll probably shoot Field Artillery (FA) FASCAM early or use other minelaying means to help set up the TF's defense. If you call in FA FASCAM to do more than seal a gap in your obstacles, you'll tie up some tubes for longer than you probably want to.

In the example below, you should not expect to call for any FA FASCAM. You aren't the TF main effort. Have your FSO plan for it, but chances are that brigade will retain the control over its execution. Brigade approval for a FASCAM target of opportunity or a planned



target would be too slow for the pace of Team A's disengagement.

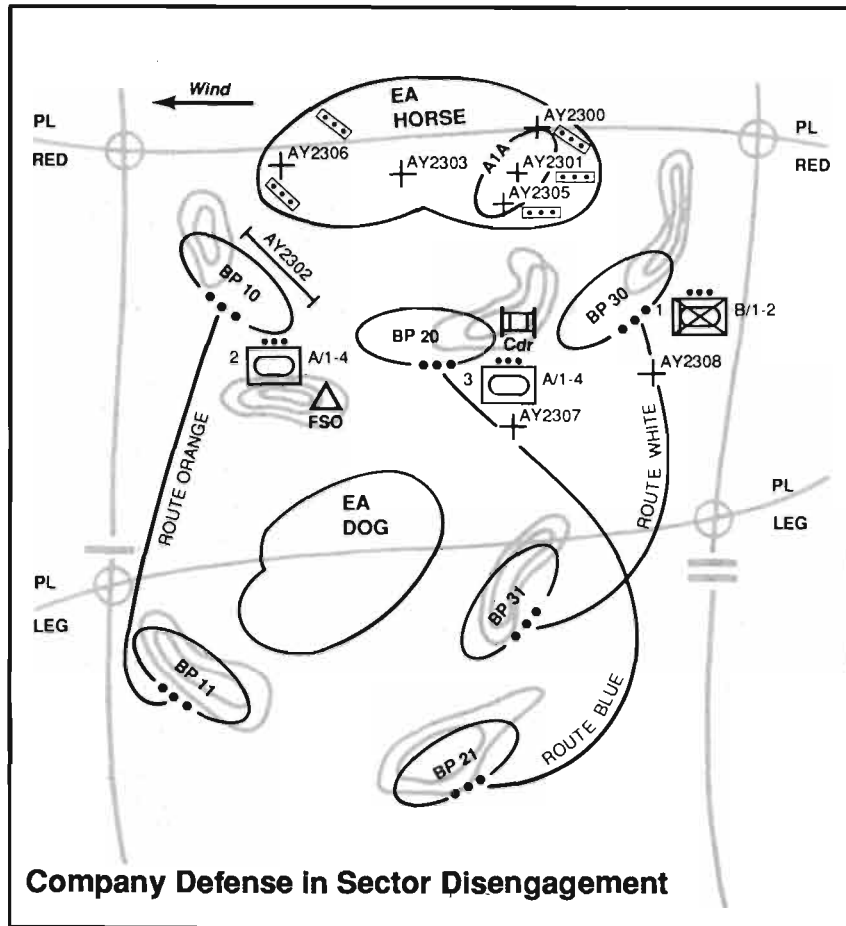
### Situation

What follows is an example of how to effectively use your fire support with an armor-heavy team in the defense; disengaging from the enemy to subsequent positions.

You're commander of Team A, TF 1-4 AR. Your battalion is task organized and has the mission of defending in sector to destroy the first-echelon battalion attacking in your area of operations. The TF S3, S2, and FSO have briefed you on the scheme of maneuver. You'll

defend successive battle positions with the three other teams in your task force. You haven't got well-concealed routes of egress from your first two positions and are concerned about how to protect yourself en route. The battalion commander has told you not to become decisively engaged.

In our scenario, you received your OPORD brief with your team FSO. You return to your position and begin troop leading procedures. You and the TF S3 agreed on approximate positions for the platoons to delay from (BPs 10, 20, 30). The TF FSO determined from the



**Company Defense in Sector Disengagement**

OPORD that since Team A isn't the TF's main effort, you'll get one artillery priority target and one mortar priority target, but no Combat Observation Lasing Team (COLT). Don't forget you still have your Fire Support Team Vehicle (FIST-V), which has the same lasing abilities as the COLT. While reconnoitering your positions on the ground, you and your FSO discussed how you'll conduct the defense from those positions.

### Making a Tentative Plan

At this step, you and your FSO begin to wargame your plan. Your

concept for the disengagement begins with the decision to pull out your mechanized platoon from BP 30 as soon as the enemy has two platoons across Phase Line (PL) Red in the engagement area or half of friendly direct fire range. You and he agree that you will accompany the tank platoon in Battle Position (BP) 20 as the last one to withdraw and the FSO will position behind and between BPs 10 and 20.

Your FSO recommends allocating 3d platoon in BP 20, the artillery priority target,

and the mortar priority target to 2d platoon in BP 10.

You tell the platoon leaders to let you know as soon as they have designated grids for those priority targets so your FSO can send them up to the TF FSO.

You and your FSO discuss what you can count on for fire support. Together you develop a plan for the disengagement. The TF FSO and the S3 have planned group A1A, a three-target Dual Purpose Improved Conventional Munitions (DPICM) group, to cover the engineer obstacles that the task force

is going to emplace in the engagement area (EA Horse).

The TF S3 has designated Team A as primary initiator for the group. Knowing that he has to ensure there is a back-up initiator, your team FSO recommends that the 3d platoon leader do it because he should be in position and able to see the target.

You plan to pull the mechanized platoon from its position first, soon after firing the group. The team will cover first platoon's withdrawal by direct fires only, saving your artillery smoke and leaving the artillery free to fire other missions. The 2d platoon leader on the left plans to screen his movement by positioning smoke pots in front. He'll activate them upon your warning order to pull out.

You agree with the team FSO's recommendation and decide to save mortar smoke for the 3d platoon's movement. Your FSO has contacted the TF FSO who told him only to expect approximately 10 minutes of smoke from the artillery, since it will be used heavily elsewhere. The team FSO plans to use white phosphorus and DPICM to screen the platoon withdrawals, but not to fire them until you direct them by use of a code word. You both agree that unpredictable winds might cause the smoke to obscure the enemy vehicles in the engagement area from 3d platoon's direct fire weapons as they cover the withdrawal of the other two platoons.

### Preparing the Plan

Once the FSO and platoon leaders understand the plan, they set out to prepare for the defense and dis-

engagement. Having allocated the priority targets to the platoon leaders, the FSO later contacts them to help them verify the grid locations to the targets they want. He verifies the grids and records and plots them, assigning them numbers from those the TF FSO gave him.

Your FSO then catches up with the engineer sergeant who has begun preparing the few obstacles he's had time to emplace in EA Horse, your primary engagement area. Your FSO finds that one of the targets that the TF FSO designated for group A1A will not cover the obstacle where the engineer has dug. He changes the grid and adds it to his target list, assigning it a different target number to avoid confusion. After showing them to you, he'll send them to the TF FSO for compilation and refinement.

You should ensure that the FSO can position himself well enough to see group A1A, the smoke target and others that you'll need him to initiate. The FSO may ask you if it is tactically advisable to outweigh the risk of detection. This decision is up to you and your task force commander. The artillery is positioned behind BP 31 and will have to fire directly over 3d platoon's heads to engage AY2303, their priority target. This concerns you because it will be only 800 meters away from their tanks.

You decide to hold the team rehearsal near BP 20 because you can see nearly everyone's positions. As you and the platoon leaders walk through the motions, various questions arise.

*How can I prevent the enemy from observing 2d platoon's movement?*

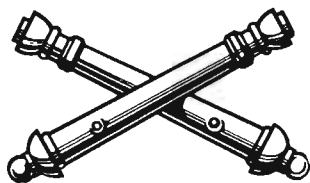
The 2d platoon leader comments that he drove along Route Orange, and he'll be in clear view of the threat forces for most of his move to BP 11. As the platoon leader motions toward the open stretch of ground he must travel, the FSO recalls that he should be able to use a few minutes of the artillery HC smoke. You and he agree to fire smoke for six minutes on target AY2302 to screen 2d platoon's movement. That's how long it will take the platoon to reach the hill at BP 11.

*How can I ensure we fire group A1A?*

During the rehearsal, each platoon leader states what he expects to see or fire as the platoons withdraw. Your 3d platoon leader remembers he must initiate group A1A, but as he stands in his BP, he's found the hill at BP 31 interferes with reliable contact with the artillery FDC. Your FSO notes that he'll initiate the group if he hears the 3d platoon leader failing to get through. It now becomes clear to you that the FSO will be better able to do his job from a spot between BPs 10 and 20, rather than at your side.

*Who can carry the battle until the XO takes command, should I go down?*

You recall that your FSO has been with you during the entire planning and preparation phases. As per your SOP, your XO takes over if you do down. However, you told him to accompany the mech platoon as they displace to BP 31, so it will take a few minutes for him to come



*Make the most of your fire support as you disengage from each position. It will help you retain the time and space to maneuver and ultimately seize the initiative from and defeat the enemy.*

forward to assume command. Until then, you FSO may be the only person up front who understands the big picture and can keep the action flowing until he arrives. He must be ready to rapidly backbrief the XO when he arrives. Be sure he's aware of this.

### **Executing the Plan**

Making fire support work for you during disengagements will depend greatly on the planning and preparation you've done. In executing the plans, however, you must expect things to go differently from the plan. Flexibility is the watchword.

*The enemy logjammed away from the priority target!*

If, for example, the enemy doesn't concentrate exactly where you designated your priority targets, the FSO will simply adjust from the grid he sent for that target.

*Two of my leaders are injured early into the battle!*

Losing key personnel such as yourself, your XO, platoon leaders, FSO, or NCOs will affect your execution. Have them backbrief you. This will ensure they comply with your intent. It also facilitates your leaders' initiative if they're confident they understand what you would want them to do.

*Third platoon leader's radio broke half way through his SITREP!*

Work together and be flexible by shifting radio channels when one team member loses communications. This will help keep the fight

going. For instance, as the 3d platoon begins to pull out of BP 20, he finds he needs to turn to his FO to call back his report. The FO's call through the team FSO will help keep the original plan on track. It will help you control the flow of the battle to have current SITREPs and will simplify your FSO's clearance of fire missions.

*Second platoon didn't call target AY2302 upon disengaging!*

Your FSO has been monitoring the battle. He noticed that an unfamiliar voice called in to report 2d platoon's disengagement from BP 10. He alerts you to this, noting that they didn't call for the screening smoke at target AY2302 as you planned during the rehearsal. After you both determine that the platoon leader's vehicle took a hit, the FSO calls in the target, aiding the platoon's withdrawal.

### **Conclusion**

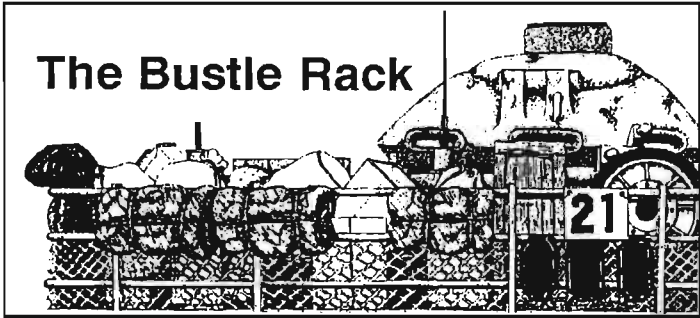
Make the most of your fire support as you disengage from each position. It will help you retain the time and space to maneuver and ultimately seize the initiative from and defeat the enemy.

Fail to do this, and you risk defeat. You won't be able to disengage from your positions on your own terms. The enemy may decisively engage you. He may close in on you and cause you to piecemeal away your platoons because you couldn't mass fires when you need them.

Use the fire support tools above to prevent your disengagement from becoming a "Point of No Return!"

Major Charles C. Otterstedt graduated from West Point in 1979. Commissioned in Field Artillery, he later graduated from Airborne and Ranger Schools. He served as a fire direction officer, firing battery executive officer, and commanded a 155-mm M109A2 battery for 24 months in 2d Battalion, 75th Field Artillery in FRG. After attending the Field Artillery Officers' Advanced Course, he served as a DIVARTY counterfire officer for the 82d Airborne DIVARTY. Later, he was the FSO for 1st Brigade, 82d Airborne. He has acted as an observer-controller and subject matter expert at the National Training Center and Joint Readiness Training Center. He has written, reviewed, and taught fire support tactics, techniques, and procedures. Currently a small group leader for the U.S. Army Field Artillery School, he is a Command and General Staff College selectee.

Major Steven J. Mullins is an officer advanced course small group leader at Fire Support and Combined Arms Operations Department, U.S. Army Field Artillery School. He commanded a battery in the 4th Battalion, 7th Field Artillery in Germany, and has served as a company and battalion FSO in Korea. He has written and teaches fire support tactics, techniques, and procedures, and has served as an observer controller/subject matter expert at JRTC and BCTP.



# The Bustle Rack

## New Battle Staff NCO Course Opens

The new Battle Staff NCO Course began at the U.S. Army Sergeants Major Academy in January.

The course, which integrates the former Operations and Intelligence and Personnel and Logistics courses, was designed to train battalion and brigade staff NCOs to serve as integral members of the battle staff and to manage the day-to-day operations of battalion command posts. NCOs not only learn their duties, but also become familiar with the duties of other staff sections.

Because the combined six-week course is much shorter, students have to complete some material by the Army Correspondence Course program before they attend the resident course at Fort Bliss. Students should be selected for the course six to eight months beforehand to allow time for this training.

All resident training is performance-oriented, based on the ARTEPs for the heavy battalion, heavy brigade, and light infantry battalion.

A summary of the course appeared in the October 1990 issue of *Soldiers*.

For more information, contact SGM Bannister, DSN 978-8145, or commercial (915) 568-8145.

### Senior Officer Logistics Management Course (SOLMC)

The Senior Officer Logistics Management Course is specifically designed to update commanders and their primary staff at battalion and brigade level. The course encompasses maintenance, supply, and transportation procedures, as well as hands-on experience with vehicles, weapons, ammunition, medical, communications, NBC, and quartermaster equipment. The course is open to officers

in the grade of major or above in the active and reserve army, U.S. Marine Corps, allied nations, and DOD civilians in the grade of GS-11 or above. The one-week course is conducted ten times each fiscal year at Fort Knox, Kentucky. Class quotas may be obtained through normal TRADOC channels. For more information, contact CPT Hammerle, DSN 464-7133/3411 or commercial (502)624-7133/3411.

Class	FY 91	FY 92
4		8-13 Mar 92
5	7-12 Apr 91	29 Mar-3 Apr 92
6	28 Apr-3 May 91	5-10 Apr 92
7	19-24 May 91	26 Apr-1 May 92
8	9-14 Jun 91	10-15 May 92
9	18-23 Aug 91	31 May-5 Jun 92
10	15-20 Sep 91	20-25 Sep 92

### Reducing Master Gunner Attrition Rate

During FY 90, the attrition rate for the Master Gunner Course was very high — of 155 students that reported for the course, 45 failed to pass the TCGST.

To reduce the number of TCGST failures, the Weapons Department, U.S. Army Armor School, has decided to make the equipment and instructors available for refresher training before the test to avoid wasting TDY funds. Equipment and instructors will be available two or three days before the test. Students should arrive three or four days early and bring technical manuals for their model of tank and also an FM 17-12 with changes.

This refresher training will not relieve the unit chain of command of its responsibility to screen Master Gunner candidates and to ensure they meet the prerequisites in DA Pam 351-4, which includes conducting a TCGST for students within three months of their arrival to the Master Gunner Course.

### Training Assistance Teams

The Master Gunner Course cannot train an individual to be proficient in every area. To assist master gunners, the Weapons and Maintenance Departments have formed training assistance teams.

Since the pilot M60A1 Course was conducted in February 1975, more than 900 students have graduated from the Master Gunner Course. The course is designed to make an individual proficient in fire control maintenance and gunnery. But every problem that could be experienced cannot be taught during the course. Therefore, the master gunner instructors are available to assist any unit master gunner with questions or problems concerning all tanks currently in the U.S. inventory.

Each Active and National Guard unit has been assigned a master gunner instructor to act as a direct link to the Armor School. To obtain information concerning your unit's representative or questions, contact the Weapons Department, ATTN: ATSB-WPG-G, Master Gunnery Branch, Ft. Knox, Ky. 40121-5212, or phone commercial (502)624-8530 or DSN 464-8530.

### The NCO Journal Begins Publication

Army noncommissioned officers will soon have another resource to add to their professional development arsenal. After months of planning and preparation, *The NCO Journal* is scheduled for distribution in April.

Described as a forum for the open exchange of ideas and information to support the training, education, and development of the Noncommissioned Officer Corps, the journal debuts as a quarterly 24-page publication. But its staff is already working toward expansion by working to attract readers and a broader base of contributors.

# Armor Branch Notes

by Colonel Steve Wilson

MSG Gil High, editor of the inaugural issue, said his first goal was to provide a high-quality product that will have value as a professional development tool. "To me that means giving NCOs a source for information and problem solving, but more important, the journal should be a place where NCOs will share their own experiences, ideas, and opinions for the mutual benefit of all NCOs. "Although we're an official publication that fully supports command policies and will publish officially approved information important to NCO development, the purpose of the NCO Journal is not to deliver the "Party Line," High said. In fact, the majority of articles we publish should not come from official sources, but from our readers. The only thing we ask is that writers address issues that are important to leader development or offer suggestions on how we as NCOs can become more professional."

High explained that future issues of The NCO Journal will follow a series of themes to help readers and contributors focus on issues that are important to the Army as a whole and NCOs in particular. But each issue will also contain articles on a variety of topics as well as standing columns such as a book review section and a section which will look at the history of the NCO Corps.

"Readers are encouraged to take a critical look at our first issues, and to help shape the journal into an instrument that will serve their needs," High said. "In many cases our first issue will live up to our readers' expectations. But when they see we've left out some important facts, when they disagree with an author, or when they think some important issues need to be raised, then we want to hear from them."

## AWTS Changes Name

The Army Wide Training Support Branch of the Non-Resident Training Division, G3/DPTM, Ft. Knox, Ky., is now the Field Support Branch of the Total Armor Force Training Support Division. They will still provide the same service; only the name has changed. The office symbol (ATZK-PTN-A) and phone number (DSN 464-2987 or commercial 502-624-2987) have not changed.

OPERATION DESERT STORM is placing demands and challenges on the personnel system, with many routine personnel actions being delayed. The uncertainties created by OPERATION DESERT STORM will undoubtedly continue. One thing is constant - DESERT STORM has the priority in all personnel actions.

We have a number of officers who are TDY to SWA and are not physically with their parent units, even though they are still carried on their parent unit's roll. We don't necessarily know that someone is TDY because MACOMS have issued their own TDY orders without PERSCOM knowledge. Many officers on valid reassignment orders have been frozen in place by "stop movement," which has created vacancies in some gaining units. We expect this phenomenon to continue until soon after our victory in DESERT STORM.

Some officers previously scheduled for schools such as AOAC have had their schooling postponed, thereby creating a large "bow wave" of officers requiring appropriate schooling. If DESERT STORM continues for an extended period, some officers may have to be deferred from CGSC and SSC; each case will be handled on its own merits. We will do our best to reschedule schools for those affected ASAP based on individual needs and preferences, unit requirements, and seating capacity.

Other officers with approved resignations or retirements have been prevented by "stop loss" from leaving active duty as scheduled or desired. HQDA will publish guidance on how and when those who are scheduled to leave active duty will be allowed to do so.

The past months have been challenging for all, and the next months promise to be even more so. I encourage you to "stay on the net" with Branch by note, message, or phone. We'll do our best to keep the personal in personnel.

To all of our comrades associated with OPERATION DESERT STORM, we congratulate you on your victory. Our hearts and prayers so with you. STEEL ON TARGET!

## Changes in Drill Sergeant Selection Criteria

When Enlisted Ranks (Selection of Enlisted Soldiers for Training and Assignment), AR 614-200, Chapter 8, Update 16, is released, there will be two changes in the prerequisites for noncommissioned officers applying for drill sergeant school and assignment. All NCOs must possess a GT score of 100 or higher, and a profile series (PULHES) no less than 211221. Both changes are non-waiverable prerequisites and are currently being used by the Drill Sergeant Team in their selection process. Personnel Service Center (PSC) representatives and NCOs applying for this prestigious duty must ensure DA Forms 2A and 2-1 (which are two of the enclosures in a drill sergeant application) reflect the correct data. Also, the appropriate SIDPERS transactions must be submitted to update the Enlisted Master File (EMF). Direct any questions pertaining to the selection criteria to the Drill Sergeant Team at DSN 221-8070/8394.

## Courses Available for 19Ds

The following courses are available for 19Ds upon requests initiated at unit level. All courses listed are designed to improve technical and tactical proficiency, however, M3 Scout Commander Certification Course (M3SCCC) and BFV Master Gunner Courses are most critical to the 19D force.

Course	Band
Airborne Training	PVT-SFC
M3SCCC	SPC(P)-SFC
BFV Master Gunner	SGT-SFC
Scout Platoon Leader	SSG(P)-SFC
Ranger School	SGT-SFC
Joint Firepower Control	SFC

For more information, contact SFC Warren or Mr. Jackson, DSN 221-9080 or commercial (703) 325-9080.

## Special Skill Identifiers

Any Additional Skill Identifiers or Skill Qualification Identifiers (master gunner, drill sergeant, or detailed recruiter) appears to improve selection rates for promotion to sergeant first class. Though not a necessity for promotion through the NCO ranks, such skills have shown selection boards self improvement and the total soldier concept. NCOs should not form the misconception that being qualified with an identifier will get them promoted, but it improves the chances and builds upon professional development. To ensure the Armor NCO presents the total soldier concept, they need to

strive to gain leadership time and successful duties in special management assignments. Below are some guidelines for the total soldier concept:

- 24 months platoon sergeant time in a TOE assignment
- 24 months tank commander or section leader time
- Master gunner assignments at company and battalion level
- Successful drill sergeant or detailed recruiter duties

For more information, contact SFC Nichols or Mrs. Nail, DSN 221-9080 or commercial (703) 325-9080.

### The SMA Graduate

The professional development of an NCO continues beyond platoon sergeant and first sergeant time. In particular, master sergeant (non-promotables) attending the U.S. Army Sergeant Major Academy (USASMA) are in a rather unique position. They are afforded the opportunity to directly influence their follow-on assignment upon SMA graduation. Preference sheets sent to Enlisted Armor Branch are closely scrutinized and acted upon to the graduate's request. However, certain Army needs prevent a 100% success rate in this program. A professional development rule of thumb applies for this selected and successful group of potential future CSMs. If the graduate completed a TDA assignment prior to SMA, a TOE assignment is appropriate after SMA. Likewise, a TOE assignment prior to SMA should be followed by a TDA assignment. The Enlisted Armor Branch works toward the professional development of a soldier throughout his career. An SMA graduate is competitive for future assignment as a command sergeant major and the follow-on assignment is critical in achieving this goal.

### 19E/K Transition

As everyone is aware, MOS 19E will phase out in FY 92. MACOM and unit commanders should ensure soldiers not yet transitioned to 19K be sent to the M1 Tank Commander Certification Course (M1TC<sup>3</sup>). This is an MOS-producing course for MOS 19E, sergeant and above, to MOS 19K. It is imperative for 19E soldiers assigned out of the current force modernization units to attend this course. Units may request attendance through the installation schools manager or MACOM.

For more information contact SFC Nichols or Mrs. Nail at DSN 221-9080 or commercial (703) 325-9080.

### RA Officers

Remember, if you are an RA officer or RA-designee, your ORB will not reflect RA until you have taken the RA oath of office and sent us your DA 71. If you have sent the DA 71 through your channels but still are listed as a USAR officer, send a copy directly to Armor Branch.

### Special Management Command Assignments

As expected, competitive senior NCOs are concerned about what effect a TDA assignment will have on their career after SMA graduation. Enlisted Armor Branch is chartered to provide top quality senior NCOs to such TDA assignments as readiness group, overseas military advisor group, and TRADOC assignments.

The Total Soldier Concept supports TDA assignments in between TOE assignments. Selection boards recognize diversity of assignments that highlight both leadership ability and technical competence. Special management command assignments require qualities and experiences as a first sergeant, TOE master gunner, and a proper balance of TOE/TDA assignments.

For more information, contact MSG Galoway or Mrs. Miller at DSN 221-9080 or commercial (703) 325-9080.

### FY 91 AOAC School Dates

Listed below are the upcoming AOAC dates. Lieutenants from Europe will attend after DEROS or on 1st PERSCOM guidance, and all other lieutenants will attend between the 42-48 month time-on-station. We can work with your commander to determine your AOAC date depending on unit strength, training requirements, and your desires.

91-3	14 Apr 91 - 5 Sep 91
91-4	7 Jul 91 - 27 Nov 91
92-1	20 Oct 91 - 27 Mar 92
92-2	5 Jan 92 - 21 May 92

We also send officers to the Infantry Officer Advanced Course (IOAC). If you would like a chance at selection for IOAC, just drop us a line. IOAC dates are roughly the same, but IOAC has an additional class in August.

Officers whose orders to OAC were revoked due to DESERT STORM, do not despair! As soon as your division or regiment releases you, we will program you for the same type of OAC originally scheduled.

### Majors Board

The FY 91 majors board is still scheduled for 2d or 3d quarter 1991. The board message will be published 90 days before the new convene date. We have no information on whether or not the zones of consideration will change; however, we expect YG 81 (primary zone), YG 82 (below the zone), and YG 80 (above the zone) to remain the target year groups.

### Major's Desk

Two key boards are coming up in the near future. The Command and General Staff College selection board and the lieutenant colonel promotion board are normally conducted in the 3d quarter of the fiscal year. As of this date, board notification letters have not been published.

### LTC's Desk

The colonel's board should convene sometime in the 3d quarter, FY 91. Now is the time to begin reviewing Officer Record Briefs (ORBs) and photographs. Close out date for complete-the-record OERs will be established by the HQDA message which announces the board.

Armor Branch has received several calls about retirements, the Selective Early Retirement Boards (SERB), and the Reduction in Force Board (RIF). Presently, no SERB or RIF board is scheduled for FY 91. No definitive policy has been established for retirement date change after the end of OPERATION DESERT STORM.

### Wanted: STORM Reports

ARMOR is interested in publishing interesting photos and stories about Operation DESERT STORM in future issues.

Share tips and techniques; tell other readers what worked, and what didn't. Let's learn from your experiences. We're also interested in unusual photos. Send submissions to U.S. Army Armor Center, ATTN: ATSB-AM (MAJ Cooney), Fort Knox, Ky., 40121

**The Great Crusade** by H.P. Willmott, The Free Press, New York, 1989, 484 pages. \$24.95

There have been a number of new single-volume histories of World War II. John Keegan's The Second World War and John Ellis' Brute Force, as well as H.P. Willmott's The Great Crusade, are the best of the new studies. All these new works share the common intent of reevaluating this last great war now that a half century provides some historical distance. It is, of course, difficult to cram all of the war into a single volume, so invariably, these authors concentrate on analysis rather than narrative. Interestingly, most of these new studies confirm the trend that is highly critical of the German "myth" of military excellence while emphasizing the Soviet contribution and operational expertise.

Willmott, particularly, goes to great lengths to demonstrate German operational and strategic ineptitude. The author's view is simply that, although the Wehrmacht may have been good at fighting, the Germans were very poor at making war. The Japanese also suffer from the author's critical analysis, and so we learn that, at the outset, the Japanese decision for war was as senseless as it was hopeless.

The Great Crusade is full of many provocative insights. The narrative summaries of operations is superb and combined with sharp analysis. The major flaw in this study, however, is the author's admitted bias on how war is made. Willmott believes modern war is waged between "systems and societies." Economic and military strength harnessed by efficient bureaucracies win wars. The author makes little attempt to examine the decision-makers. Once the balance of economic and military power of the world is arrayed against the Axis as the United States and the Soviet Union enter the war, their defeat is inevitable.

Unfortunately, Willmott has forgotten that war is not only a political and economic activity; it is also a human drama. But I fully recommend The Great Crusade. It is the best example of the new history of the war. Willmott's insights will keep historians and soldiers arguing for years to come.

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**Hanging Sam, A Military Biography of General Samuel T. Williams**, by Colonel Harold J. "Jack" Meyer, University of North Texas Press, 1990. \$16.95.

If you are a student of methods of leadership, you should read this book. If you want to learn of the unique career of a most unusual military man, you should read this book. If you want to know how hard work, steel strong determination, and plain guts brought a "busted" general officer back to a rank two grades higher one war later, you should read this book.

The author has accomplished a significant feat in presenting this military biography — and emphasize military biography — of General Williams in a straightforward and emotionally clear manner. There was emotion being in or out, or even near, Hanging Sam's command. You either admired this general and improved yourself from his methods of motivation, or you feared him and hated being around him due to your own inadequacies.

One point the author does not include in the book is what happened to those fired from or thrown out of his command. Did they become career failures, as they were with him, or did they go on to a brighter life in a gentler environment? It could be expected that they numbered fewer in actual fact than the reputation of ruthlessness based on the stories.

Truth to tell, General Williams was a trainer without peer of individuals and units. The reviewer did not know him and his Blue Spaders, but did know him and his great 25th Division in Korea (from a distance) and of his repeated trips to the II ROK Corps. It is unfortunate that the book does not give more details of his most significant accomplishments in his efforts in the ROK Corps.

Some of the most vital details in the book are included in the battle experiences of the 90th Division in World War II, when Brigadier General Williams was the assistant division commander. His relief and very questionable and patently undeserved "bust" back to colonel came as a result of those experiences. The story of those experiences reveals anew some of the classical problems faced by the U.S. Army in World War II and now. Problems such as a division commander who trained the division relieved and promoted to a higher echelon, just as the division

was going overseas, followed by two division commanders in sequence who did not know the division and its senior officers. How old can a man be and fight a unit with all the energy and stamina command requires. How can you actually judge the fighting ability of a unit and its commanders before the fighting begins? Hanging Sam learned from this experience, and ever after this, his unit was prepared before he got there — or shortly afterward. His stringent leadership methods, so well laid out in this book, were effective — for him. But be warned, they will work only for a man of his character.

LEO D. JOHNS  
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**The Battle of the Ruhr Pocket — April 1945** by Leo Kessler, Scarborough House, Chelsea, Mich., 1990. 244 pages. \$19.95.

Leo Kessler is well known as the author of startlingly dramatic fictional accounts of life in the German Army on the Russian Front in the Second World War. His titles have adorned many an airport or station bookshelf. This is a more serious book. The style could be called popular history and here is a very readable account of the Battle of the Ruhr Pocket. The book reopens the controversy, never fully settled by military historians, as to the wisdom of Eisenhower's decision to attack the Germans encircled in the Ruhr Pocket rather than starve them into submission. Kessler evidently agrees that the latter decision would have been the wiser course and produces convincing evidence to support his case. The appalling casualty figures from a possibly needless campaign only back his argument further.

Mr. Kessler has undoubtedly researched his material well. He knows the country, and as one who has served for many years in the area he describes, I can vouch for his accuracy — not surprising in an author who was German correspondent for six years for the London Times Educational Supplement and himself fought in the campaign he describes.

Serious military historians may quibble at the style, but I recommend the book as an easy and enjoyable read.

J.M.W. MOODY  
Lt. Col.  
British Liaison Officer



PIN: 045926-000  
U.S. Government Printing Office 1991  
748-050/91-2