

ARMOR

The Magazine of Mobile Warfare

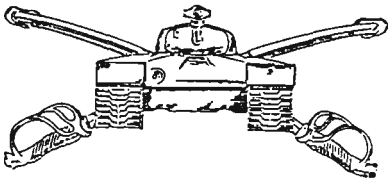
Objective: NTC

Some Ideas For Leaders on How To Get There From Here

July-August 1986



SCHWERPUNKT



Training to fight and leading to win should be our guiding principles as professional soldiers. Everything that we do each day should, in some way, connect directly to those two essential tasks. The features in this issue of

ARMOR deal directly with those tasks.

The National Training Center at Ft. Irwin, California, provides the finest training experience available to any heavy force in our Army. Our cover story in this issue describes how to prepare for such an experience. "Objective NTC," by Lieutenant Colonel Alan R. Cocks, tells how one task force organized and trained for its rotation to the NTC. I recommend it to you for both its ideas on preparation and the lessons it reveals.

One of the significant lessons that many units learn at the NTC is that "killing" is difficult, but ensuring that you "kill" the OPFOR, and not your own people, is even more difficult in the mobile and confusing battlefield. Captain Keith Blakeman, in "To Mark Or To Commit Fratricide?" describes what happens when a task force attacks at night and one company team uses visual recognition markers and the other teams do not.

Fighters can't fight unless they have food, fuel, and ammunition. In "Beans and Bullets" by Lieutenant Colonel A. J. Bacevich and Major N. Winn Noyes, we learn how one squadron of the 3d ACR provides logistics training through logistics exercises for its key leaders.

In Lawrence Wells' novel, *Rommel & The Rebel*, Wells writes of a group of German officers who come to the United States in the 1930s to tour Civil War battlefields. One of those officers is Erwin Rommel. Key to the plot of the novel is Rommel's appreciation of Nathan Bedford Forrest's role as a Confederate cavalry commander and, specifically, "The Battle of Brice's Cross Roads." The historical article for this issue of *ARMOR* is one in which Captain James Faust analyzes that battle and shows how the self-educated Forrest put into

practice the Principles of War during this historically neglected, but illuminating battle.

Editors of branch journals often view manuscripts on leadership as "soft" stories or those that readers will not find as informative or enjoyable as the features on tactics, training, the threat, or weapons. That view is unfortunate, for leadership is the "glue" that brings all those other elements together and produces a unit that can win. "A Tale of Two Guidons: Leading the Company" by Captain Dale Wilson is not a "soft" story. Read it; then, read it again. For those of us who have commanded companies, it brings back memories. For those of you who will command companies, it will teach you that to be a good commander, you must first be an excellent leader.

When we published Lieutenant General Sam Myers' first "Random Recollections," I received many positive comments from readers. We asked Lieutenant General Myers for some more "recollections," and he graciously provided them for this issue. When you read this feature, you will see that for the new lieutenant, the Army really hasn't changed all that much.

Just as we were putting together this issue, we received Captain Gil Villahermosa's article on the "T-80." I'm certain that the feature will spark some discussion on this newest of the threat's tanks.

Because of the vast number of books that we receive for review, we attempt to keep the size of our reviews down to three or four paragraphs; however, when we received Dr. John E. Tashjean's analysis of P. H. Vigor's book, *Soviet Blitzkrieg Theory*, we saw in it a superb and well-documented analysis of a work that simply has not received the attention that it deserves. I commend to you Dr. Tashjean's intelligent, balanced, and informative review.

Train to fight and lead to win. This issue of *ARMOR: The Magazine of Mobile Warfare* will help you do that. — GPR



ARMOR

The Magazine of Mobile Warfare

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Crossfire: Review of Christie Biography Draws Comments from Author, Readers

(Colonel Leo D. Johns' review of *Steel Steeds Christie* appeared in the January-February issue of *ARMOR*. The review elicited a reply from J. Edward Christie, author of the biography of his father, armor pioneer J. Walter Christie. Colonel Johns was given an opportunity to reply and several other readers also offered comments on the book.)

Dear Sir,

The review of *Steel Steeds Christie*, in the January-February issue of *ARMOR*, is in some cases incorrect and misinterpreted and severely needs correction. Where the summary is feebly favorable, it leaves much to be set straight...

There has never been a book published that dealt with J. Walter Christie's life and inventions in detail until my book, *Steel Steeds Christie*, was published. It was not written exclusively for "armor buffs" and "military historians," but also for "the multitude of others (who) have been waiting many years for a definitive work on the life and armored vehicle developments of J. Walter Christie." Contrary to what Colonel Johns states in the opening paragraphs of his review, it is just that! (The book covers) his turret-building days for the U.S. Navy, his front-wheel-drive automotive era, commercial truck days, Christie fire engine conversion tractors, the Marines' amphibian vehicles, and U.S. Ordnance gun carriages — all of them invented by J. Walter Christie — and what about the modern fastest Christie high-speed tanks on record? This encompasses more than just armor buffs and historians, who have not been overlooked. I could have written a technical textbook; I have ample data if I wanted to.

My father's detailed spoken events, recited to me, were sufficient for my records, plus the records in the family Bible...I didn't need 250 written references by others, many of them inaccurate, to write my *Steel Steeds Christie*. In addition to my participating in many historical events, I worked on many of the vehicle projects from 1928 to 1944 with my father.

...The caption mistakes are mostly miscaptioned by my publisher and his staff. The sketches on page 18 that you mention are photos and the errors underneath the photos were incorrectly placed there by the publisher's staff, even though my original manuscript contained the correct captions.

Enclosed is a picture of the truck used in the 1916 Pershing Mexican campaign; it was a 4x4. Also on pages 28 and 29, the same photograph is shown with different captions...the errors here again were my

publisher's: they had the correct pictures before them — as they appear in my manuscript — and it was called to their attention, but was not corrected. Additionally, the 4x4 truck of the Pershing Mexican campaign was adapted from the Christie fire engine tractor and was only a forerunner of the Christie Model 1917 anti-aircraft gun mount, which did not exist at that time.

My captions are correct and I can identify almost all of the people standing (in the photos) or driving the Christie. In the past, many authors have used incorrect captions and these have been copied incorrectly by others. Who would know better than I what the captions should be?

Colonel Johns refers to the "supposed initial firing of the Christie Self-Propelled Mount for the 155-mm Gun" as a tale. My eyewitness account of the firing of the gun is a fact, not a tale. My father mentioned to me that it would be the biggest firecracker I would ever set off, so it could possibly have been in July, in conjunction with firecracker-firing time.

Many tests of Christie's gun carriages, armored vehicles, and tanks were conducted at Sandy Hook, Rock Island Arsenal, Camp Meade, Fort Halibut, Aberdeen, Fort Knox, Fort Benning, etc., many, many times. My father tested his own vehicles on his own testing grounds before they were presented for the so-called "official tests," and many dates were recorded wrong...

J. EDWARD CHRISTIE
Bonifay, FL

The reviewer replies:

Dear Sir,

With respect to J. Edward Christie's letter, about all I have to say is as follows: To be rated definitive on a subject, a book should at least be authoritative, precisely accurate, exhaustive of the subject, and leave no room for doubt. For reasons stated in the review, I do not consider that Mr. Christie's *Steel Steeds Christie* meets these criteria.

This in no way casts adverse reflections on the inventive genius of either the late J. Walter Christie or of his son, J. Edward Christie. The work of J. Walter Christie has been covered piecemeal in numerous publications over the years, including many official documents in the National Archives. Use of these type publications and documents, official and unofficial, are key to the production of an authoritative, accurate, and exhaustive book on almost any subject.

As an example, take a look at the photo

in the upper left hand corner of page 160 of Fred W. Crismon's *U.S. Military Wheeled Vehicles*, and see if that is the vehicle in the sketch printed in the upper third of page 18 of *Steel Steeds Christie*.

Nothing in Mr. Christie's letter or its enclosures would lead me to modify any part of the book review.

LEO D. JOHNS
Colonel, USA (Ret.)
Newport News, VA

The following unsolicited letters on Christie's book were also received.)

Dear Sir,

I have just seen a copy of the January-February issue of *ARMOR Magazine* and noticed the review of J. Edward Christie's book, *Steel Steeds Christie*.

You have no idea just how relieved I am that someone else reviewed this little volume. About three years ago, the editors of *Automotive Quarterly* asked if I would review a manuscript which had been sent to them, unsolicited, for comments. They found that the manuscript for a book entitled *Steel Steeds Christie*, told very little of the era involving Christie's famous racing cars (which *AQ* had already covered magnificently several years earlier), but seemed to dwell on the military ventures of J. Walter Christie. And they warned that the author, J. Edward Christie, son of J. Walter, might just be a tad touchy to deal with.

Having been forewarned, I nonetheless accepted the offer, as I was curious to know what the younger Mr. Christie would say, and devoutly hoped he would have access to good photographs. Many Christie vehicles are only known by dismal, heavily retouched photographs — indeed, some are so heavily retouched one has to ask whether the vehicles actually existed.

In short, the manuscript was depressing. It was a child-like rendition of J. Edward's remembrances, accompanied by photographs and drawings even worse than those historically available! And it was unbelievably inaccurate and naive, indicating J. Edward had not even done minimal research on the documented life and work of his father...

I prepared a long, carefully-worded critique so as not to overly offend, but there was no way there would not be some offense in what I had to say. I offered to provide good photographs from my collection, and mailed it off.

In return, I received the most vituperative letter I have ever read, essentially

saying that he should have known an Ordnance officer (in 1983, yet!) would be strongly prejudiced against the great accomplishments of J. Walter (in 1919-1940!) and that he should have realized I would reflect the "official Ordnance dogma".

Obviously, he ignored most of my suggestions concerning both the manuscript and the illustrations. The book appeared in print almost exactly as he had written the original manuscript. He did delete one photo which I pointed out was quite well-known, from an Aberdeen Proving Ground negative, and that his doctoring of it by scissors or white-out to claim it was a completely different vehicle would definitely be noticed.

...Although vanity presses will print anything you pay them to, it seems a real shame that a book as flawed as *Steel Steeds Christie* is even on the market and will be accepted by unknowing readers as gospel. And the worst part is that the book is about someone who was quite famous in his day, and about whom we should be hearing facts, not emotional fiction.

Please pass my sentiments of appreciation on to Colonel Johns for his astute review...

FRED W. CRISMON
7th Army CATC
FRG

(Major Crismon, a retired Ordnance officer, is the author of *U.S. Military Wheeled Vehicles* and a frequent reviewer for *ARMOR*.)

Dear Sir,

I read with interest the book review of *Steel Steeds Christie* in the January-February issue by Colonel Leo D. Johns. He is perfectly correct in stating that it would require another book to rectify all the errors in this one. Where I disagree with Colonel Johns is when he states that the personal remembrances are filled out by research into the times and events in which the son did not participate. The whole book is afflicted by a complete lack of any research. Plagiarism is very evident, along with a strong streak of fantasy, what must be an extremely poor memory and vivid imagination. In the main, J. Edward Christie is ignorant regarding the details of the majority of his father's designs.

Attached is a copy of a review of the same book I had published in *AFV News*, Vol. 21, No. 1). A copy of this had previously been supplied to J. Edward Christie in September to let him know there are people who know him for what he is. Since this date, I have advised him of 34 main errors and falsifications just dealing with the military vehicles. This doesn't take note of the multitude of omissions.

D. P. DYER
Constantine, near Falmouth
Cornwall, England

Leader-Led Ratios Questioned

Dear Sir,

General (Ret.) Donn A. Starry, in "Leadership and Technology" (January-February 1986 *ARMOR*), has delivered yet another of his pertinent, colorful presentations. His observations on the need for operational concepts to drive technological developments is right on target.

What I question is the current drive (which General Starry apparently endorses wholeheartedly) to reduce the size of our units and call it progress. How is reduction from a five-tank platoon to one of three tanks, or from an 11-man rifle squad to one of nine men, automatically a good thing? Are the officers and NCOs of the U.S. Army incapable of leading our current-structure organizations? If so, let's slow down our madcap promotion system and overhaul our leadership development programs rather than creating "a whole lot of smaller units." If our captains are incapable of commanding H-series TOE companies, why can't we stop cranking out 3½-year captains instead of transforming companies into reinforced platoons?

Somehow, the Army has bought the idea that "we need more leaders for those who are led." Who sold us this concept, and what's so great about it? Based on three years in Army Aviation, which surely has the highest leader-to-led ratio of any segment of the Army, I can personally attest that having a lot of chiefs running around is no panacea. Beyond a certain point, all you get is diluted responsibility and authority; a situation where everybody (and therefore nobody) is "in charge."

My misgivings about this "leader-to-led" cure-all have steadily increased since my initial exposure to Division 86 concepts back in 1981. I feel that we are barking up the wrong tree in our attempts to solve the problems of command and control, while at the same time getting more bang for our buck. In his studies on the subject of span of control, the eminent British military philosopher, Sir Basil Liddell-Hart, concluded that the ideal arrangement was for five to seven subordinate elements to exist for each level of command. We now seem to be conceding that our junior leaders can only handle about three. We already have what has been widely described as a "bloated" officer corps; increasing the leader-to-led ratio will only make it more so. It has been stated by some senior officers and NCOs that our Army of Excellence reorganization is just a way to build up a large cadre of "leaders" for a future expansion of the force. Surely this is not so, for this would mean enlarging existing units in wartime, which would negate all our efforts to increase the stability and cohesion of our current combat units.

If increasing the leader-to-led ratio is such a great concept, where are the historical examples of armies with high percentages of officers and NCOs which have

fought effectively? Certainly not the German Army of WWII, one of the most tactically effective forces ever seen. Certainly not the U.S. Army of the same period, an army which ultimately defeated every enemy it faced.

If we have genuinely decided that our junior leaders can't cope with the responsibilities of leading H-series units, let's admit it and do something to improve their professional competence. Let's not camouflage the issue with a lot of "happy talk" about increasing our leader-to-led ratio.

RANDALL N. BRIGGS
CPT, Aviation
Ft. Bragg, NC

Wants More on Allies

Dear Sir,

With a great deal of interest, I read the article "The Armoured Regiment of the RAC," by Lieutenant Colonel Oliver E. Holder and Major Frederick G. Lee, in the September-October 1985 issue.

As a National Guard officer, I generally have little or no contact with the armed forces of our allies. I would like to commend the authors on a very informative article on the organization, equipment, and training of a British Armoured Regiment. I would also like to recommend that *ARMOR Magazine* run a series of similar articles on our other allies' armor and infantry forces. These articles would greatly increase the flow of knowledge about our allies to those of us in the reserve components.

JOHN A. CRYER
1LT, Armor
Sacramento, CA

Gunnery Record Noted

Dear Sir,

I read with interest your article in *Regimental Review* on the fine gunnery performances of the 1st and 3d Battalions, 33d Armor. While I applaud their accomplishments, I must set the record straight.

The 3d Battalion, 35th Armor, 3d Brigade, 1st Armored Division currently owns the 1985 gunnery record at which all other armored units are shooting. The Armadillos qualified 26 tanks during qualification on TT VIII, using the old Fort Knox gunnery standards and 38 of 58 using the updated standards employed by the 1st and 3d of the 33d.

These totals are even more noteworthy when your readers realize that the 3d Battalion, 35th Armor qualified these numbers using the M60A3 Dinosaurs and without the use of reruns.

Now that's good shooting!

ROBERT W. WHITTON
LTC, Armor
FRG

Correcting the Record

Dear Sir,

This concerns the back cover of the January-February 1986 issue of *ARMOR* which recently was sent to me by a former colleague.

I was delighted to see the Lineage and Honors of the 77th Armor published in such a conspicuous place. But as one who served in the parent unit from 1 June 1941 through 23 September 1945, I was distressed to note that the Campaign Participation Credit for World War II was that of the 70th Tank Battalion rather than the 753d.

The Campaign Participation Credit of the 753d Tank Battalion in WWII includes: Sicily (with arrowhead), Naples-Foggia, Rome-Arno, Southern France (with arrowhead), Rhineland, Ardennes-Alsace, and Central Europe.

I believe there are eight WWII campaign streamers on the regimental colors but I have been unable to verify any credits other than those listed above.

I am sure you will wish to publish an appropriate correction in a future issue if you have not already done so as a result of other correspondence.

CHARLES L. MCNEILL
COL, USA (Ret.)
Foster City, CA

Editor's Response

Dear Sir,

You are correct in your listing of the 77th Armor's campaign participation credits.

Additionally, the 77th Armor is credited with the following Korean War campaign credits: UN defensive; UN offensive; CCF intervention; First UN counteroffensive; CCF spring offensive and the UN summer-fall counteroffensive. — GPR

Improving Equipment Acquisition

Dear Sir,

I agree with many of the letters about the design of American military equipment.

Having served in the military and now working in the building of military equipment, I can see the biggest mistake is the fact that most people in the design process have never been in the military and in most cases are only working in the design field because of the high pay. We need to be like West Germany and have the military work on the design and not worry about the college degree.

GLENN BROWN
Moorpark, CA



Early IFV Concept?

This "artist's conception" of the world's then-newest weapon, the tank, was cleared by the British press bureau censor on October 10, 1916, less than a month after the tank's first employment in battle. Note fanciful "personnel claw" mounted on front of hull. Armor author Don R. Kennedy discovered the postcard on a recent trip to England. "Are the pincers to grab the enemy CO for interrogation?" he wonders.

Ballistics Report

Note: Donald Kennedy, a frequent and knowledgeable contributor to ARMOR Magazine, is an expert on armor, in particular the ballistics field and the effects of armor penetration and spalling. His article, "Improving Combat Crew Survivability," which appeared in the July-August 1983 issue of ARMOR Magazine, has been distributed in at least 600 reprints to date.

Mr. Kennedy attended the the ADPA/RARDE-sponsored International Ballistics Symposium at the Royal Military College of Science, Shrivenham, England. Following are excerpts from his letter on that visit and some pertinent comments on the much-discussed vulnerability testing of the Bradley Fighting Vehicle.)

Dear Sir,

...As you may be aware, ABC's "20/20" is planning to do a segment (read "job") on the issue of realistic testing (read "Bradley") and I have been doing my best to avoid them because I oppose the unfairly biased way they present their material. I am among those who take the position:

Bradley is a fine machine, it is loved by the user, the Army needs it, and yes, it has some problems that must be addressed, but let's resolve the problems, fix the Bradley as may be required by retrofit, and let's get on with it!

The Bradley's vulnerability problems are the same as those encountered by most new combat vehicles whether on land, sea, and in the air. Thanks to the increasing attention given to crew and

vehicle combat survivability, the DOD agencies and their contractors are addressing the issues in what I see to be a proper manner...The Army is planning the retrofit of thousands of M113 APCs to the "A3" configuration, which includes external fuel cells and spall suppression liners...The Army and FMC Bradley vehicle developers are working on block modifications to improve both function and combat survivability of the M2 and M3 versions of the vehicle.

However, the detractors who appear to be determined to kill the system continue to make out everything the Army tries to do — to discover and remedy any problems — as a lie. This is most unfortunate because the Bradley appears to have the potential of being a superb fighting machine, as I have personally observed in both mobility and live-firing demonstrations at both Fort Knox and Aberdeen PG...

...The subject of crew and vehicle combat survivability was addressed by several speakers (at the ADPA-RARDE symposium). Two of a Swedish speaker's papers were concerned with blast incapacitation inside armored vehicles attacked by HEAT, and both U.S. and Australian papers were concerned with the vulnerability of explosives and propellants to shaped-charge attack. The writer was approached by delegates from England, Switzerland, and Sweden on questions concerning behind-armor effects, as I discussed them in *ARMOR Magazine*.

Other *ARMOR* authors were present, including Joseph Backofen and Richard Ogorkiewicz, who advised Backofen and I to visit the Tank Museum at Bowington Camp...We followed his advice...we recommend it to all Armor branch personnel

as a necessary part of their education!

Among the 150 or more tanks and related vehicles in the museum, Kennedy said he and Backofen examined a "Wet-Sherman", i.e., one with water-filled ammunition containers.)

We were surprised to note that two of the tanks...have complete inner linings of what we assume to be spall/ricochet-suppression materials. One such tank was the Vickers-Armstrong A1E1 "Independent" land battleship of 1926, a vehicle with four machine guns and one 3-pounder turret, a speed of 20 mph, a weight of 31 tons and a crew of 8! Another was a U.S.-built M3 Grant, made for England in 1942. Linings of a soft material were noted in both vehicles, but the materials were not identified. It is planned to pursue an inquiry, although the reasons for the installations may be beyond the "corporate memory" of the Vickers or U.S. builders.

I trust that the above information will be of interest to you, and perhaps of some interest to your readers.

DONALD R. KENNEDY
Los Altos, CA

More on Soviet Armor

Dear Sir,

After reading Captain Warford's letter in the March-April 1986 issue of *ARMOR*, I would like to share a few thoughts and clarify one point on Soviet armor design.

One of the biggest problems in dealing with the armor-antiarmor debate is the apparent assumption on the part of many involved that "new armor" (Chobham) equals "heavier" armor. Obviously, a quick review of the gross weight of the vehicles involved, versus relative volume, promptly reveals the fallacy of this contention. At most, one can argue that the weight of one vehicle a few tons greater than its predecessor suggests somewhat better protection. To further argue *better* or *heavier* armor protection requires an investigation into the placement of the armor.

In this case, the historical trend in tank design has been the migration of available armor (by weight or thickness, as you will) to the forward face (30 degrees) of the vehicle. This results in a relatively more difficult penetration problem on the glacis/mantlet but *lesser* penetration problem to top, sides, and rear. Tests of the USAF 30-mm GAU-8 cannon on the A-10 aircraft substantially documented this trend when fired at T-54, T-55 and T-62 designs as well as older American designs. An argument can be made that specific defense against HEAT rounds has been increased on vehicles such as the M1, the Leopard II, and Challenger, but again the weight growth has not measurably resulted in a more survivable "heavi-

er" tank nearly as much as technology has ostensibly provided an edge over the mechanics of the HEAT round. (As an important aside, this optimization may well work against NATO, as the Soviets contrive to optimize the high velocity long rod penetrator (HVAPFSDS) due to the relative ease in target acquisition and hitting compared to the slower flying HEAT round, and the potential for the former round to severely degrade the protective value of the Chobham style armor after the first hit, leaving a considerably more vulnerable vehicle for the almost-to-be-certain second hit.)

Another question which comes to mind is what the Captain means by "A tank destroyer that could engage NATO anti-tank positions and vehicles at extreme ranges by accurate *indirect* fire" (emphasis added)? Is this a reference to his understanding that a Soviet 152-mm gun/howitzer can now hit and kill tanks by individual indirect fire (presumably at ranges of 2,000 meters or more) with the same one- or two-round accuracy of a dedicated, antiarmor-specific tank cannon? Or is it an indication of the Captain's belief that the Soviets have now adopted the expensive and highly questionable U.S. Army Artillery doctrine of buying laser-guided "smart" rounds like COPPER HEAD for their artillery batteries? In either case, I would suggest he is far off the mark. Indirect fire is the least efficient means to destroy an armored target, particularly a moving one (including displacement to prepared positions), as the original development requirement for the COPPERHEAD clearly reveals. Further, the COPPERHEAD — even in U.S. artillery employment — leaves great doubt about the impact on battery fire mission availability and runs nearly entirely contrary to Soviet artillery doctrine of suppressive fire as opposed to destructive fire in mobile operations, the kind which we might readily expect in a future confrontation.

Certainly, one objection to the Captain's argument about heavy gun developments is the suggestion that range — for antiarmor action in the 2,000-meter category — is currently a primary concern of the Soviet Army. This seems off on a number of counts. First, the terrain and urbanization of Western Europe — the area of obvious greatest concern and equipment design effort on the part of both the Soviets and NATO — by Soviet analysis precludes action at ranges of 2,000-3,000 meters in all but 15 percent of the cases. Rather, the average (55 percent) is 500 meters or less. Moreover, the Soviets have long considered the lavish use of smoke and obscurants to be a tactical requirement of the first order, further closing the effective range at which an opposing vehicle or position may be observed or acquired. Studies by the U.S. Army Infantry School have suggested that a Battalion Task Force may in fact face many actions at ranges of 400 meters or less due to the combination of the above factors and effective use of terrain masking by Soviet combat elements.

Second, the thrust of Soviet tank design has traditionally been to *reduce* the training burden on conscript soldiers by developing simpler, more reliable (by Soviet system measurements) equipment, especially tanks. This is perhaps best reflected in the adoption of the high-velocity smooth-bore cannon on the T-62/64/72/80, which simplifies aiming by producing nearly flat trajectory fire at ranges up to 1,000 meters (60 percent of antiarmor engagements). To return to a rifled gun/howitzer, particularly a large gun of 152-mm caliber, with a relatively slow-velocity round, combined with a suggestion that the gun be used in an indirect fire role, suggests a move directly opposed to Soviet armor doctrine and development over the past 45 years.

Third, using such a large gun almost certainly requires a separate round and charge system which, though potentially fed by autoloader, would suggest a low rate of fire, again contrary to Soviet design-conscious decisions. As I am sure the Captain is aware, this problem has already been encountered in the development of the IT-130, possibly resulting in the rejection of the 130-mm gun for tank development on the basis of rounds too heavy to handle in the projected cramped turret interior.

Finally, in response to our discussion on the Soviet armored self-propelled gun (ISU-122, ISU-152, IT-130, etc.) and Western turretless combat vehicles, please permit me to clarify any apparent misperception of design intent and capability of these vehicles. First, the word tank in armor circles has more often than not been attributed to tracked, self-propelled armored fighting vehicles specifically *including* a turret (360 degree traverse). In 1944, the British Army went so far as to define a tank as such a vehicle with an enclosed turret while an identical vehicle with open turret would henceforth be termed a "tank destroyer", thus ending a long-running feud within their armor and artillery branches. By definition, the British Challenger (WWII), German Sturmgeschutz III (self-propelled casemate gun), Soviet SU-85 and US M-10, M-36 and M-18 (turreted, open-top, self-propelled guns) were all *non-tanks*. The rise of the Swedish S-Tank and West German Kanonenjagdpanzer also specifically fall within the realm of self-propelled, armored antitank vehicles and — regardless of the name assigned — fit the functions of such vehicles as the Sturmgeschutz and the SU-100. Armed with both HE(HEAT) and APDS rounds, these later NATO vehicles are very suitable for both direct-fire/indirect-fire artillery support and direct-fire antiarmor action. That the caliber of cannons is smaller is true, but accuracy of fire and the actual armor to be penetrated (i.e. Soviet armor, not NATO armor) very strongly suggests that these vehicles are very much a match for their Soviet opposite.

JOSEPH R. BURNIECE
Washington, D.C.

COMMANDER'S HATCH

"We Will Be Listening to You..."

I consider it an honor and a privilege to be assigned as the commander of the U.S. Army Armor Center and Fort Knox. I look forward to serving you and providing you with the view from the "Commander's Hatch" at the Home of Armor and Cavalry.

The Armor Center has long been in the forefront in the development of tactical doctrine and innovative training. This has been accomplished not only by the dedicated professionals assigned here, but is also due to the continuous dialogue between the Armor Center and the field. Your input and feedback sustains us and ensures that we develop the right tactical doctrine and training techniques. This exchange has been healthy in the past, and I look forward to its continuance. We will be listening to you.

As many of you may know, I assumed command of the Armor Center after having served with soldiers for eight years at Fort Bliss, Texas, and in Europe, followed by ten months as Director of Training, ODCSOPS, DA. I have been impressed by our armor soldiers, noncommissioned officers, and officers. They are the best with whom I have had the pleasure to serve. They deserve to be provided with only the best training, leadership, and equipment that the Ar-

mor Center and the operational force can provide.

The greatest contribution we at the Armor Center can make to the field is to provide it with competent, dedicated junior leaders and soldiers. Our soldiers are our strength; they must be nurtured. In order to ensure that our soldiers not only win, but also survive on the battlefields of the future, our doctrine must be correct, and we must take full advantage of what technology offers. We must ensure that the technology fits the soldier, that the human element is taken into account before that technology is provided to him.

We must also continue to think in terms of combined arms. All our exercises should be developed around combined arms operations. At the Armor Center, this will receive the highest priority.

More about these and other topics will be covered in future issues of ARMOR Magazine. We welcome your comments and ideas.

I, like my predecessors, am fully dedicated to providing the best support possible to our soldiers.

And, finally, on behalf of the entire armor community, I would like to thank Lieutenant General Brown for his devoted service and to wish him the very best in his new assignment.

*MG Thomas H. Tait
Commanding General
U.S. Army Armor Center*



Thomas H. Tait

The Armor Basic NCO Course: Training for Excellence

by CSM John M. Stephens, Command Sergeant Major, USAARMS

A couple of years ago, I wrote about the then-new Basic Noncommissioned Officer Course. I was excited about it: the program of instruction was geared to train, and return to the field, tank commanders and cavalry scout section leaders who had demonstrated a basic competence at Skill Level 3 tasks. I was confident that the program of instruction, including written test evaluations, hands-on evaluations, range firing, and situational training exercises, would produce competent noncommissioned officers.

But after monitoring the progress of the program in the field for the past few years and hearing feedback from the academies and commands where BNCOCs are located, USAARMS found very few academies following the program of instruction (POI), for a number of reasons. Whatever the reasons, we realized that we did not have an exportable, standardized, training program for basic Armor NCOs. So it was back to the drawing board!

The new POI is scheduled to kick off on 1 October. Now in the development stage, it includes the Common Leader Tasks designed by the Sergeants Major Academy and will have a standardized base, giving field commanders more flexibility in setting up their BNCOCs without losing sight of the objectives of the course.

Before the new POI is fielded, each major command and installation that offers BNCOC instruction will be briefed — in fact, they probably will have been briefed by the time this article hits the field. We want to be sure that every school and command involved has the necessary resources to meet the basic standards of the course.

For the most part, the Common Leader Tasks (applicable to all BNCOC) will be integrated throughout the course. It is important for all of us to understand that some leader tasks are already taught in a previous POI. An exam-

ple is the map-reading requirements which are common leaders' tasks. For the 19D Cavalry Scout, those tasks are taught and evaluated in OSUT and should be reinforced in the unit. They will not be taught in 19D BNCOC, although most of the tasks will be part of the STXs.

Maintenance instruction will be limited to Skill Level 3. However, hands-on maintenance will be included in the field portion of the POI, to include a maintenance day between STXs and after the last field problem.

Gunnery will be taught at Skill Level 3. Every tank commander and cavalry scout squad leader will be required to demonstrate hands-on proficiency with every weapon assigned to the vehicle, including the TOW. The tank commander will also be required to demonstrate his capability from the commander's weapon station on either the M60A1, the M60A3, or the M1. Cavalry squad leaders will be required to demonstrate proficiency on either Bradley (as a D3), or on the M113, 901 (or HMMWV with TOW), the 50-cal, and 40-mm. All of the above systems will be part of an end-of-course test called the Tank Commander Certification Test 1 and the Scout Commander Certification Test 1.

Tactics will be taught in the classroom and tested in the field. The test will be a series of situational training exercises designed to determine the commander's ability to maneuver the vehicle and employ its available firepower. The STX will also test the vehicle commander in other areas, such as NBC, mines, land navigation, patrol plans, troop leading procedures, etc.

The tank commander's test will be set in offensive or defensive situations. The scout squad leader test will initially start out in a reconnaissance scenario, concluding with a change in mission to an offensive

or defensive situation requiring him to employ the weapon systems available. The STXs are designed to train and test. Starting in a crawl phase, developing to a walk phase, and then testing at normal operational level, called the run phase, it is a good program and a good test. The STXs are being used in the present Armor BNCOC with great success.

The key to a successful BNCOC is the knowledge possessed by the student prior to entering the course. Now that PLDC is mandatory before attending BNCOC, trained leadership skills will have been taught, but the student must be proficient at Skill Level 1 and 2 in his MOS. Do not expect soldiers who have been away from their MOS to attend BNCOC and be successful before they have had a chance to refresh themselves on the system first. Do not expect those who lack the basic skills and leadership skills to be successful.

There will be some form of diagnostic test given up front to determine the student's knowledge in the skills in which he is about to be trained. The diagnostic test will be helpful to both student and instructor, identifying weaknesses and strong points. But too many weaknesses will only lead to failure.

This should be the final major POI change that we'll need. The entire core POI will be SL 3 or better. All SL 1 and 2 tasks found in the POI are tested tasks as part of the STXs or the certification test.

Commanders should feel confident that the graduates they receive from BNCOC are qualified vehicle commanders and leaders. Those who fail to complete BNCOC are technically deficient in subordinate skill levels or incapable of being an "armor leader". Those who are identified as incompetent armor leaders should be automatically removed from armor and cavalry. The numbers will be small, but that type of program will be a shot in the arm for the proficiency of the force.

RECOGNITION QUIZ

This Recognition Quiz is designed to enable the reader to test his ability to identify armored vehicles, aircraft, and other equipment of armed forces throughout the world. *ARMOR* will only be able to sustain this feature through the help of our readers who can provide us with good photographs

of vehicles and aircraft. Pictures furnished by our readers will be returned and appropriate credit lines will be used to identify the source of pictures used. Descriptive data concerning the vehicle or aircraft appearing in a picture should also be provided.

Answers on Page 47



What Would You Do?

Using Bradley Gunnery Techniques

Situation #1

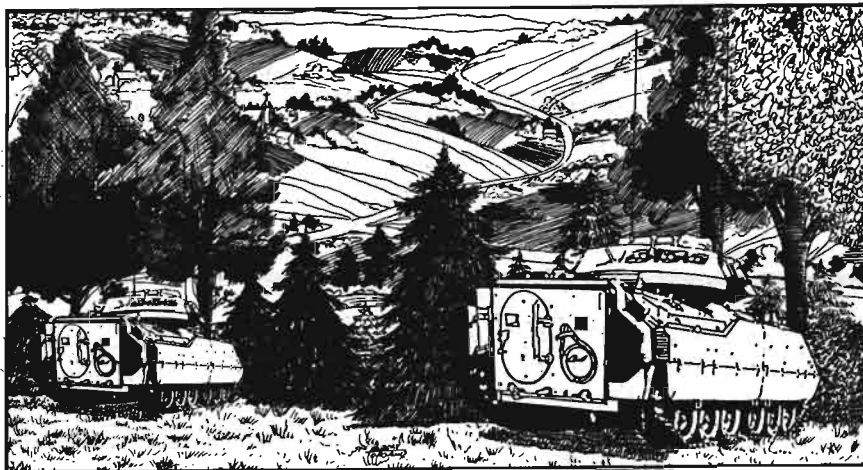
You are a Bradley section leader in the first section of the scout platoon of 1/98th Armor. It is now 0400 of the third day since the platoon occupied its present position to act as the battalion's forward screen and counter-recon element. The battalion is deployed in defensive positions that contain two regimental-size avenues of approach within its sector. The battalion has not yet been engaged; however, intelligence reports indicate a major attack by a BMP-equipped motorized rifle regiment is expected within several days.

The platoon is configured into three sections. Your M3s are fully operational and are in turret defilade positions scanning to your front. Your sector is located in a wide, rolling valley criss-crossed with roads, farm trails, and intermittent woods. There is a paved farm trail leading up to your position on the high ground which sits squarely on a major avenue of approach. You have unobstructed fields of fire out to approximately 2,000 meters.

The rain which has been falling steadily all night has just stopped. You are thinking about your two dismounted scouts on O/P duty about 100 meters to your front. Almost an hour has passed since their last land-line check, and you're just about to call them when a voice suddenly crackles in your CVC...

"This is O/P-1, I can hear two tracked vehicles in the vicinity of Grid ES985783, moving from the southeast."

Using the thermal sight, your gunner picks out two vehicles moving slowly cross country about 2,000 meters to your front. You begin sending a spot report to the platoon leader. After what seems like an hour, but is only a moment, the platoon leader informs you that you are to maintain contact with the enemy vehicles. You are to engage and destroy this enemy recon element if your position is about to be discovered. You call the two men on O/P back to the track. Through the darkness you can just make out



your squad leader's dismounted scouts boarding the vehicle.

Your gunner is continuing to track two tracked vehicles moving slowly in column through a wooded area. They will soon cross into a plowed field about 1,600 meters to your front. Eventually they will present their flanks to you if they continue on their present course.

Discussion

As the section leader, you have determined that if the enemy vehicles are allowed to continue on their present course, your positions may eventually be discovered and the disposition of the entire battalion revealed. Therefore, complete and immediate destruction of this recon patrol must be accomplished without allowing them the opportunity to report.

Under the present conditions, what would you do? Consider the commander's intent and mission requirement in using all Bradley gunnery techniques, fire control methods, and actions necessary to remove this threat from the battlefield.

Solution

This is an ideal situation. Your section has acquired and is tracking two BMPs from a motorized rifle regiment's recon company. They have not detected you and are within your capability to destroy

them. As the section leader, you have analyzed the situation and know that the 25-mm cannon with APDS-T ammunition is the primary weapon to use against BMPs and other lightly armored vehicles.

Since the BMPs are moving in a column formation in a lateral track to you, a frontal method of control should be used. This simple method reduces confusion and provides complete effectiveness on these flank targets.

Therefore, the section fire command should sound like this:

"Red 3, this is Red 2, Sabot (optional); two moving BMPs; sixteen hundred direct front; frontal (optional); at my command."

After allowing the vehicles to close with an optimum engagement range of 1,200-1,600 meters, the command, "Fire" should be given. After the targets have been engaged and destroyed, the section leader then issues the command, "Cease Fire", receives a crew report from his crew and his squad leader's vehicle, and issues a spot report to the platoon leader. Some additional points to remember are that since these targets are moving slowly across uneven terrain and the indexed ammunition is APDS-T, an initial lead of 2.5 mils should be applied. Also, once the command, "Fire" is given, each gunner should fire a sensing burst and after sensing/observation an-

nounces, "BOT" and adjusts the round to the target. Once the "BOT" correction has been applied, the gunner fires a three-to-five-round burst to destroy the target.

Situation #2

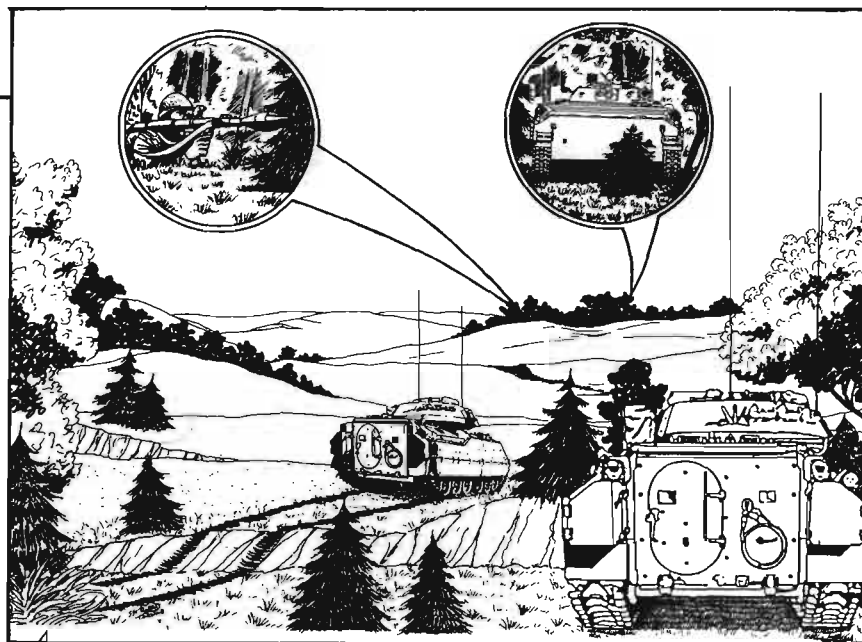
Your section was successful in destroying the enemy recon elements, and the battalion has fought a difficult defensive battle for the last several days. The scout platoon was pulled back to be refitted and resupplied. Throughout the battle the platoon has been occupying a screen position on the battalion's flanks.

The battalion is now conducting a counter-attack deep into the stalled and weakened enemy. Intelligence reports indicate enemy defense will be composed of scattered remnants of various units each at about 35-40 percent strength.

The scout platoon has been given the mission of conducting a zone reconnaissance to determine enemy disposition and strength. The platoon is organized into three sections. Your M3s are completely unloaded with a basic load of TOW, 25-mm, and 7.62-mm ammunition with a battlesight range of 1,200 meters for sabot. Shortly after crossing the line of departure, your section is moving along the side of a hill and maneuvering carefully toward a thick woodline about 500 meters away.

Suddenly your vehicle comes under heavy small arms fire, and a 73-mm heat round rips into the TOW launcher and tears it away from the side of the turret. Your squad leader observes the muzzle flash and immediately returns fire in the direction of a BMP hidden in the far woodline. You're thrown forward in the turret when the vehicle lurches forward as your driver frantically attempts to place the vehicle into cover.

Immediately your gunner screams into the microphone that he has identified a BMP and dismounted troops in the woodline. You press your face to the commander's extension and see that your gunner has acquired a BMP which appears to be backing out of its firing position and dismounted troops preparing to engage you with an RPG-16 about 200 meters away from the BMP.



Discussion

As the section leader, you know that your squad leader has found a hull defilade position and is returning fire in the direction of the BMP. Also keep in mind that your vehicle is moving violently across uneven terrain as your driver seeks a hull defilade position. Given the urgency of this situation, what would you do? Consider all Bradley gunnery techniques, immediate action, and target classification used to destroy these targets.

Solution

In this situation you must do something and do it fast! Because your squad leader reacted quickly by returning suppressive fire in the direction of the BMP's muzzle flash, he has suppressed this vehicle and caused it to back out of its firing position. This has momentarily eliminated the BMP as the most dangerous target. However, the RPG team, armed with the RPG-16, is now the most dangerous threat. Your M3 is within its range of 500-800 meters, and they are preparing to engage you. You should immediately issue the following initial fire command:

"Gunner, coax, troops, 500." This engagement should be fired on the move while allowing your driver to find a covered position. During this engagement the movement of the vehicle should be used to carry the burst through this narrow frontal area target. No specific fire pattern is prescribed; however, you want to immediately eliminate the enemy's

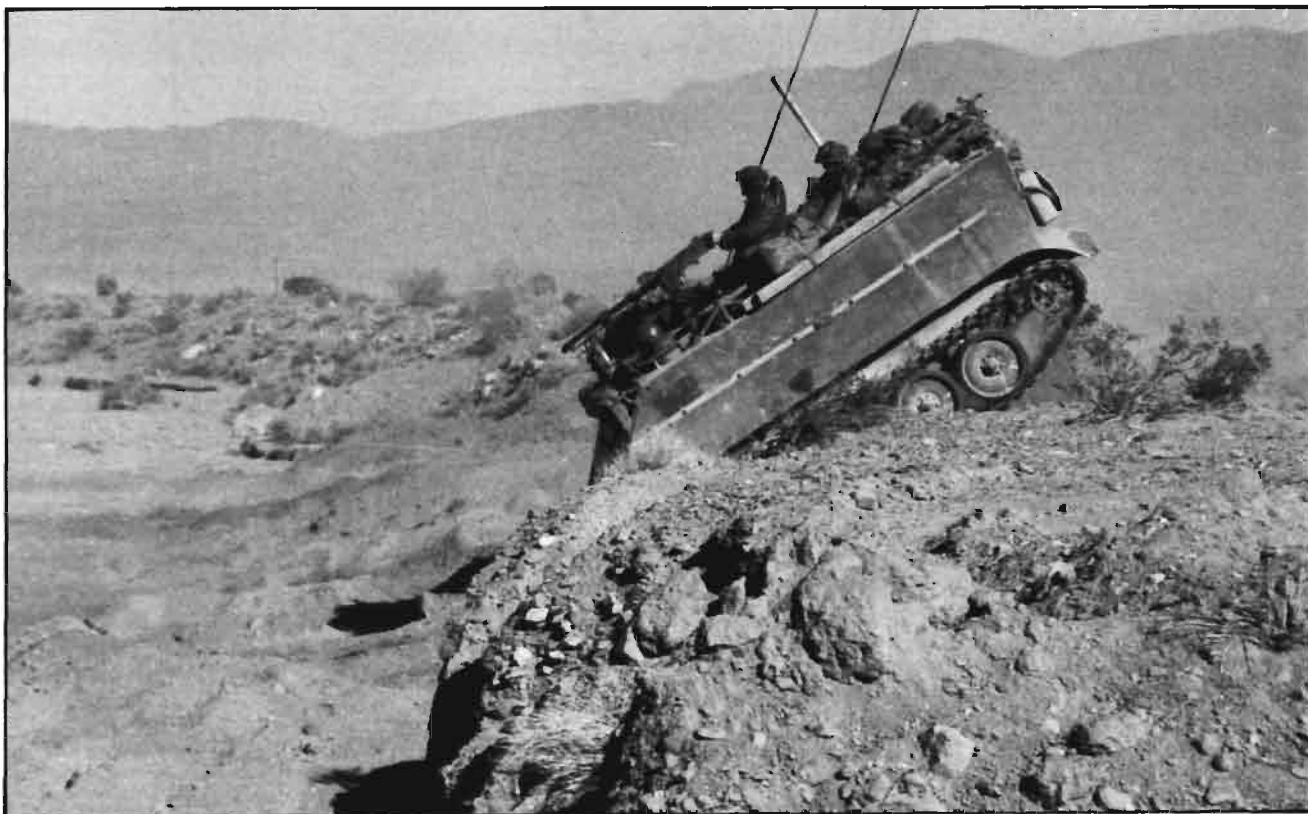
ability to shoot at you. Effective suppression is usually achieved by using bursts of 10-15 rounds every 10 seconds. Once you have suppressed or eliminated this threat, you must then attempt to reacquire the BMP in the woodline.

While your driver continues to seek a defilade position, your gunner has traversed the turret and reacquired the BMP. This fire command should then be issued:

"Gunner; battlesight; PC." Once the gunner announces "Identified," the command, "Fire" should be given.

Keep in mind that although battlesight gunnery is the quickest method of engaging a target with the 25-mm cannon, you are firing with a battlesight of 1,200 meters as specified earlier. Therefore, at the range of 500 meters your initial burst will overshoot or strike high on the top of the BMP. An adjustment of burst-on-target should be applied if the gunner has a sensing, as this is the fastest method of adjustment. Once this correction has been applied again, the gunner fires a three-to-five-round burst at the center of mass of the target. Once the vehicle commander verifies complete destruction of the BMP, the command, "Cease Fire" should be given. The vehicle commander should then receive a crew report and continue the mission.

This problem was prepared by Captain James E. Oliver, Chief, M3 Branch, USAARMS.



Infantrymen of the 4th ID's First Brigade crest high ground in an NTC rotation last January.

Objective: NTC

Some Ideas For Leaders on How To Get There From Here

by Lieutenant Colonel Alan R. Cocks

If you are like the typical combat arms commander or leader scheduled for training at Fort Irwin's National Training Center (NTC), chances are you get that uncomfortable knot in the pit of your stomach every time you ponder your unit's probability of success on that wide expanse of Mojave high desert.

If you will stay with me, I've got some ideas that should help you cover all the necessary preparatory bases. While they may not all be revolutionary, at least they are all in one place, and I am confident that they're on target. They should really help you and your unit hit the desert running.

Since its activation as an active Army installation on July 1, 1981, today's Fort Irwin is now arguably the finest, most sophisticated training facility for ground forces in the world.¹

The NTC has revolutionized our training by combining a highly motivated, tactically proficient opposing force, a professional team of observers/controllers (O/Cs), state-of-the-art instrumentation, realistic distances, and extremely challenging terrain. The resulting environment approximates actual combat with sometimes frightening realism and emphatically says to the training unit, "show me — don't waste my time telling me what you think you can do."

Talk is cheap, and faking is painfully apparent at the NTC. Moreover, the training environment makes it impossible to cover up decrepit task force systems. They are all inspected and tested. Inadequate or sloppy homework during NTC preparation will exact a very predictable toll as the weak system is exposed to the intense Mojave sunlight.

Warned about how difficult the NTC can be, most leaders take very seriously the task of preparing for Fort Irwin, and this leads us to what is undoubtedly the NTC's most telling contribution. It has become the catalyst for vast improvements in home station training among CONUS-based units. In short, it drives the best training our Army has ever seen. Some might view this as an overstatement, but certainly not those of us who have witnessed the insightful discussions of barrier planning, fire support integration, dismounted infantry techniques and the like that routinely take place among company-grade officers during officer calls. In fact, if those of us who are now lieutenant colonels are completely honest with ourselves, we would have to admit that as lieutenants and captains, 10-15 years ago, we could not have ante'd up in such

discussions. Virtually every facet of our training has been focused and intensified by the lessons in tactics, combat support, and combat service support that flow from Fort Irwin.

In the first days of the next war we will hopefully not repeat past mistakes — the loss of life due to inexperienced, unseasoned soldiers and leaders. Rotation by NTC rotation, we are gradually building a base of experienced combined arms leaders who will enter their first real battle with a level of tactical competence heretofore unattainable in peacetime. They will perform those fundamental combat imperatives whose absence in the early stages of past wars were so costly. There are now over 46,000 officers and NCOs who have experienced the NTC, and their numbers grow with each task force rotation. Their future value is certainly worth every penny invested in Fort Irwin and the NTC.

If you are one of these 46,000 veterans, you probably understand all this, but if you are anticipating a first visit to the NTC, you may be experiencing a great sense of foreboding and anxiety. It is natural, and it is healthy; it indicates an understanding of the NTC's training value and the absolute necessity of intense preparation. Perhaps you are wondering how your unit will do out there and how you personally will perform. You may wonder how on earth you are going to be able to accomplish all the training tasks required in the time remaining before deployment. You may also be wondering what all those training tasks should be.

Here are some ideas if you are a tank or mechanized infantry task force commander or a subordinate leader. While based primarily on my experiences (both good and bad) as a tank TF commander who went through a rotation in November 1984, they have been generally accepted by many other leaders who have run the same gauntlet. While I can offer no guarantees, the type of training program proposed here should really assist in getting your systems and leaders tuned up for the challenge ahead.

But first, get smart! Don't start designing your preparatory program until you know what your most likely problems are going to

Major Recurring Weaknesses Observed at the NTC

- Poor battlefield reconnaissance
- Ineffective fire support integration
- Ineffective countermobility operations
- Poor employment of dismounted infantry
- Inadequate terrain appreciation
- Poor attack helicopter employment
- Faulty offensive operations (e.g., "piecemeal" attack)
- Command and control deficiencies
Commander's intent not understood
Failure to take risk

Figure 1

be out there. Get an all-source NTC lessons-learned collection effort going. There are many sources of these lessons, but you will find consistent themes and common, recurring task force weaknesses. The current, consensus all-Army pitfall nominations are listed in Figure 1. These weaknesses, along with your unit's specific weak areas, should drive both the form and substance of your train-up. Except for an occasional reference, detailed discussion of these common pitfalls is not within the purview of this article. Suffice to say here that they are the hard things to do right. Not surprisingly, they demand great training emphasis and lots of practice. You will find them amply defined and discussed in the following sources.

Your best source will be your own first-hand observations of NTC action. There is no substitute for this. It is one thing to read or hear about the classic piecemeal attack, but quite another to actually see one develop. Use every opportunity to get out to the NTC. One way to do this is the Forces Command Leaders' Training program: selected members of your division or brigade are invited under NTC sponsorship to observe and evaluate two or three task force operations. A member of the O/C group will coach the leaders to draw out all major strengths and weaknesses. This is the formal route, but not the only route.

If you are lucky, your higher headquarters will have a task force rotation scheduled prior to your own, and you will be able to employ the informal route. Under division or higher headquarters sponsorship,

get out and spend a few days with this sister unit. If necessary, ship one of your vehicles with them to ensure you have transportation. If you are a task force commander, take as many of your subordinate leaders as you can, mission and money permitting. It is particularly important that you take company/team commanders that have never been to the NTC; this breaks the ice for them and softens the edges of the imposing NTC mystique. You can easily observe task force operations without interfering (This is important — you would want this same courtesy during your rotation.) and spend as much time as you can (again, without interfering) driving the terrain. There will most assuredly be unanimous agreement within your group that this terrain driving alone made the trip worth the time and relatively small expense. You and your guys will be amazed at the number of significant features hidden by the 20-meter contour interval on Fort Irwin maps and the great difficulty accurately gauging distances on the ground. Also remember to take your logistics operators, or get them out there some other time. They need to see the terrain as well, and can really benefit from first-hand observation of draw/turn-in facilities and procedures.

The next good source is the experience of NTC graduates from other battalions of your division. Once you have weathered their accounts of great victories over the OPFOR and they settle into more accurate recollections of events, you will probably get some hard-hitting admissions of major system breakdowns that seriously screwed up operations. While you've got them talking, pump them for the solutions that worked. These should prove invaluable in your efforts to develop a sound training program.

Listen carefully to your division's senior leaders, the brigade commanders, the ADC (M) and the CG. While this may seem painfully obvious, it is, in fact, a valuable caution. In most CONUS divisions, these leaders will have acquired a unique perspective on the NTC garnered from "out-of-the-smoke" observations, discussions with senior leaders from other divisions, and candid exchanges with the



NTC leadership and key members of the O/C group. Their observations are weighed in the context of rich combat and prior command experience. As such, they are particularly insightful and useful as you focus your training.

In addition to human intelligence, you will need to tap the vast body of NTC-related articles in professional journals, and the absolutely superb summations of observations published by the NTC and the Center for Army Lessons Learned (CALL), Ft. Leavenworth, Kansas. The articles, of course, zero in on specific aspects of operations. When compiled over time from the entire spectrum of journals, however, they present a comprehensive and useful compendium of the major deficiencies and, more importantly, some very sound and oftentimes ingenious solutions. It is nice to be able to benefit in this way from somebody else's hard-earned lessons.

The lessons-learned summations, on the other hand, provide under one cover the total NTC experience to date, and constitute the best single written source of guidance for your preparation. There is something critical in them for virtually every level of leadership in your task force and each of your staff officers. It would be criminally negligent to bound into your training program without a solid knowledge of the most recent packet. They are readily available for the asking. In fact, it is likely that they are floating around your headquarters now.

These, then, are the best sources of NTC lessons learned. Now you are ready for the next important step — establishing your “umbrella” concepts. As you train, you will be wrestling with innumerable specific solutions to the challenges

listed in Figure 1. There are a few imperatives for NTC success, however, that are more general in nature and transcend the more specific requirements. They define the context for the entire training program and must remain foremost in the minds of all your leaders. We might call these “umbrella” philosophies. You may want to develop your own, but the three outlined below are indisputably critical and will serve you well.

The first is that your trip to the NTC is more than a mere training event — *it's WWII!* This mentality serves several purposes. It places your training program in the proper perspective; that is, you are preparing for war. It dampens the tendency to “go admin” while you are at the NTC. There is no “admin” at Fort Irwin, and your leaders need to know this up front. They should feel like they are in a hostile fire zone from the time they get off the plane. Finally, it nurtures the seed of fighting spirit you will want to plant among your soldiers during home station preparation. A former chief of the NTC Operations Group once said that the OPFOR loves a good fight on Saturday night. He was right. They are dedicated to whipping you. Your guys need to feel the same way.

Next, establish effective gunnery with MILES (Multiple Integrated Laser Engagement System) as an absolutely essential goal of all your training. Simply put, if your tanks and TOWs cannot kill the OPFOR with deadly consistency, you can excel in all aspects of the seven evaluated operating systems (maneuver, command and control, fire support, etc.) and still fail miserably. MILES gunnery is truly the *sine qua non* of success at the NTC. To borrow a phrase: Don't leave home without it.

Finally, you will need to develop the type of command climate within your unit that encourages and rewards self-starting leaders and soldiers. After one trip to observe another unit, you will be a believer. Way out in the distance you will notice a first sergeant leading his logistics pack (LOGPAC) from the trains area. To your right you will see a maintenance collection point in operation. Further to your right, some leaders are performing a recon for their next operation, and

beyond them you see some engineers at work on a tank ditch. Way over to your left, a mechanized infantry unit is setting in hasty protective minefields, and beyond them you spot a tank platoon reboresighting its MILES. In short, it is one hell of a busy place, with extraordinary distances between activities. These distances and the pace of events will doom the unit bred and raised in a tightly controlled, centralized environment. Each leader will need to do the right things because he knows that is how you fight, not because he expects his boss to pop out of the wadi at any moment to supervise him. This does not speak against things like backbriefs and the personal involvement of the chain of command in making things happen. It does recognize that supervision will be limited if leaders are going to get the required hours of sleep per day, and the unit that relies solely on the boss will gradually lose its energy as the boss loses his.

Now that you have established these fundamentals and are determined to emphasize and enforce them throughout NTC preparation, take the next step.

Get your “slice”. At the risk of again accentuating the obvious, let me encourage you to ascertain, early on, your precise task organization. You will surely have a fire support officer (FSO), engineer platoon leader, air liaison officer (ALO) and one or two companies from your sister mech or tank battalion. You may also have an air defense platoon leader, an electronic warfare and intelligence platoon leader, and a smoke asset leader. Lock these guys into your task force for training and socializing, preferably a year out, but certainly as early as possible. Within tolerable constraints imposed by their organic chains of command, make them members of your team. There is no point in conducting the training we are going to discuss without these leaders. Insist that they attend, and make it a crisis when one does not show. If you are too liberal on this one, you may fail to adequately test, train, and incorporate these essential combat and combat support systems, and your learning curve on the desert floor could be embarrassingly steep. You will be glad you started early, as incredi-

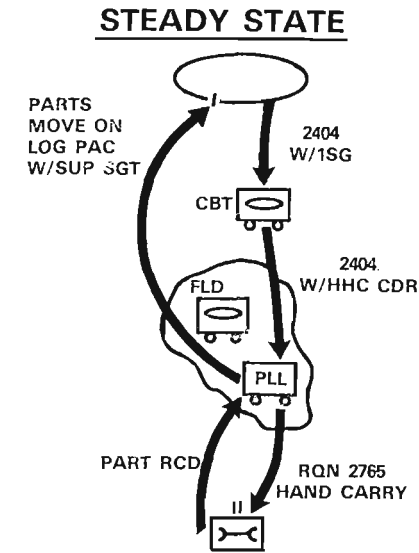
ble differences surface in jargon and procedure, even between your organic and attached companies. One closing caution: as you cross-attach units to task-organize, make it an inviolable rule that each losing unit give up its best element. It is the only way to keep peace in the task force.

Now you are ready to look at your tactical and logistics systems.

Perform a system tune-up. Take a close look at your unit's tactical and logistics standing operating procedures (SOPs). Do this for basically two reasons. First, you will want to avoid the criticism sometimes heard that, "Your unit doesn't follow its SOP because it doesn't know its SOP." While this may not be the most heinous crime a unit can commit, it is certainly one of the most professionally embarrassing. Secondly — and most importantly — ask yourself whether the SOP is merely a document filled with innocuous platitudes or a resource for leaders that accurately states how you are going to conduct the specific business of combat. Far too many SOPs fall into the former category, perhaps because they were written to fulfill the requirement to have an SOP, and before the unit had actually determined how it was going to do business. So, before you begin training in earnest, develop a draft SOP that outlines specific, workable procedures; then revise as you go. The final product should be specific and proven through trial at home station.

Such a process greatly improved the utility of our task force field SOP. While it started as an imposing volume of generalized responsibilities and requirements, it made the trip to Fort Irwin as a trimmed-down series of essential procedures. To illustrate, here are some examples:

•An NTC graduate task force commander told me how much trouble his tactical operations center (TOC) experienced getting operations overlays out on time in sufficient quantities (generally 18-20 copies). We knew from reading NTC observations summations that this was not a unique problem. Our S3 solved it by developing what became known as the "chimpanzee" method. Once the master acetate overlay was proofed and approved, one of the TOC workers



copied it onto another sheet of acetate. A second worker proofed it, and began copying it onto a third sheet of acetate. Meanwhile, the first worker was busy copying his second acetate overlay. This process continued until five workers were involved. End result: 20 acetate overlays in less than 2 hours. This seemingly ridiculous SOP worked like a charm.

•An equally thorny problem on the service support side was that of "steady state" maintenance, or the challenge of ordering parts and fixing equipment as you progress through the rotation rather than waiting until you are through and flooding the system with backlogged requisitions. To solve this, our SOP

dictated a very specific route for daily crew-level DA Form 2404s (depicted graphically in Figure 2). Each crew's meal card for the daily Class A meal was a thorough 2404 (no one ever went unfed), which was handled without deviation per SOP. Over 2,500 requisitions were processed during force-on-force and live-fire training, almost twice the average up to that time. To emphasize the importance of specificity — and home station trial — our first shot at this system allowed either the first sergeant or maintenance team chief to carry the 2404s. We found that those given to team chiefs mysteriously disappeared while those corralled by first sergeants made it back to the field trains and generated the necessary requisitions. As it turned out, team chiefs were too embroiled in on-the-spot fixes and hardly ever got back to the trains. Their 2404s died in their tool boxes.

•Another legendary service support challenge involved accurate and timely casualty reporting. As you probably know, NTC rules closely parallel consequences of combat performance. In casualty processing, you either execute properly, or your unit slowly but surely erodes in manpower.

Our S1 developed the unit battle roster system depicted in Figure 3. These rosters, maintained by the Admin/Logistics Center (ALC) and first sergeants, allowed complete casualty identification by a simple line number, and greatly facilitated the speed and accuracy of reporting.

UNIT BATTLE ROSTER

TF-1

DATE ROSTER PREPARED: _____

AUTHORIZED

POS #	TITLE	GRADE	SSI/ DMOS	NAME	RK	SSN	RAD DOSAGE RATE	REMARKS
A001	CDR	O-3	11C00	SWING, B	CPT	2530	_____	_____
A002	XO	O-2	11C00	YAMASHITA, J	1LT	2531	_____	_____
A003	1SG	E-8	11B5M	CARPENTER, D	1SG	2532	_____	_____
A004	SUPPLY SGT	E-6	76Y30	VANNATTA, J	SSG	2533	_____	_____

3RD RIFLE PLATOON

POS #	TITLE	GRADE	SSI/ DMOS	NAME	RK	SSN	RAD DOSAGE RATE	REMARKS
A301	PLT LDR	O-2	11C00	GUEVAS, J	2LT	2541	_____	_____
A302	PLT SGT	E-7	11M40	CARTER, W	SFC	2544	_____	_____
A303	SQD LDR	E-6	11M30	HARVEY, A	SSG	2556	_____	_____
A304	ASST SQD LDR	E-5	11M20	PRUITT, M	SGT	2566	_____	_____

Figure 3

•SOPs, of course, are designed to standardize the most efficient process for doing the routine things. The diagram in Figure 4 shows our standard LOGPAC layout. Once again, it is very specific and served to alleviate the confusion caused by changes in vehicle drivers, company/team organization, and most importantly, darkness.

•One final example. Many units develop brevity codes for use on command nets. They are particularly essential at the NTC due to very effective OPFOR jamming. But if they are needed on command nets, they are twice as essential on the Admin/Log net. Tune it in for awhile if you want classic examples of lengthy banter, security violations, and fundamental indiscipline. Part of our answer was an admin log brevity code, a small portion of which appears in Figure 5. Beyond merely abbreviating transmissions, this system served to highlight and reinforce for each combat service support (CSS) operator (S1, S4, battalion maintenance officer, etc.) his critical CSS functions, and became the "one sheet of music" everyone was supposed to get on. Please note the "NUTS" segment dealing with admin-logistics center's (ALC) assumption of TOC duties. Unless you are extremely fortunate, you will have an opportunity or two to exercise this during force-on-force training. It is not easy and needs lots of home station rehearsal. Note also the ALC parking plan, a simple, specific method for a routine action.

These examples are not offered as the only, or necessarily even the best, ways to operate. They merely illustrate the need to deal specifically with all those hard little problems you will encounter at the NTC. First, review your SOPs to see if they standardize in sufficient detail all the routine, essential functions, and tune them up as necessary. Then, as you exercise the procedures at home station, get the entire team involved in critiquing their effectiveness. Review as necessary, and take to Fort Irwin a document that actually reflects how you have trained and how you expect to operate.

Put in terms of the offense, what we have discussed thus far are really assembly area actions. We are

LOGPAC LAYOUT

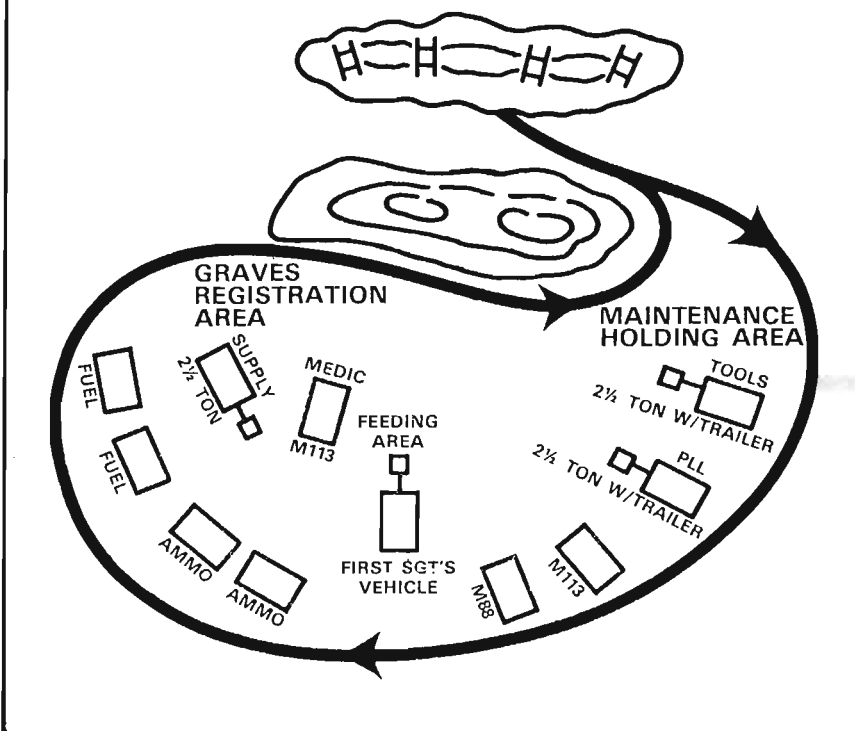


FIGURE 4

now ready to cross the training line of departure. As we do, ask yourself, "Who is going to make most of the honest mistakes at the NTC?"

Your soldiers? Probably not. They will fight valiantly because they will be up to their sweatbands in the most realistic fighting our Army has done in peacetime. The

specter of the attacking OPFOR regiment will grasp the attention and imagination of even your most reticent troops. It is exactly the sort of adventure that led them to their local recruiters. Your leaders will make most of the mistakes, simply because they have the hardest things to do. As you can see from a

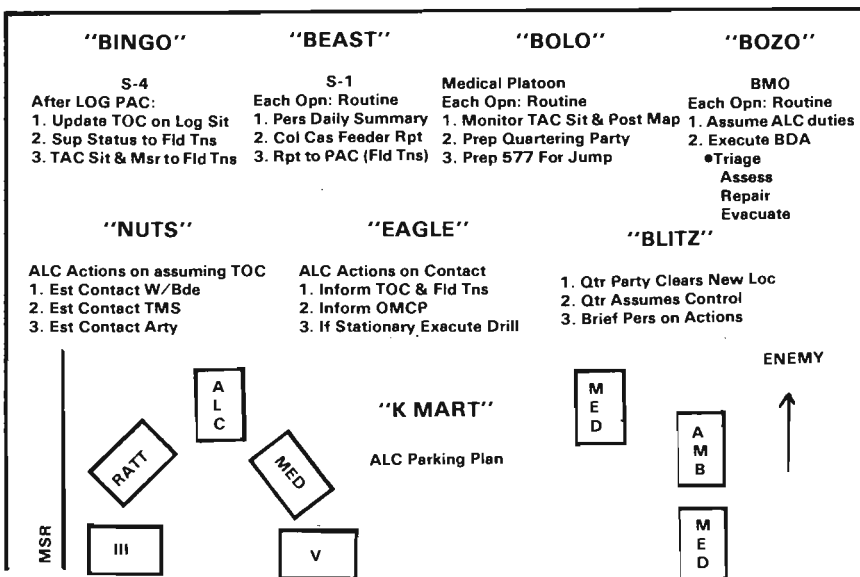


FIGURE 5

reinspection of Figure 1, the common pitfalls are all leader-generated.

The answer, of course, is to train your leaders. Here are some ideas to weight your attack on the objective of competent leadership:

Officer and Noncommissioned Officer Professional Development (OPD/NCOPD) Programs:

While you cannot devote these entirely to NTC preparation, you should be able to give NTC issues a corner on the market as early as a year out. As trainers, try to get both officer and NCO leaders who have recently returned from NTC rotations. They have tremendous credibility. They should also have their "take home" packages from Fort Irwin, including excellent 8-10 minute video tapes of selected battles. These are ideal media for conveying the hard-hitting lessons learned at the NTC. Many will allow the instructor to show and recall with emotion the dire consequences that accrued to his unit from some seemingly minor leader omission. These will have particular impact and in most cases will reinforce the things that need to be done to avoid the major, recurring pitfalls. Under brigade task force sponsorship, see if you can get some OPFOR representatives to come out. They will discuss some of the classic blunders rotational units have committed and some of the key elements underlying their own success. This is not only good training. It also tends to get your guys' blood boiling. One small caution: unless you are full on lieutenants, you will have NCO platoon leaders. Be sure to include them in all OPD classes.

Simulation Exercises (SIM-EX): Most posts have simulation centers. I must admit to some skepticism concerning their utility before we began our leader training. I am now convinced that, rationed properly, their use has real value, particularly if they have terrain models replicating the NTC. Use these facilities to exercise both the tactical and logistics aspects of operations. Run a SIMEX with your officers; then power down and exercise your NCOs. Develop Operations Plans (OPLANS) for potential battles in the southern and central NTC corridors, and use these as the governing media for

Break-in-the-Action Checklist

CREW/SQUAD

- Update class I, III, V
- Treat/evac casualties
- Perform during-operations maintenance
- Maintain air guards
- Maintain local security
- Stay on radio
- Restore load plan
- Zero MILES
- Change mask filters

PLATOON

- Cross-level class I, III, V
- Make hasty defense platoon
- Check sensitive items
- Evac damaged vehicles
- Tie in with adjacent elements
- Cross level personnel
- Set up M-8 alarms
- Implement sleep plan
- Inspect

Figure 6

your SIMEXs. Do the same for the northern (live fire) corridor, and focus on the most probable missions. Take all of these OPLANS with you. That is not cheating. It is what OPLANS are all about. SIMEX benefits are obvious. At almost no cost, you will be able to test your tactical and logistical systems, train your first and second levels of leadership, and get everyone used to working NTC terrain. As long as it is not overdone to the point of boredom, and the focus stays on NTC lessons rather than the occasionally frustrating and arbitrary results of game rules, the SIMEX can provide an excellent medium for leader training.

Leader Checklists: Some units at the NTC are not able to routinely execute basic Army Training and Evaluation Plan (ARTEP) tasks at the squad/tank crew and platoon levels. These, of course, are the levels that can make or break company/teams and task forces. Failure to perform these fundamental blocking and tackling tasks indicates one of two problems: lapses in discipline or inadequate training. While our ultimate goal was 24-hour-a-day adherence to ARTEP standards, we knew our rotation would not be a zero-defect performance. We also knew, however, that we could eliminate inadequate training as a culprit, thus allowing immediate attribution of such prob-

lems to lapses in discipline, a far easier issue for the chain of command to deal with on a fast-moving battlefield.

One key ingredient in this effort was a packet of checklists issued to the leader of each squad, crew and platoon in the task force. Each checklist dealt with an area identified by the NTC as a common weakness and provided its holder with a quick reference outline of required actions. Some of the more important areas were:

- Actions on receiving indirect fire
 - Obstacle breaching sequence
 - Reorganization/consolidation activities
 - Soldier care at the NTC
 - Troop-leading procedures
 - Break-in-the-action checklist
 - Actions on receiving direct fire
 - Passage of lines
 - Attack
 - Defend
 - Road march fundamentals

Figure 6 shows our "Break in the Action" checklist. This one is used to illustrate the checklist system because it was particularly effective in a seemingly minor — but actually quite consequential — area. Without the training emphasis this list provides, the tendency could well be for your soldiers to use lapses in battle primarily for sun-tanning and smoking.

If they do, here are the results in order of impact: it is sloppy and unprofessional; it leaves them open to catastrophic OPFOR retribution; it moves them along the continuum from active aggressive players to passive participants merely awaiting the next order or OPFOR move; and it gradually degrades combat strength as MILES "debore-sights," casualties go untreated, roadwheels burn up for lack of lubrication, and critical supplies (particularly ammunition) become maldistributed. A final point: The checklists do not stand alone. They require a good measure of training in OPD/NCOPD and the discipline that accrues from the commander's insistence on adherence.

Leader tests: This is another technique that improves execution of fundamentals at the lower levels of leadership and maintains a leader focus on your forthcoming war at the NTC. Periodically (weekly or monthly), administer written or



Troops of the 1st Forward Support Bn. dig in as they await attack at the NTC.

practical tests to all task force leaders on NTC-specific requirements (intersection/resection, soldier care in the desert, etc.), common leader tasks, NTC imperatives (MILES boresighting), and other items on leader checklists. Have the chain of command grade and follow-up to help those not doing well. Reward those who do particularly well. At very low cost and a relatively minor investment of leaders' time, you can reinforce other aspects of your leader training program and further isolate that issue of fundamentals execution.

NTC terrain drive: Leader training can continue even after you have arrived at the NTC. We have already talked about the terrain issues of deceptive distance and hidden features. In fact, based on the map's 20-meter contour interval, the NTC is one of the few places on this planet where you will often fight for, and from, terrain that does not appear on the map. You need to close the gap between your leaders' knowledge of the ground and that of the OPFOR during the 4 days of equipment draw. Your officers should spend at least 2 of those 4 days traveling the

terrain and pointing out the significant features that do not appear on the map, but often turn the tide of battle. There are plenty of them, particularly in the western portion of the central corridor. I can assure you that this effort will pay extraordinary dividends in your ability to develop sound offensive and defensive orders.

These, then, have been some suggestions for preparing your leaders tactically, technically, and mentally for their greatest peacetime challenge. Here now are some ideas for other important aspects of preparatory training.

MILES stakes and marksmanship. As we have said, if there is one essential for success at the NTC, it is unit effectiveness with MILES. You can do everything else right, but you will get your butt kicked every time if you cannot kill OPFOR vehicles with speed and precision. Though I cannot remember the author's name, I recall an article a while back that described combat crews as either "killers," "fillers," or "fodder." (Ed Note: See COL Thomas A. Horner's article in *Parameters*, Vol. XII, No. 3, pp. 27-34.) This was merely a more graph-

ic way of portraying the historical battlefield phenomenon of ten percent of the men doing ninety percent of the killing. You cannot afford to let this happen at Fort Irwin. What happens if your four or five "killers" become shielded from the OPFOR's main thrust, or some of them are broken down? Even if they are perfectly sighted and ready, they will have a very difficult time servicing the entire 130-vehicle OPFOR regiment. So your goal must be to maximize your percentage of killers, both tanks and TOWs. Here's how.

Train with MILES when you train. I cannot think of too much worthwhile training you can do in the field with tanks and TOWs without MILES. In fact, maneuver training without this key resource could well be negative training. The use of MILES will become second nature to your crews only with repeated mounting, employment, and dismounting. Think twice before you schedule field training without first scheduling MILES.

MILES stakes. Best done at task force level, this entails setting up a series of stations requiring



crews (tank and TOW) to mount, test, boresight and zero, and effectively employ MILES. Don't forget the .50 caliber MILES on vehicles so equipped. It can come in very handy against the dismounted OPFOR assaults you will experience and can also kill BMPs and the like if properly zeroed. But the primary emphasis, of course, should be on tank-killing maingun and TOW systems. Do not let crews off the course until they have demonstrated that they are no longer "fillers" or "fodder." Targets can be other MILES-equipped vehicles or, better yet, Saabs with laser detectors. Time this training to ensure that most of the crews will be with you for the NTC, and do not forget to train the trainers.

MILES discipline. During tactical training, all levels of command must be alert for crews who are not getting kills. Treat them exactly as you would deadlined vehicles, because that is what they are and that is how they will be treated at the NTC. Do not let them

Photos used in this article were taken by Private First Class Randy Schaefer of the 4th Infantry Division Public Affairs Office during an NTC rotation in January.

slide through training without proving themselves with MILES. If you do, don't bother taking them to Fort Irwin. They will just be excess baggage. Troubleshoot the problems. If they are not mechanical, you will probably find that the crews have not checked their boresight and zero. This brings up a critical point of discipline. All tank-killing systems absolutely must re-zero before each battle. Perhaps this should not be the case, but it is. Companies and platoons must have SOPs for this process that are ingrained during home station training and become so disciplined that no amount of adversity preempts them. Without this, this morning's killer may become tonight's filler.

MILES awards. If you believe, as I do, that there is a strong correlation between today's MILES killers and tomorrow's combat effective crews on a real battlefield, then it seems reasonable that we reward those MILES-effective crews for their demonstrated proficiency. Consider developing a graduated system of awards based on numbers of vehicle kills achieved both during home station training and at the NTC. For example, 25 kills earns "MILES Marksman" status (Task Force Certificate of Achievement), 50 kills "MILES Sharpshooter" (Brigade Certificate), and 100 kills "MILES Expert" (Army Achievement Medal). There are obviously many other workable variations. It is the theme that counts, for it further reinforces the impor-

tance of being good with MILES and hopefully provides some positive motivation for crews to excel.

The radiological survey party. You may have a good handle on your chemical teams. We surely did not. In fact, it became one of our most difficult problems. Sometimes the men did not even know they were on one of the team rosters. Sometimes they knew they were, but knew next to nothing about their chemical equipment and duties. Then, when we seemed to have the training done, transfers devastated the system in a miraculously short time. This all occurred, by the way, despite a superb chemical officer and a good fill of trained company chemical NCOs.

We finally fixed it, however, with a last-minute chemical team training and testing course. Organized by the task force chemical officer and using company chemical NCOs as instructors, the course forced every team in the task force (and there were a lot of them) to demonstrate the critical tasks we knew they would have to perform to avoid disaster at the NTC. They all brought their own equipment and made it work. First, second, and third-place finishers in each team category received appropriate awards. Although far too late in the game, this last ditch effort got the guys and their equipment ready. They performed well in the war.

Your pre-NTC ARTEP. This is undoubtedly your most important single training event as you work towards Fort Irwin, and certainly every CONUS-based division has developed a model geared to the NTC. So, while I would not presume to know the one best solution, if such a thing exists, the ideas presented below seemed to me particularly significant in pre-NTC ARTEPs.

You will make many trips to the field as you prepare for the NTC. Your last one should be the big one that approximates, as closely as local conditions permit, the NTC experience. This is the ARTEP we will be talking about here.

This exercise should occur about 30 days prior to your departure date. This ensures that the great majority of participants will be with you through Fort Irwin, and the training will be fresh in their minds. It also leaves about the

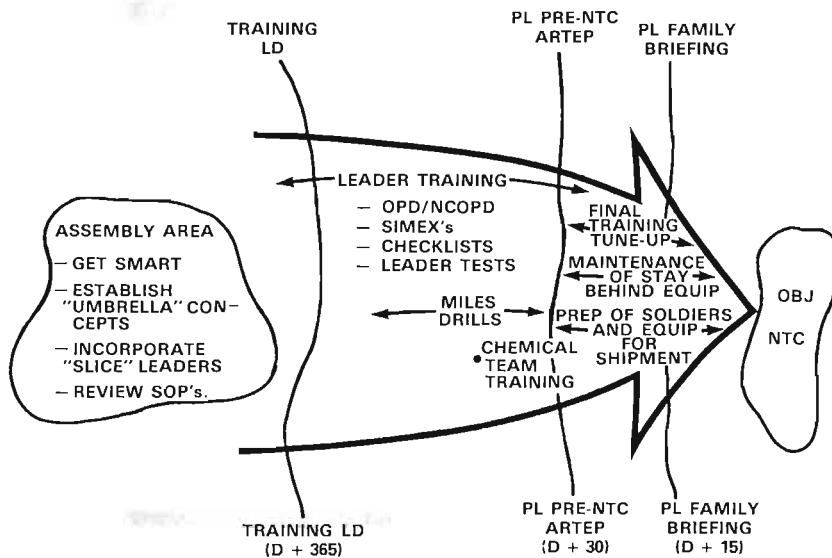


Figure 7. A graphic schematic of the planning process leading up to an NTC rotation, as described in this article.

right amount of time for necessary final training tune-ups, family briefings, maintenance of stay-behind equipment, and preparation of soldiers and equipment for shipment.

The one-month-out timing also facilitates the next requirement; that is, your ARTEP leadership and task organization must exactly match your NTC configuration. No exceptions! It is time for all leader leaves and passes to be cancelled. Among other things, this will really be your final opportunity to meld your team. If done right, it will be far too important an exercise to miss. Rookies may occasionally do well in sports, but they will not do your unit much good at the NTC. So, hold the line and insist that your entire team play.

Do not allow your unit to be shortchanged in its evaluator package. If you are not careful, natural forces will work to cut its corners, trim it, and reduce the number of first-stringers, particularly at the platoon level. The most desirable package should include a first-string evaluator for each staff section and unit in the task force, down to and including the platoon level. And, while some task forces may have to be evaluated by units with no prior NTC experience, I would not want mine to be one of them. The tactical insights, skills and credibility NTC veterans bring to evaluator duties are practically essential to effective pre-NTC ARTEPs.

As leaders in the evaluated task force, you should demand as tough an evaluation as resources, time, and the experience of your evaluators will permit. This temporary self-inflicted pain will steel your leaders and pay extraordinary dividends in the desert.

Finally, the exercise should be about eight days of quick-paced action. This will ensure that your systems and people are stressed generally to the same extent they will be tested at the NTC. Your men may have been able to "gut out" the old 72-hour ARTEP, but they will not be able to stay awake for eight days; hence, sleep plans and second-string leaders will necessarily get a workout. Evaluators must stress execution of the fundamentals (infantry dug in with overhead cover, vehicle dispersion, reaction to artillery and NBC attack, etc.) by exacting heavy tolls when they are ignored. CSS systems (personnel replacement, casualty evacuation, etc.) should be exercised as they will be at Fort Irwin, and command and control should experience NTC-level doses of jamming, smoke, and mission-oriented protective posture (MOPP) 4. In short, the idea is that your men come home from Fort Irwin and are able to say, "That was easier than our ARTEP."

OBJECTIVE: NTC. We have now talked through what I would consider the key aspects of an effective NTC preparatory process, from gathering intelligence to meeting a very capable OPFOR in the Mojave

Desert. Figure 7 graphically summarizes these suggestions.

Please remember above all else that the most important single contribution of the NTC has been its effect on the caliber of home station preparatory training. There is no question that your soldiers and leaders have the competitive spirit and are dedicated to victory over the OPFOR. But, as noted by Indiana basketball coach Bob Knight — a fairly successful competitor against capable opponents on their home courts — it's not the *will to win*, but rather *the will to prepare to win* that counts. Nothing could be more pertinent to your unit's performance at Fort Irwin.

Hopefully, you have found here some ideas and training concepts you can use in this most essential effort.

I would say good luck, but that, of course, has very little to do with it.

Footnote: 1. Most recent edition of the Fort Irwin welcome packet.



LIEUTENANT COLONEL ALAN R. COCKS was commissioned in the Military Police Corps from Lafayette College in 1965 with a BA in Political Science. Following assignments as a military police officer in Korea, Vietnam, and Hawaii, he received his RA commission in Armor in 1968. He has since served both in CONUS and Germany in numerous Armor command and staff positions, culminating in command of the 4th Battalion, 37th Armor, 1st Infantry Division, Fort Riley, Kansas, from 1983 to 1985. LTC Cocks is a graduate of MPOBC, AOAC, CGSC and the Army War College, and is currently assigned as G3, 1st Infantry Division (Mech) and Fort Riley.

To Mark Or To Commit Fratricide?

by Captain Keith E. Blakeman

As I listened to the order being read in the task force's tactical operations center in preparation for the upcoming night attack, my mind raced with all the work that was ahead of me and my M1 company. I thought about the problems that the hours of darkness would bring in this, my first night attack. But I did not consider the problem of vehicle identification at night, and before the sun would rise, twenty-five percent of my company team would learn (the hard way) how important friendly vehicle identification was during the hours of darkness.

The order we received was for the battlefields of Fort Hood, Texas. Our task force, two armor companies and two mechanized infantry companies, was honoring its operations prior to deployment to the NTC. The OPFOR against which we were maneuvering consisted of two battalions (one mechanized and one armor). MILES usage was the standard, not the exception, for all personnel and vehicles. All deployed forces had M1s and M113-series vehicles.

The S2 informed the orders group of numerous OPFOR sightings during the day in the intended area of operation. He cautioned us that there was a strong possibility that reconnaissance elements were still active in our sectors. He also gave us the most recent intelligence on enemy activity in the objective area.

The concept for the night attack called for two companies to maneuver abreast in adjacent sectors, but they would attack separate objectives (see accompanying map). One mechanized infantry company was to cross the line of departure (LD) several hours prior to the main task force. Its mission was to conduct a zone reconnaissance in force, to determine the location of any enemy obstacles, and if possible, to create breaches at several points. The second mechanized infantry company, reinforced with an additional antitank platoon, was the task force reserve.

The distance from the LD to the objective was only seven kilo-

meters. The boundary between the two attacking companies was an improved dirt road which was easy to identify even in darkness. My company was on the right, or the northernmost company. My right boundary was a very prominent ridgeline that was also very easy to identify in the dark. The objective was an imposing mountain that I was *sure* we could see in the dark. The concept was simple enough, in theory, to be successful.

The order went into extensive detail on visual and pryotechnic signals we were to use if we encountered enemy obstacles. The mechanized infantry platoons received detailed instructions on lane markings and guide recognition techniques.

Prior to departing from the TOC, I spoke briefly with the commander of the adjacent company who would be on my left during the attack. We agreed that orientation and navigation to the objective would present little or no problem to the accomplishment of the mission. We also discussed, with the task force S3, the need for unit markings to identify the individual companies in the dark. The S3 told us that he saw no need for individual company markings because of the identifiable boundaries.

On my return to the company area, I began inspecting the company's precombat checks and began to prepare my company operations order. One aspect of the task force continued to concern me: How would we identify friendly vehicles in the dark? I intended to resolve that problem within my company through specific instructions to my platoon leaders, even if the remainder of the task force was not going to be identifiable in the dark. I was not so much concerned with individual vehicles becoming lost during movement; I wanted some way that my platoon leaders could use so that they could identify the company's vehicles and thus better control their platoons' movements.

Tactical security presented the primary problem that I had to consider in marking my vehicles for night operations. Other problems

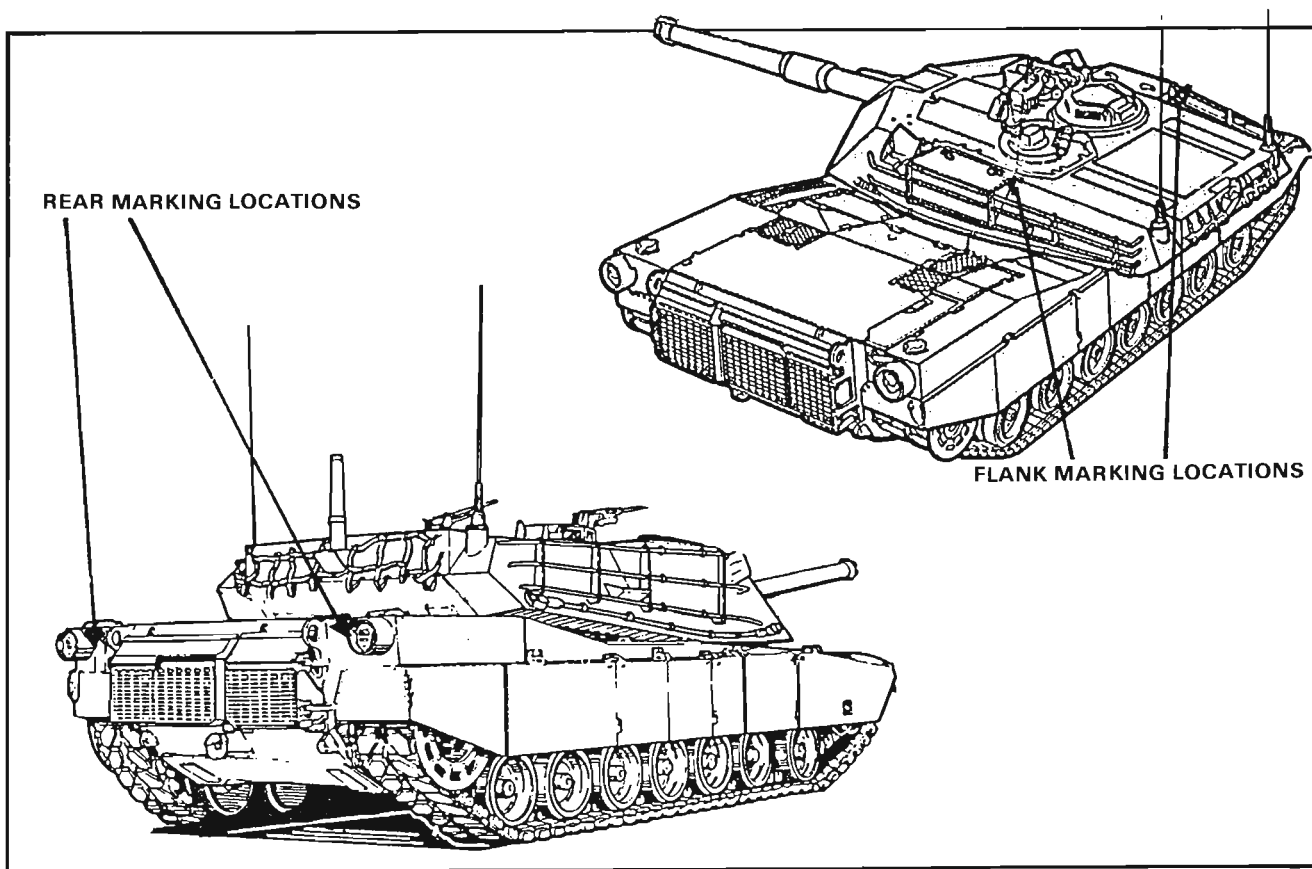
"...How would we identify friendly vehicles in the dark?..."

that I faced were: the ease in identification at 300 to 400 meters distance, the need for a light source that we could see without infrared or passive devices, and the assets I had available in the assembly area. The two light sources that I knew were available in sufficient quantities were flashlights and chemical lights. Flashlights with filters could provide enough options in colors and design to make them useful, but mounting them in shielded locations proved difficult. Chemical lights provided the needed size as well as color options to meet the marking requirement.

Operation security (OPSEC) posed a dilemma: I could move totally blacked out and arrive at the objective without knowing exactly what the status of my force was or where they were; or I could mark my vehicles so that we could identify each other from 300 meters and arrive with my force intact. I chose to risk identification from the flanks and rear by an enemy who might already be within 300 meters.

Figures 1a and 1b show the locations on the vehicles that my soldiers selected for marking their vehicles. The location in Figure 1a shielded the marker from the front. The rear marking locations in Figure 1b shielded the lights from all directions except the rear. By taping various colors and patterns on the sides and rear of our vehicles, we could identify platoons and the vehicles of key leaders. Because we covered all but two inches of the chemical light, the brightness was not sufficient to disclose the vehicle's location at great distances.

Once we had marked our vehicles,



had put out all of the orders, and completed our final checks, LD time was upon us. Our move from the assembly area to the LD was orderly and without incident. As my company progressed unopposed through its sector, I moved laterally within our boundaries and easily identified the three separate platoons.

I had no idea where the lead elements of the adjacent company were, and radio communication with the company commander of that unit told me that he was not absolutely sure either. Then, my lead platoon reported a section of vehicles moving across our axis at a 90-degree angle and at a range of 500 to 750 meters.

Again, I frantically contacted the adjacent commander and questioned him about the location of his platoons, but before he could contact his leaders, the brilliant flash of a Hoffman charge in the distance produced spots in my eyes. Five or six vehicles from my company returned the single shot, and when my night blindness finally dissipated, I could see the vehicle that had fired the first shot: it was illuminated by its MILES kill light. Within seconds, our brilliant volley was returned by a large volume of

fire from our left: the adjacent company was firing on us! It thought that we were an enemy reconnaissance element.

The adjacent company's lead platoon had become misoriented, crossed the company boundary, and had been traversing across our sector. The misoriented platoon leader saw our vehicles and fired on them. My platoons then returned fire, which drew attention from the adjacent company's two remaining platoons. These two platoons believed that they were being attacked from their flank and also began firing!

After a great deal of heated conversation with the adjacent company commander, we finally regained control of our platoons and they ceased their fire. In a 30- to 45-second period, I had lost four vehicles. The adjacent commander had lost three.

I believe that if the entire task force had used visual recognition markers, we could have avoided the entire incident. From that point on in our training, to include trial at the NTC, our use of chemical lights as markers proved to be beneficial in command and control at all levels. To mark or commit fratricide? Do we really have a choice?

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"Beans and Bullets": Logistics Training in 2/3d ACR

by Lieutenant Colonel A. J. Bacevich and Major N. Winn Noyes

Cavalry regiments have led the way in appreciating that sergeants must conduct unit-level combat service support operations in the field. The ACRs have recognized that in combat, planning and conducting tactical operations will fully absorb the attention of commanders and platoon leaders. However much they would wish otherwise, officers at the unit level will have precious little energy or time to devote to the routine, but critical, tasks of unit sustainment. If they are to be done at all, these tasks will be done by sergeants.

To describe these tasks as routine is not to imply that they are simple. On the contrary: few things are more complex — and more susceptible to going off the rails — than the business of supporting an equipment-intensive combat unit operating on a fluid and highly lethal battlefield. If our sergeants are going to be up to the challenges of combat service support in wartime, we have a clear obligation right now to train them to master the skills needed to sustain a unit's ability to fight.

Some of you might argue that one function of FTXs is to develop proficiency in logistics operations. We disagree for several reasons. Our experience in "full-up" exercises has been that it's maneuver that gets all the attention, with service support training hardly more than an afterthought. In the context of the "crawl-walk-run" approach to training, moreover, most FTXs take place at a *sprint*. During an FTX, the emphasis is on making it happen *now*. This accelerated tempo no doubt accounts for the madcap, helter-skelter aspect of the limited logistics play that accompanies an FTX. Such a pace is not conducive to teaching, and seldom permits the reflection needed to learn from mistakes.

Any logistics play that does occur during an FTX falls into the narrow spectrum of Class I and

Class III resupply, plus the evacuation of broken-down vehicles. Other support requirements are all but ignored: resupply of Classes II, IV, V, and VIII; PLL replenishment; Class VII replacement; medical evacuation; graves registration; and personnel replacements.

We believe that to become proficient in conducting unit sustainment operations, NCOs need training dedicated to that purpose. With this in mind, our squadron has instituted a series of recurring exercises designed specifically to train our sergeants in logistics operations. We call this *Beans & Bullets*.

The term *recurring* deserves emphasis. Given the personnel turbulence with which all units live, one-shot training in the intricacies of service support simply will not work. We've structured the squadron training calendar to incorporate a *Beans & Bullets* exercise each quarter, a frequency intended to introduce newly arrived sergeants to their logistical responsibilities while ensuring that old hands remain current.

Of the two exercises in the series, Armor School graduates will find *Beans & Bullets II (BBII)* the more familiar. It is the Logistics Coordination Exercise (LCX) devised at Fort Knox and described in Field circular 71-7. The LCX provides invaluable training. It gives sergeants a realistic appreciation of just how tough sustainment operations can be and illustrates the crucial role that NCOs must play. It provides a valuable, "hands-on" opportunity to grapple with combat-related challenges. Most importantly, it provides the arena in which sergeants can develop the drills and SOPs so essential to the effective accomplishment of these activities.

A word of caution for those who have never been in an LCX. A good LCX requires plenty of preparation. Overhead is substantial. An LCX's effectiveness varies inversely with the amount of simulation

permitted. The unit that wants rearming to be something more than simply the transfer of a piece of paper, for example, must plan imaginatively, and well in advance of the event.

BBII provides first sergeants and platoon sergeants with realistic training in executing sustainment operations, but contributes little toward educating sergeants on the overall functioning of the combat service support system available to the squadron. To address this need, we devised *Beans & Bullets I (BBI)* — a logistics war game.

BBI does three things: First, it lays out key elements of the squadron logistics apparatus on a scale where they become comprehensible (Figure 1). Platoon sergeants and first sergeants see normally-obscure elements like the combat trains and maintenance collection point and learn where they are established, and what they do. Secondly, *BBI* exercises the flow of logistical information: units submit status reports, request routine and emergency resupply using the prescribed formats, and keep abreast of information such as which Logistic Control Point (LCP) is "active" and when the next "Logpac" is due. Third, since *BBI* incorporates a tactical war game that produces a wide variety of logistical requirements, the exercise forces the sergeants to walk through the full range of sustainment problems that they will encounter in combat. The emphasis must be on "walking through." The game allows plenty of opportunity for instruction and critique. If the attempt to evacuate a "casualty" misfires, for instance, those involved — platoon sergeant, first sergeant, unit medic, and the medical platoon sergeant, discuss how it ought to have been done. *BBI* also pays off in a fourth way. All squadron radio nets down to the platoon level are operational. The war game that produces logistical need also generates maneuver play,

“...The game allows plenty of opportunity for instruction and critique...”

intelligence, and fire support requirements. Troop leading procedures are exercised. Orders are drafted and issued. In effect, *BBI* is a scaled-down CPX that benefits the entire C³I system.

Let's look in greater detail at Figure 1, from the rear up toward the FLOT. What is actually on the ground in the area marked off as the "Regimental Service Support Area" (RSSA)? The squadron field trains contain the M577 that is the admin/log rear CP, manned by the personnel who actually operate it in the field. Nearby are representatives of logistical elements located in the field trains — most notably, unit supply sergeants and the squadron support platoon leader. The field trains also contains an imaginary bank of materiel — realistic quantities of Class III and Class V, for example, that units must draw on as they deplete on-board stocks. Since that bank contains limited quantities, those in charge of the field trains must coordinate with the RSSA to refill the bank as the units draw it down. For *BBI*, the RSSA itself is primarily a communications node, manned by the Regimental Materiel Management Center.

Set up of the combat trains and maintenance collection point is similar. Communications equipment is actually on hand and placed into operation. Key personnel such as the S4, squadron maintenance technician and the physician's assistant are present. Here the "bank" has a different character, consisting of recovery, PLL, medical evacuation, an aid station, and limited quantities of uploaded ammunition and fuel for emergency resupply.

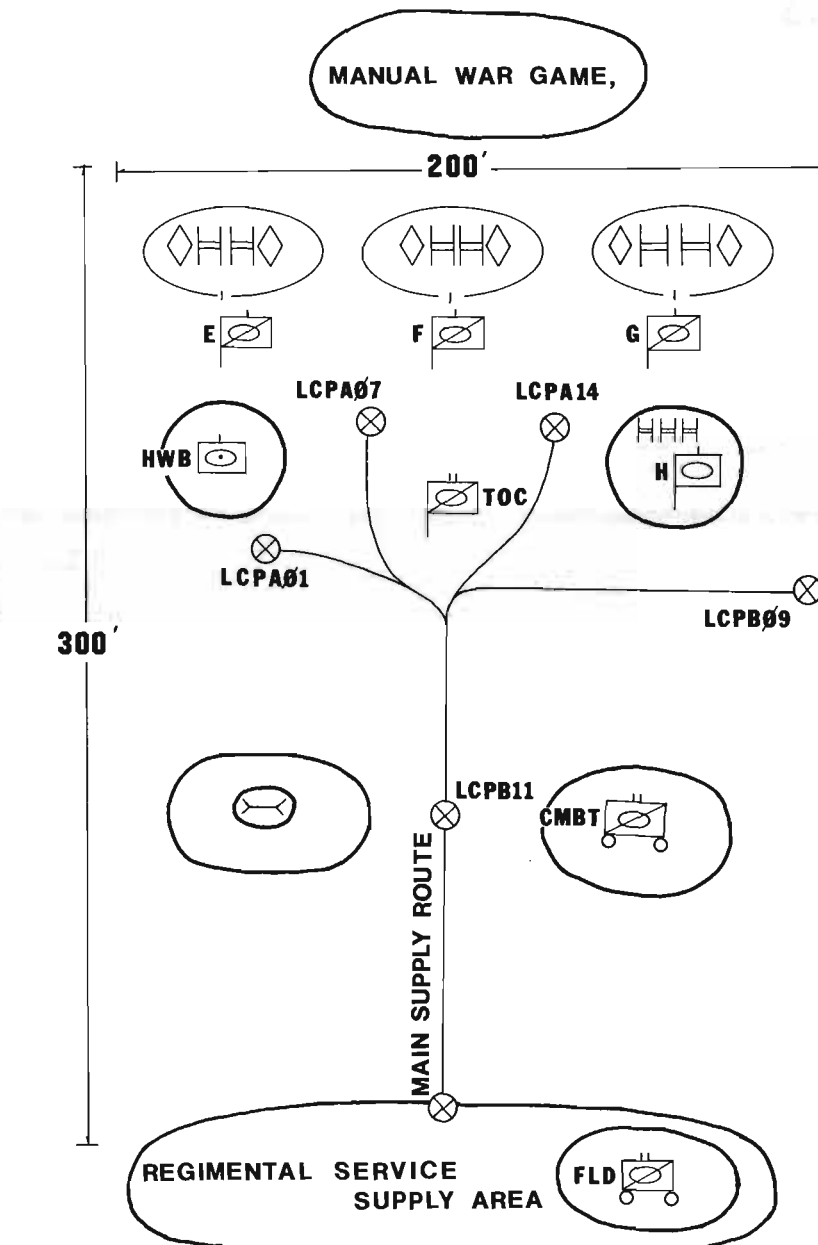


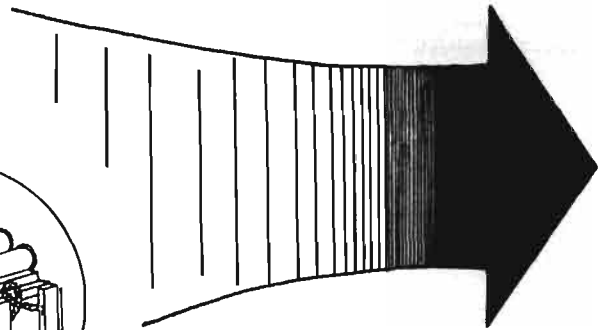
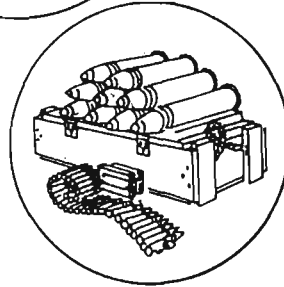
FIGURE 1: BEANS & BULLETS LAY-OUT

Figure 1. The schematic represents a squadron defending with three cavalry troops abreast, a tank company in reserve, and the howitzer battery in support, but game layout can vary.

Forward of these elements is the squadron TOC — fully deployed and operational. As the tactical situation unfolds, the TOC receives reports from units and issues the orders that cause "Blue Forces" to maneuver on the game board.

Beyond the TOC are the units themselves. The schematic shows a squadron defending with three cavalry troops abreast, tank company in reserve, and the howitzer battery in support. In practice, units could

be laid out in any number of ways. In terms of equipment, each unit's position consists of a command post (BOC for howitzer battery) with a combat vehicle for each platoon sergeant. "Players" in each unit are more numerous: XO, first sergeant, platoon leaders (maneuvering their platoons at the game board but not participating in the logistics play), platoon sergeants, motor sergeant, VTR operator, and medic. The unit commander's exclu-



sion from the list of players is intentional. The XO and platoon leaders fight the tactical battle depicted on the game board. The sergeants attend to logistics. This division of labor frees the commander from immediate involvement and allows him to concentrate on helping his NCOs learn the techniques needed to sustain their unit in combat.

Here's how the game works. Play normally begins with units assuming their actual equipment and personnel status. Platoon leaders array their forces on the game board. "Red Forces" — placed on the board and commanded by the S2 — initiate combat and the fight is on.

Contact between Red and Blue produces combat information, passed by platoon leader's radios to their CPs and up to the squadron TOC. This information in turn stimulates orders that cause troops and platoons to maneuver on the game board. More importantly, contact with the enemy generates logistics requirements for Blue — equipment destroyed or damaged, soldiers wounded or killed, prisoners needing evacuation, supplies needing replenishment. Platoon leaders note these requirements on 3x5 cards and notify their platoon sergeants by radio of what has occurred. Now, it's up to the NCOs to coordinate the support needed to fill these requirements.

Here are three examples of how that coordination works in *BBI*:

Example 1

The platoon leader of 1st platoon, E Troop annotates a card as follows:

E4 19D WIA; compound fracture to right femur. In response to this situation, these actions occur: (a) Having been notified that the platoon has suffered a casualty, platoon sergeant calls his CP on troop command to request medical evacuation. (b) The first sergeant escorts the troop medic from the troop trains to the vicinity of 1st platoon. (c) The platoon sergeant guides the medic to the game board and passes the casualty (i.e., the 3x5 card) to the medic. (d) The medic evacuates the casualty to the nearest active LCP, in this case A07. (e) The E Troop XO in his CP calls on squadron admin/log to have an ambulance sent to LCP A07; he also updates his casualty feeder report. (f) The squadron aid station dispatches a medic from the combat trains to LCP A07, picks up the casualty, and receives a report on what Class VIII items the E Troop medic has expended. (g) The squadron medic completes the evacuation of the casualty to the aid station. (h) The admin/log CP incorporates the E Troop casualty into its loss figures subsequently reported to regiment. (i) The RSSA provides a replacement — a new 3x5 card reading *E4 19D* — to the squadron field trains. (j) As part of the next routine resupply, the E Troop supply sergeant carries the replacement forward to the unit, ensuring eventual delivery to the platoon sergeant of 1st platoon and subsequently to the game board itself. Only at that point has the platoon's fighting strength been restored.

Example 2

The platoon leader of 3d platoon, F Troop informs his platoon sergeant of the following: *M60 tank deadlined; Number 1 right side road wheel arm unserviceable.* Given this situation, these actions occur: (a) The platoon sergeant reports his problem on troop command to the troop CP. (b) The first sergeant dispatches his motor sergeant to assess the situation. (c) The first sergeant goes to the 3d platoon's location, consults with the platoon sergeant, and decides whether to fix the vehicle on site, tow it to the troop trains, or evacuate it further to the rear. He bases his decision on the tactical situation depicted by the war game and on the *actual* availability of parts in the unit's PLL or the Support Squadron ASL. (d) Assuming the part is unavailable, the first sergeant calls forward his VTR operator. The platoon sergeant guides the VTR to the site of the downed vehicle, (i.e., to his platoon's location on the game board.) The VTR now evacuates the vehicle, (the 3x5 card) to the nearest LCP, in this case, A14. (e) The troop XO calls on the squadron admin/log net to request that a squadron M88 be sent to A14; he also updates his equipment availability report. (f) At the maintenance collection point, the squadron motor officer dispatches a mechanic representing a VTR to A14; the mechanic assumes control of the downed M60 and evacuates it to the maintenance collection point. (g) Squadron maintenance requisitions an arm from the RMMC. (h)



RMMC produces the arm, (a new 3x5 card) and provides it to the squadron at the field trains; the next available transportation delivers the part to the collection point. (i) Once part and vehicle are married up, the vehicle comes off deadline and moves forward to rejoin the unit. The first sergeant ensures its return to 3d platoon. Only when the repair part card has actually reached the game board does the platoon leader consider his tank strength to have been restored.

Example 3

Routine resupply of Howitzer Battery. To accomplish this, the following actions occur: (a) At times designated by the unit TAC-SOP, all section sergeants provide the battery first sergeant with their requirements for fuel, ammunition, or other classes of supply. (b) The BOC passes a consolidated list of requirements to the squadron S4 on the admin/log net. Again, the TAC-SOP prescribes time and format. (c) Drawing on his bank, the S4 in the field trains provides the howitzer battery supply sergeant with those requested requirements that he is able to fill. This constitutes the battery's LOGPAC for that day. (d) On admin/log, the S4 tells the battery when and where they can expect their LOGPAC. In this case, delivery will be to A01. (e) The first sergeant moves to A01 to linkup with the LOGPAC. (f) The supply sergeant assumes control of the LOGPAC, (i.e., a set of 3x5 cards) and guides it from the field trains to A01. (g) Once linkup is complete,

the first sergeant determines if the LOGPAC contains all the unit's needs and decides how to distribute any shortfall that exists. (h) The first sergeant guides the LOGPAC to the battery, coordinates resupply with the section sergeants, and returns the emptied LOGPAC to A01. From A01, the unit supply sergeant guides it back to the field trains. (i) As the unit rearms and refuels, its combat capability is momentarily degraded. As the first sergeant resupplies each section in turn, that section of the game board moves off of its position and is unavailable for delivering fires. Having well-coordinated drills for this procedure enables the battery to expedite resupply and to return the unit quickly to a fully ready posture. (j) Based on supplies consumed by all of the unit LOGPACs, the S4 requests resupply through the RMMC.

The play in *BBI* continues as long as the commander wants the war to last. Our experience has been that six hours permits a battalion or squadron to run through most situations and still leaves time for the after-action review which is so crucial in reinforcing teaching points.

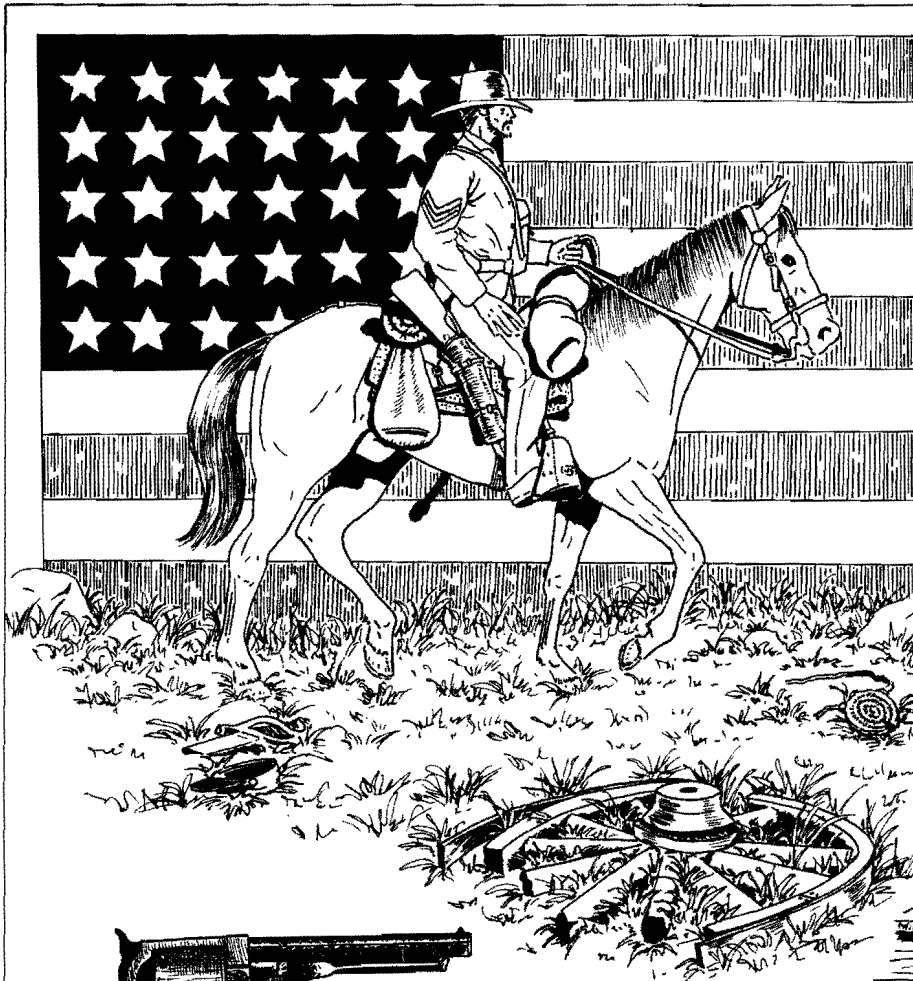
Logistics training is not especially glamorous. As far as we're concerned, it's not nearly as much fun as racing across the desert or shooting at Dona Ana. We're convinced, however, that *Beans & Bullets* is making a significant contribution to our overall readiness through detailed training.



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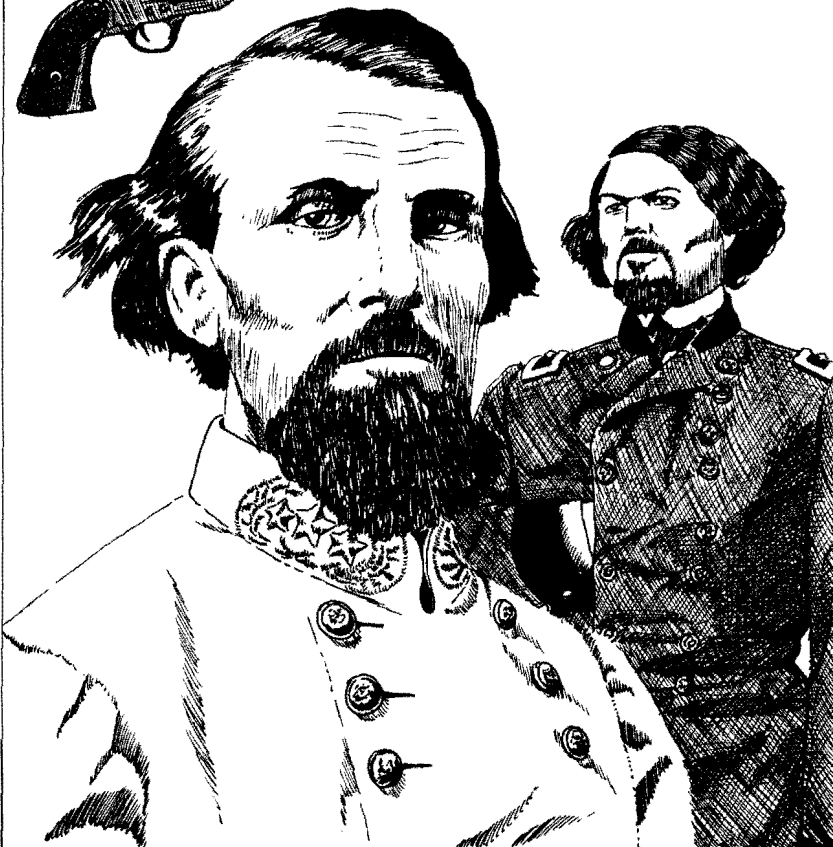
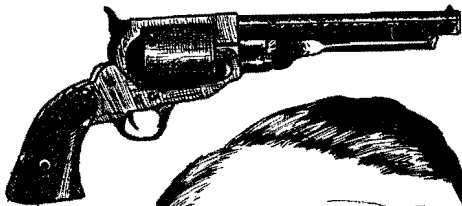
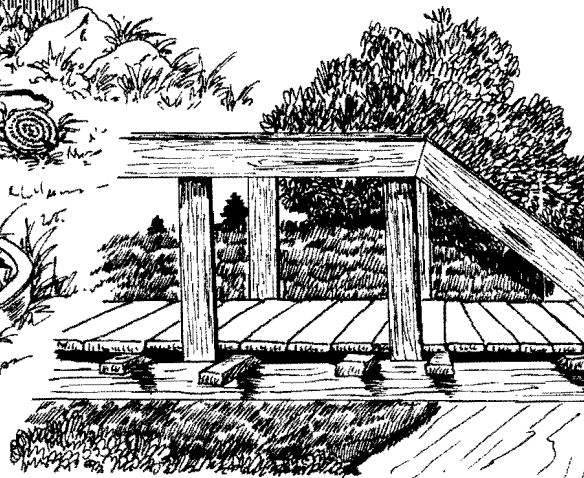


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The Battle of Brice's An Application of the

by Captain



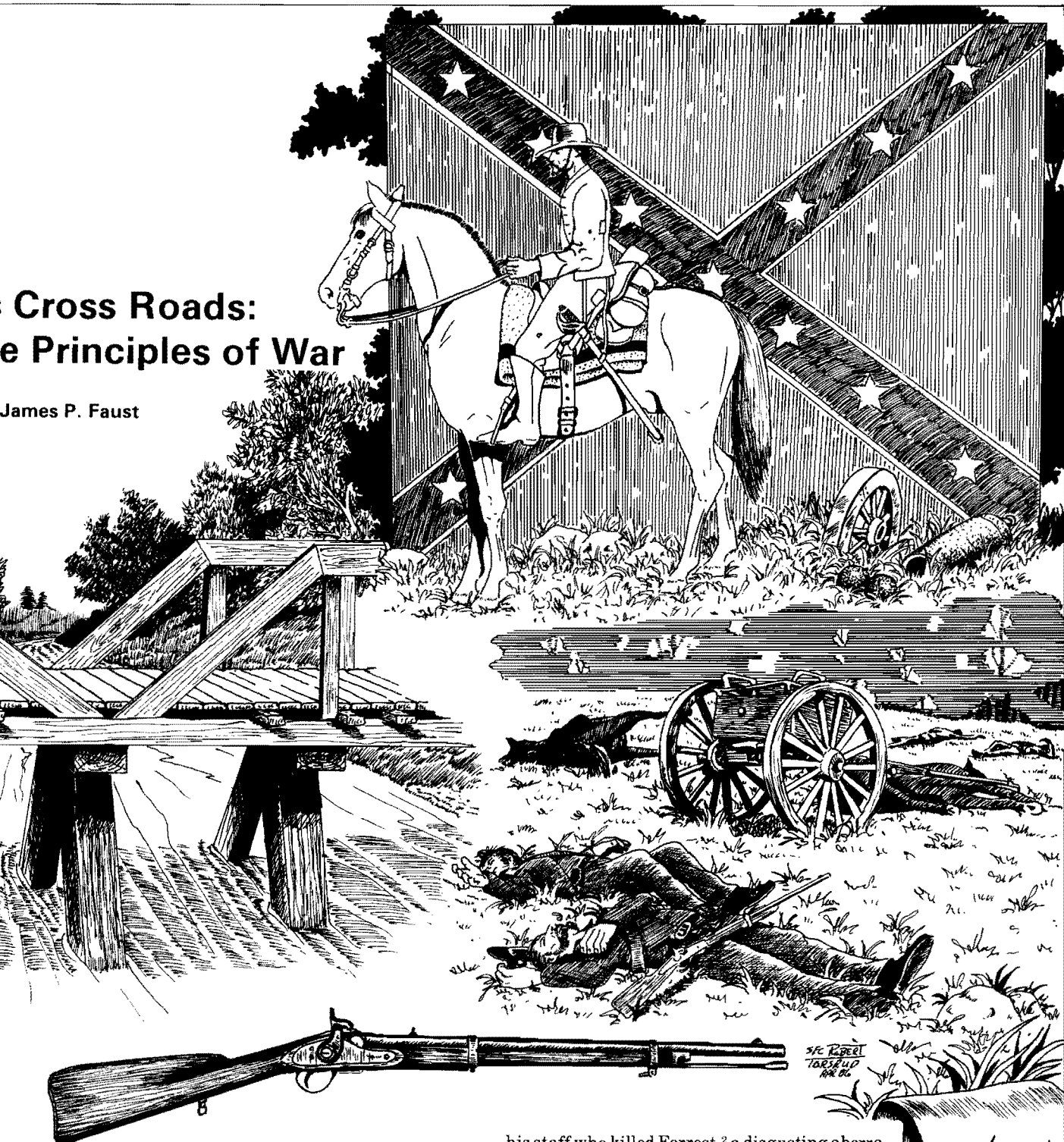
In March 1864, Ulysses S. Grant was promoted to the newly established rank of lieutenant general and given command of all Union armies in the field.

Grant's strategic plan was simple enough: "To use the greatest number of troops practical and to hammer continuously against the armed forces of the enemy and his resources." In implementing this plan, his strategy in the eastern and western theaters would be quite similar. In the east, the Army of the Potomac would maneuver against Richmond, counting on the probability that General Lee would maintain his Army of Northern Virginia between his union adversary and the Confederate capital at Richmond. In the west, General Sherman would maneuver his army group — the Army of the Cumberland, Army of the Ohio, and Army of the Tennessee — against Atlanta, opposing General Johnston and his Army of Tennessee. Hence, Richmond and Atlanta would provide the anvil for Grant's hammer. (See Map 1)

The similarities ended with the provision of logistical support for these two massive undertakings. Washington and Richmond were only 100 miles apart; therefore, a logistical base could always be established in Washington or Baltimore with their radiating rail nets, and the Union Navy could support armies along the eastern coast. But in the west, in moving on Atlanta, Sherman had to maintain a precarious

Cross Roads: The Principles of War

James P. Faust



supply line to Nashville, Tennessee — a distance in excess of 470 miles, along a single railroad.

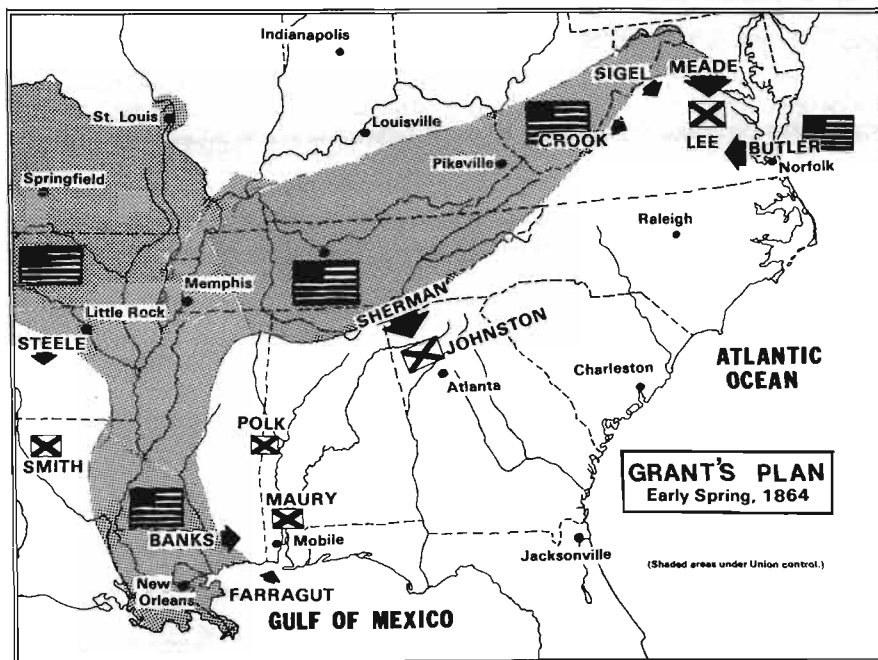
Boldly exploiting this logistical vulnerability was Confederate General Nathan B. Forrest. Between 1862 and 1864, he preyed on Union supply depots in central Tennessee and displayed no sign of letting up. In fact, shortly after Grant's promotion, Forrest was returning from another raid which had carried him north to the banks of the Ohio River. This raid rekindled Sherman's obsession with the need to stop "that devil Forrest," as he called him. Sherman even promised a promotion to major general for any member of

his staff who killed Forrest,² a disgusting aberration. Later, Grant swore that he would "follow Forrest to the death, even if it costs 10,000 lives and breaks the Treasury."³

Sherman didn't succeed in breaking the treasury, but Forrest did cost him the 10,000 soldiers many times over.

Forrest's elusive genius had allowed him to escape capture from anyone put in the field against him. Early in 1864, the most recent victim had been General Samuel D. Sturgis, who pursued Forrest as far south as Ripley, Mississippi, before giving up the chase. "I regret very much that I could not have the pleasure of bring-





Map 1: Grant's Strategy — Spring, 1864

Sherman's campaign against Atlanta hinged on a long logistic tail, vulnerable to Confederate raiders. To secure this supply line, Grant sent Sturgis to find and destroy Forrest's troops in Mississippi and Tennessee.

ing you his hair," he wrote Sherman, "but he is too great a plunderer to fight anything like an equal force."⁴

Shortly after making this bold statement, Sturgis got another chance to deliver Forrest's hair. Sherman had decided to send another force against Forrest, and Sturgis was chosen to command it. In his orders to the District of Memphis Commander, General C. C. Washburn, Sherman said that the force "should be a light, movable column, but not too strong. It need not exceed 6,000 men."⁵ Sherman had recently embarked on his Atlanta Campaign and had no intention of allowing Forrest to wreak havoc on his fragile line of communications. Protecting it was Sturgis' mission.

The force to be commanded by Sturgis was assembled in Memphis. (See Map 2) Instead of the 6,000 recommended by Sherman, Washburn assembled 8,500 of his best equipped and most seasoned men. The 3,300 cavalry and 4,800 infantry would be supported by 22 pieces of artillery, 250 supply wagons and 25 ambulances, stocked with enough medicines, ordnance and rations for 20 days.⁶

The column met with a series of misfortunes, beginning shortly after it departed Memphis on the first of June, 1864. It rained almost daily, leaving the roads nearly im-

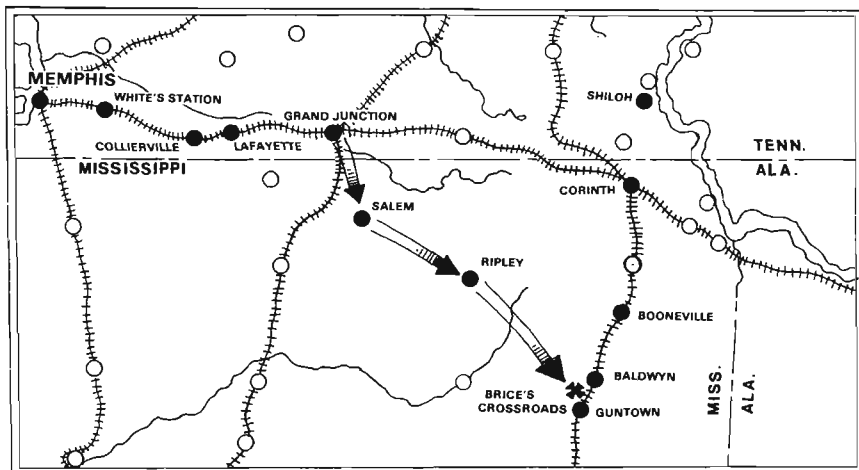
passable, particularly for the artillery and the obese supply train. There was a lack of forage along the route of march, causing an almost total dependence on the supply trains, which were quickly being depleted.

This combination of problems had a synergistic effect — the barren condition of the countryside made the large supply train necessary; the large supply train further churned up the already muddy roads and the churned-up, muddy

roads increased the caloric intake needed to keep the men and horses slogging along. So when the battle actually commenced, the men and animals were hungry, exhausted, and demoralized.

On 9 June, Forrest was at Booneville, deciding whether to move against Sturgis' force or to make another raid into Tennessee. Seeing that the Union column was not going to turn back, Forrest decided to move against it and immediately seized upon his plan of action: "I know they greatly outnumber the troops I have, [8,500 to 3,400]" he told Colonel Rucker, "but the road along which they will have to march is narrow and muddy, they will make slow progress, the country is densely wooded, and the undergrowth so heavy that when we strike them they will not know how few men we have."⁷ He then followed up with a correct interpretation of his adversary's tactics, and also an evaluation of his own:

"Their cavalry will move ahead of the infantry and should reach the crossroads [Brice's] three hours in advance. We can whip their cavalry by that time. As soon as the fight opens, they will send back to have their infantry hurried up. It is going to be hot as hell, and coming on a run for five or six miles over such roads, their infantry will be so blowed we will ride right over them."⁸



Map 2: Sturgis Moves on Forrest

The Union troops traveled by rail from Memphis to Grand Junction, Tennessee, then slogged down muddy rural roads to Ripley, Mississippi, before falling into Forrest's trap at Brice's Crossroads, just outside Guntown.

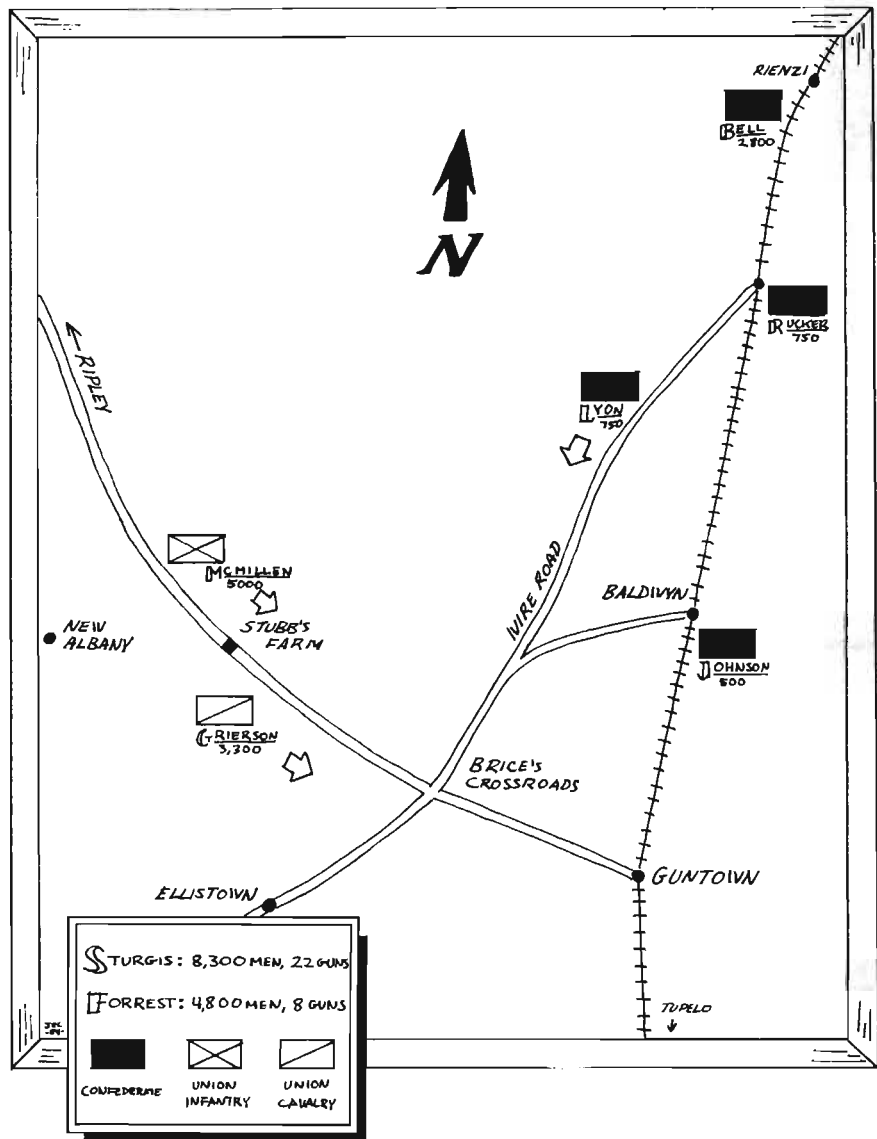
Forrest moved immediately with his escort and Lyons' Brigade (see order of battle) to open the fight. On the night of 9 June, he issued orders to his subordinates "to move as rapidly as the 'jaded' condition of the horses would allow, intending to concentrate at Brice's Cross Roads (see Map 3) before the enemy." In addition, he ordered his lean wagon train to the rear and southward from Booneville, east of the railroad to Verona, and one regiment of Bell's Brigade (Bartea's 2d Tennessee) to Ripley to gain the rear of the enemy, with orders "to attack and annoy the enemy's rear and flank."⁹

The Union column encamped at Stubb's Farm, 14 miles south of Ripley, on the night of 9 June.¹⁰ At 0500 hours the next morning, Grierson's cavalry moved out with Waring's Brigade in the advance, followed by Winslow's (see order of battle). The indolent infantry didn't begin moving until 1000 with the following order of march: Colonel Hoge's Second Brigade, Colonel Wilken's First Brigade, supply train, and Colonel Bouton's Third Brigade. The column was stretched out along the road for more than five miles, hardly prepared for battle.¹¹

Sturgis was completely ignorant of Forrest's dispositions or intentions. From the time the expedition left Memphis, Forrest had used local residents, "deserters," and escaped slaves and prisoners to spread misinformation as to the composition and disposition of his forces. Sturgis was forced to rely almost exclusively on these planted sources and later wrote, "it was impossible to gain any accurate or reliable information of the enemy."¹²

The Battle

At a point one mile south of the crossroads, the Union vanguard met Lieutenant Block and a few men from the 7th Tennessee. After a brisk skirmish, Grierson deployed Waring's Brigade on the left at Guntown Road (see Map 4). Captain Tyler simultaneously joined the fight with two companies of Kentuckians, followed closely by the rest of Lyon's Brigade. As Grierson was deploying Winslow's Brigade to the right of Waring, Lyon attacked and threw the Union



Map 3: Movement to the Crossroads

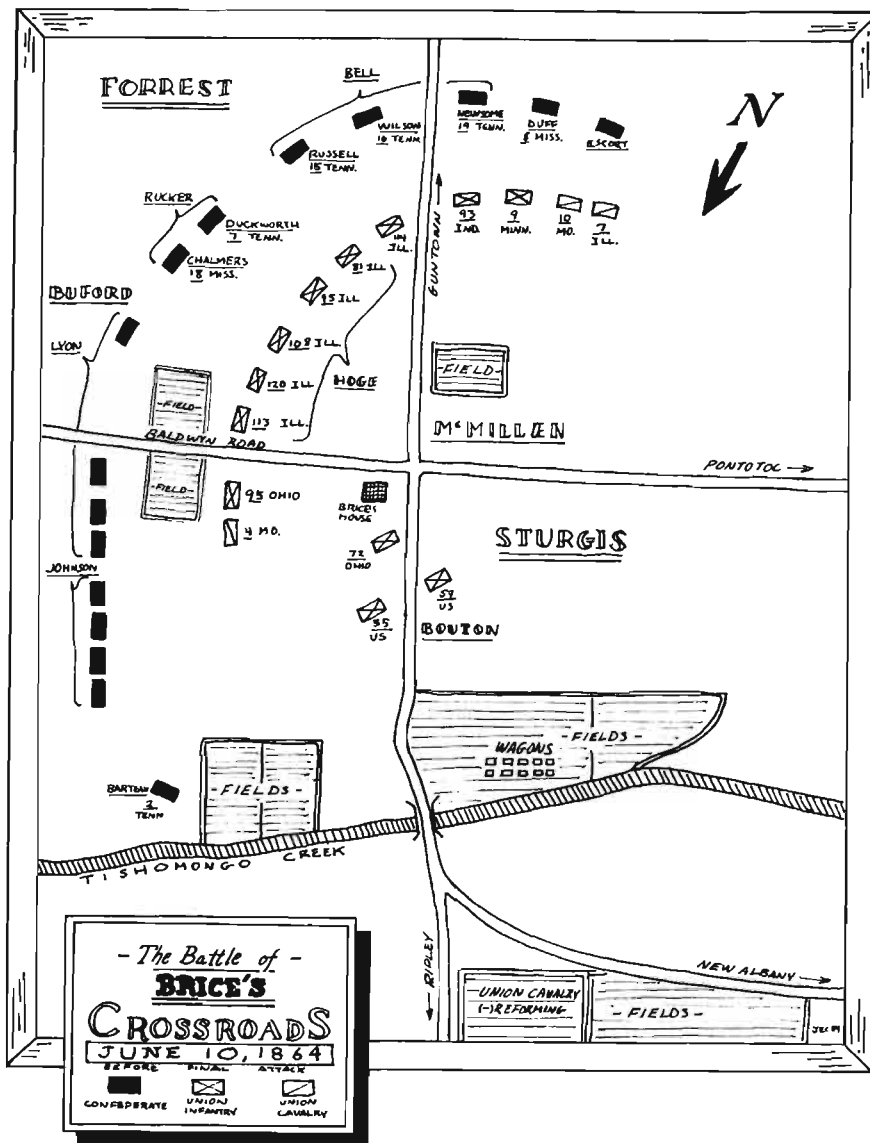
Grierson's cavalry were several hours ahead of McMillen's infantry force, giving Forrest time to take on the Union cavalry before the infantry could reinforce them. Forced to hurry into battle, the Union infantry arrived at Brice's Crossroads exhausted and demoralized.

cavalry back towards the crossroads. Being outnumbered 3,300 men to 800 men and 10 pieces of artillery to none, Lyon halted his attack. His troops began to build hasty fortifications out of fence rail.

At this moment, the Federals had probably their best opportunity to win the battle, had they attacked, but when the Union commanders saw the Confederates tearing down the fence, they incorrectly assumed that the rebels were preparing for a major assault. Lyon enhanced this misconception with continuous feints. Although the major attack did not materialize, Lyon kept the enemy under a constant and intense fire. Because of the dense

undergrowth and the positioning of his troops, Lyon was able to keep his men concealed.

At approximately 1130 hours, Colonels Rucker and Johnson arrived with their respective commands. Rucker's troopers were moved to the left of Lyon's, while Johnson's were placed on his right. Forrest quickly dismounted these forces and the amount of lead flying into the dispirited Union cavalry increased. Meanwhile, the rapid-firing (Spencer) carbines of the troopers in blue quickly began to run low on ammunition and Grierson repeatedly sent back word to have the infantry hurried up. With the arrival of Rucker and Johnson, Forrest had two-thirds as many



Map 4: The Battlefield

Once the heavy Union force crossed Tishomongo Creek, it was pinned down by Forrest's force and unable to flee as the situation worsened. Rebel fire converged on the encircled Union position, while the Federals' fire, directed outward, could not be as effective.

men as Grierson on the field. The intensified firing and continuous feints by Forrest's forces led Grierson to report that the enemy was "in large numbers, with double lines of skirmishers and line of battle with heavy supports."¹³ Grierson also reported that he had succeeded in "repulsing with great slaughter, three distinct and desperate charges."¹⁴ These "charges" were simply feints used by Forrest to buy time until the balance of his command arrived.

Sturgis finally arrived on the field at 1200 hours, only to find one of the cavalry brigade commanders

threatening to "fall back unless he received some support" and the other "almost demanding to be relieved."¹⁵ Sturgis left the field to hurry Colonel Hoge, who had already received three successive orders to "move forward as rapidly as possible" and finally to "move forward at the double-quick."¹⁶

Forrest's shrewd assessment was now beginning to be verified. As Hoge's Brigade began to arrive, it was completely exhausted and further demoralized by the scene: "The cavalry...falling back rapidly in disorder and the roads at Brice's house were filled with retreating cavalry,

led horses, ambulances, wagons, and artillery, and the whole presenting a scene of confusion and demoralization — anything but cheering to troops just arriving."¹⁷ As the cavalry fell back, it was exposed to an equally depressing sight, the infantry who had fallen out of the order of the march column. These men were overcome by the rapid marching — creating the inevitable accordion effect — and the heat had taken its toll over the last several miles.

Colonel Winslow reported that "over three-fifths of the infantry did not get into the fight on account of exhaustion."¹⁸ Hoge said that his men were so exhausted that many could not even load their rifles. He also said that 20 percent of his command had fallen out of the march.¹⁹

Forrest's tactics of disguising his true intentions and troop dispositions continued to be very effective. As Colonel Wilkin's Brigade arrived, Colonel McMillen took over the deployment of his arriving infantry, "without any exact knowledge as to the position of the enemy."²⁰

On the other side of the field, Brigadier General Buford arrived with Colonel Bell's Brigade and the artillery. Forrest placed him in charge of the right and center and led Bell's men to the left and put them in line beyond Rucker (see Map 4). Forrest was preparing for his characteristic artifice. Now that everyone was up, he would launch a heavy assault on the front, supported by heavy assaults on the flanks, and, if Barteau reached the field in time, from the rear.²¹ Forrest moved from unit to unit, riding up and down the line, resembling the very "God of War" as one of his soldiers wrote later. Because of the intense heat, he "fought most of the battle in his shirt sleeves, sleeves rolled up and his uniform coat of a Major General laid across the pommel of his saddle."²²

Forrest had instructed Captain Morton (his Chief of Artillery) that once the battle started, to roll his guns up by hand to support the assault. He began yelling to his troopers, "Get up, men. I have ordered Bell to charge to the left. When you hear his guns, and the

bugle sounds, every man must charge..."²³ At about 1500 hours, all was ready. Both sides had enjoyed a 30-minute lull, and Forrest had completed his final preparations. The brief rest proved to be the calm before the storm as Forrest's troopers attacked with the impetuosity which had characterized them so often before.

McMillen reflected, "they attacked me along my whole line and outflanked me on both flanks at the same time."²⁴ As the Union infantry was forced back, Barteau and his 250 men arrived and assaulted their rear with the bugler galloping along the line sounding the charge at long intervals, as if several regiments were attacking.²⁵ This rear assault proved to be the *coup de grace* for Sturgis' Army. The encirclement was so complete that Barteau reported "one of the Confederate artillery fell among my men."²⁶

During the assault, Colonel Bouton arrived with his brigade and the indolent supply train. As the wagons began to assemble in a field near the bridge (see Map 4), they came under hostile fire. The vanguard of the wagons attempted to cross the bridge a second time (this time much faster and in the opposite direction) and met the tail of the train just arriving which, needless to say, created a great deal of confusion.

The Pursuit

In the meantime, the Federal infantry, as if by signal, broke simultaneously and fell through a hastily assembled blocking force, the 72d and 95th Ohio and 200 dismounted men from the 10th Missouri. As the panic-stricken mob ran through this line, they arrived at the bridge only to find an indiscriminate mass of wagons, artillery, caissons, ambulances, and broken, disordered troops. To compound this confusion, the "hand-rolled" Confederate artillery and some captured Union artillery began firing double-shotted canister into this seething mass.²⁷

Bouton organized his brigade into a second blocking position between Dr. Agnew's house and Stubb's farm, with the 55th U.S. posted on the left side of the road and the 57th U.S. and Lambert's artillery on the right side. There,

"...The Union mob reached Ripley and attempted a reorganization, but had barely stacked arms when Forrest hit them again..."

just south of the bridge, the 72d and 95th Ohio and the elements of the 10th Missouri fell through this line.²⁸

As Forrest continued to crowd the rear of his routed enemy, his innate military genius (he had no formal education) was surfacing, as it had done so many times during the war. "Come on men," he urged his troopers, "in a rout like this, ten men are equal to a thousand."²⁹ He had told Morton the previous morning that "the way to whip an enemy is to get 'em skeered and keep the skeer on 'em."³⁰ Forrest was never satisfied with simply defeating an enemy, but was bent on their destruction. Forrest continued to keep the "skeer" on the Federal troops until his own force was exhausted to the point of near ineffectiveness.

At 2000 hours, Forrest allowed his men to rest and sent forward the horse-holders, (In those days, if the cavalry was fighting dismounted, one man in four would remain in the rear and hold the horses — they were the horse-holders.) as they were the closest thing to a reserve that he had left.

This lessened pressure, however, did not slow down the retreating column or ease the prevailing confusion. Colonel Bouton found Sturgis at the Stubb's House at 2300 hours on the night of the tenth. "For God's Sake," he pleaded with Sturgis, "Don't let us give up so." "What can we do?" replied Sturgis, not really expecting an answer, "If Mr. Forrest will let me alone, I will let him alone."³¹

Forrest had no inclination to leave Sturgis alone. He woke his sleeping troopers at 0100 hours on the 11th and continued the pursuit in force. At 0300 hours he hit the enemy rearguard of cavalry at the south prong of the Hatchee; this line quickly gave way. Here Forrest found that "they had abandoned the balance of the wagon trains, all their wounded, and 14 pieces of artillery."³² A private in Forrest's command wrote, "this slough was

knee-deep in mud and water; logs lying here and there and on top of every log were Yanks perched as close as they could be, for there were more Yanks than logs — reminded me of chickens at roost."³³

Four miles east of Ripley, continuing the pursuit, the 7th Tennessee and Forrest's escort met another line of enemy, but it was only a "feeble and ineffective resistance." Two miles east of Ripley the Federals made another stand that was followed by another "characteristic retreat."³⁵ At 0700 hours, the Union mob reached Ripley and attempted a reorganization, but had barely stacked arms when Forrest hit them again in the rear and both flanks. The Union defenses quickly caved in, leaving "another piece of artillery, two caissons, and two ambulances."³⁶ From this point on, the Federals offered no serious resistance, but retreated in "the most complete disorder, throwing away guns, clothing and everything calculated to impede their flight."³⁷

As the remnants of the Union force reached Colliersville, it was obvious to any observer that they had suffered a major defeat. Their march down the road had taken more than a week, but the return took only two nights and a day. The official reports from both sides revealed that Forrest had indeed won a decisive victory. Confederate losses were 96 killed and 394 wounded; Federal casualties were 223 killed and 394 wounded.³⁸ Even more significant was the count of prisoners: Forrest captured 1,608 men along with 16 guns, 1,500 stands of small arms, and 176 wagons, including a vast supply of harnesses, quartermaster, medical, and other equipment and supplies.³⁹

The Battle of Brice's Cross Roads illustrates the decisive conclusion to an engagement where a victor's plans visualized the application of the principles of war. On the other hand, we see the vanquished commander's complete disregard of them or, at least, ineptitude in their application.

The Principles of War Applied

Objective

General Forrest's overall objective during these latter stages of the war was to harass Sherman's communications and try to divert as many Union troops as possible from Sherman's front in Georgia. With Sherman taking the initiative and sending Sturgis against Forrest, it would seem that Forrest would be forced to forfeit his objective, at least for the time being. However, Forrest realized that if he could destroy his adversary, he could force Sherman to divert more troops, not only to replace the Sturgis expedition, but also to reinforce the other garrisons protecting his rear throughout central and eastern Tennessee, North Alabama, and northwestern Georgia. These garrisons had to be reinforced not only against the forces led by Forrest, but also to neutralize the aura of invincibility attached to Forrest's name. This aura of invincibility, present throughout the Union forces in the west, was certainly enhanced by the victory at Brice's Cross Roads.

Sturgis' objective was simply to kill Forrest. It appears apparent that Sturgis had developed inadequate plans to do this. He didn't know how to find Forrest, or even what to do with him if he found him. This lack of planning ensured that when the two forces met, the terms of engagement would be choreographed by Forrest.

Offense

During the course of the battle, the Confederate officers were the only leaders initiating any offensive operations. As the battle first opened, both sides were faced with the same problems — to get the balance of their forces up while holding off their opponent. To accomplish this, the Confederates relied on probing attacks and feints. The Federals, on the other hand, were content to remain in defensive positions. These offensive movements, and the subsequent paralysis of the Union troopers, allowed the Confederates to keep their adversary off balance and fixed in position.

ORDER OF BATTLE	
UNION: Brigadier General Samuel D. Sturgis	
Cavalry Division	BG Benjamin H. Grierson
1st Brigade	COL G. E. Waring, Jr. (1500 men)
7th Indiana	COL John P. C. Shanks
4th Missouri	LTC Gustav von Helmrick
2d New Jersey	COL Joseph Karge
19th Pennsylvania	LTC Joseph C. Hess
2d Brigade	COL Edward F. Winslow (1800 men, 6 guns)
3d Iowa	LTC John W. Noble
4th Iowa	MAJ A. R. Pierce
10th Missouri	LTC Frederick W. Banton
Provisional Regiment	CPT Augustus M. Goodrich (including Battery X, 1st Illinois Light Artillery)
7th Illinois	
7th Wisconsin Battery	
Infantry Division	COL William L. McMillen
1st Brigade	COL Alexander Wilkin (2,000 men, 6 guns)
114th Illinois	LTC John T. King
93d Indiana	COL Dewitt C. Thomas
72d Ohio	COL Charles G. Eaton
95th Ohio	LTC Jefferson Brumbock
9th Minnesota	LTC J. F. Marsh
Company E, 1st Illinois Light Artillery	CPT John A. Fitch
Section, 6th Indiana Battery	CPT John M. Mueller
2d Brigade	COL George B. Hoge (1,600 men, 4 guns)
81st Illinois	COL Franklin Campbell
95th Illinois	COL Thomas W. Humphrey
108th Illinois	LTC Reuben L. Sidewell
113th Illinois	MAJ Cephas Williams
120th Illinois	COL George W. McKeary
Company B, 2d Illinois Light Artillery	CPT F. H. Chapman
3d Brigade	COL Edward Bouton (1,200 men, 2 guns)
55th U.S. Infantry (Colored)	MAJ E. M. Lowe
57th U.S. Infantry (Colored)	LTC Robert Cowden
Battery F, 2d U.S. Artillery (Colored)	CPT C. A. Lamberg

When the time was right for the final assault, Forrest's impetuous violence of action had so much impact that the Union force melted away. For all practical purposes, all Union resistance ended at this time, while Forrest maintained offensive action throughout the pursuit as well.

Mass

Although Forrest could not rely on numerical superiority to destroy his enemy, he was most successful in massing his fires. He could thank his selection of the battlefield for that advantage. Upon arriving on the battlefield, the Union column was first channelized by the bridge over Tishomingo Creek. Secondly,

after crossing, they were prevented from deploying properly by the Confederate positions surrounding their perimeter. Consequently, the fires had to originate from a common point outward. The Confederates, on the other hand, were firing from perimeter positions, their fire converging on a common point. As the Union line constricted toward the bridge, this advantage, of course, multiplied with every backward step as maneuver room became smaller and smaller. The maneuver area became so small, in fact, that by the time the last elements arrived at the bridge they found "an indiscriminate mass of wagons, artillery, caissons, and demoralized troops."

Economy of Force

Although Forrest never fielded as many troops as his opponent, he did not let the Union leaders discover this. Using a series of feints and by shifting forces from one point to another, he kept his opponents so intimidated that they would not attack. Grierson reported that he had succeeded in "repulsing...three distinct and desperate charges." He said that the enemy was in large numbers, with double lines of skirmishers and line of battle with heavy supports." At the time, he actually had 3,000 men facing not more than 2,000 Confederate troopers.

Maneuver

On the night of 9 June, Forrest realized that a fight with Sturgis was imminent. Faced with the problem of consolidating his scattered forces, one can easily see from the map (see Map 3) where he would draw his forces together. (What better place for a consolidation than at a cross road?) On the other hand, the Union column was traveling down a single, narrow road, bordered by largely impenetrable foliage. Because of this and the dismal weather, they were not allowed any freedom of movement. This constricted situation continued upon arriving at the battlefield: the Union troops were compressed into a small area. Their movement was restricted by Tishomingo Creek to their rear, the Confederate positions to their front and flanks, and by the lethargic wagon train blocking the approach road and the bridge. In contrast, Forrest enjoyed total freedom of movement and could easily transfer troops from one point to another, which he did with maximum efficiency.

Unity of Command

Once Forrest arrived on the field, he personally took command from Lyon and went about the business of issuing orders and positioning arriving units. His physical presence inspired his troopers — reminding one Confederate private of the "God of War." Forrest and his command had been through many successful campaigns together (in fact, he had personally recruited most of them), and his leaders were hand-picked. They could anticipate

CONFEDERATE: MAJ GEN Nathan Bedford Forrest

Buford's Cavalry Division

3d Brigade

3d Kentucky
7th Kentucky
8th Kentucky
12th Kentucky

4th Brigade

2d Tennessee
15th Tennessee
16th Tennessee
19th Tennessee
Rice's Battery
Morton's Battery

6th Brigade

8th Mississippi
18th Mississippi
7th Tennessee

Johnson's Brigade (of Roddy's Div)

4th Alabama
Moreland's Regiment
William's Battalion
Warren's Battalion

BG Abraham Buford

COL H. B. Lyon (800 men)
LTC Gustavus A. C. Holt
LTC L. J. Sherrill
LTC Absalom R. Shacklett
LTC W. W. Faulkner

COL Tyree H. Bell
(2700 men)

COL C. R. Barteau
COL Francis M. Stewart
COL Andrew N. Wilson
COL John F. Newsom
CPT T. W. Rice (4 guns)
CPT John W. Morton
(4 guns)

COL E. W. Rucker
(700 men)

COL William L. Duff
LTC Alexander H. Chalmers
COL William Duckworth

COL W. A. Johnson
(500 men)

COL Alfred A. Russell

his order, even when they had received none, and could interpret implied orders when not explicitly stated.

The Federal command was quite confusing. To begin with, Grierson deployed his cavalry to open up the battle. When Sturgis arrived on the field (about the same time as Forrest), he quickly left to hurry the infantry and even stopped at the bridge to attempt to untangle the mess there. These duties could have and should have been assigned to staff officers. Meanwhile, Colonel McMillen had to assume field command and begin deploying the arriving infantry "without any exact knowledge as to the position of the enemy."

Security

A difference in the confidence level of the opposing commanders is directly related to what they knew about each other. From the moment the Union expedition was being assembled in Memphis, Forrest knew the size, composition, and mission of his adversary through a network of spies outside,

as well as inside, the city. Residents along the route of march also provided valuable information as did frequent raids on the column. In contrast, Sturgis was forced to rely on misinformation planted by Forrest. Forrest used local residents, escaped slaves and prisoners, as well as his spies to spread misinformation, forcing Sturgis to know only what Forrest wanted him to know. These methods, in addition to his effective feints and irresistible pursuit, led Sturgis to report after the battle that Forrest had 15,000 to 20,000 men during the battle and pursuit. The fact remains that Forrest had no more than 3,400⁴⁰ at any time during the battle.

Simplicity

General Nathan B. Forrest is credited in military circles the world over with his famous prescription for tactical success, to get there first with the most. I can think of no standard operating procedures which has so much military significance expressed in so few words. His orders to his divided

command on the night of the ninth were characteristically succinct: "to move as rapidly as the 'jaded' condition of the horses would allow, intending to concentrate at Brice's Crossroads before the enemy." He ordered Barteau "to attack and annoy the enemy's rear and flank." He didn't tell his subordinates what routes to follow or even what to do when the enemy was contacted. Forrest was able to enjoy the luxury of full confidence in the decisions, actions, and reactions, of his junior leaders. He could count on their initiative because he had selected, trained, and observed them in combat many times before.

"...Forrest was able to enjoy the luxury of full confidence in the decisions, actions, and reactions of his junior leaders..."

Summary

The Battle of Brice's Crossroads is a masterpiece of strategy and tactics. Marshal Foch used the battle as a text for a lecture at Chaumont.⁴¹ As we have seen, the Confederate victory and subsequent Union rout can directly be related to the fact that Forrest intuitively applied each and every principle. Sturgis, on the other hand, violated

many of the principles. Aside from possibly the Battle of Nashville, the Battle of Brice's Crossroads is the only decisive victory of the Civil War in which one force was totally eliminated as an effective fighting force. The battle remains the definitive example of how a force can defeat an opponent over twice its size.

Footnotes

- ¹Shelby Foote, *The Civil War, a Narrative*, Vol. I (New York, 1974), p. 14.
²William C. Oates, *The War Between the Union and the Confederacy*, (Dayton, 1905), p. 475.
³U.S. War Department, *The War of the Rebellion — A Compilation of the Official Records of the Union and Confederate Armies* (Washington, 1889), Serial Number 78, pp. 121, 142. (This work is hereafter referred to as U.S. War Department.)
⁴U.S. War Department, Serial No. 77, p. 698.
⁵U.S. War Department, Serial No. 78, p. 82.
⁶U.S. War Department, Serial No. 77, p. 218.
⁷John A. Wyeth, *Life of General N. B. Forrest* (New York, 1899), p. 400.
⁸*Ibid.*, p. 400.
⁹U.S. War Department, Serial No. 77, p. 223.
¹⁰E. Hunn Hanson, *Battles and Leaders of the Civil War*, Vol. III (New York, 1914), p. 400.
¹¹U.S. War Department, Serial No. 77, p. 103.
¹²Foote, p. 367.
¹³U.S. War Department, Serial No. 77, p. 129.
¹⁴*Ibid.*, p. 129.
¹⁵Hanson, p. 421.
¹⁶U.S. War Department, Serial No. 77, p. 163.

- ¹⁷*Ibid.*, p. 208.
¹⁸Hanson, p. 421.
¹⁹U.S. War Department, Serial No. 77, p. 165.
²⁰*Ibid.*, p. 208.
²¹Andrew Lytle, *Bedford Forrest and His Critter Company* (New York, 1960), p. 299.
²²John M. Hubbard, *Notes of a Private* (St. Louis, 1913), pp. 110-111.
²³*Ibid.*, pp. 110-111.
²⁴U.S. War Department, Serial No. 77, p. 211.
²⁵John B. Lindsley, *The Military Annals of Tennessee, Confederate* (Nashville, 1886), p. 617.
²⁶*Southern Sentinel* (Ripley, Mississippi, 27 June, 1935).
²⁷Lytle, p. 300.
²⁸U.S. War Department, Serial No. 77, p. 213.
²⁹Lytle, p. 301.
³⁰*Ibid.*, p. 302.
³¹U.S. War Department, Serial No. 77, p. 214.
³²*Ibid.*, p. 224.
³³William Witherspoon, *Reminiscences of a Scout, Spy and Soldier of Forrest's Cavalry* (Jackson, 1910), p. 68.
³⁴U.S. War Department, Serial No. 77, p. 224.

- ³⁵*Ibid.*, p. 224.
³⁶*Ibid.*, p. 124, 224.
³⁷*Ibid.*, p. 224.
³⁸*Ibid.*, p. 95, 230, 231.
³⁹*Ibid.*, pp. 95, 226-228.
⁴⁰U.S. War Department, Serial No. 77, p. 95.
⁴¹Foote, p. 368.

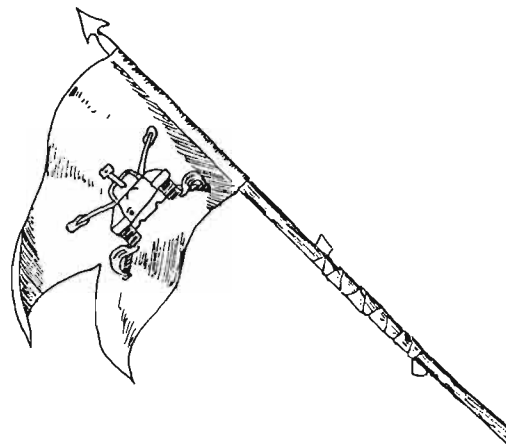
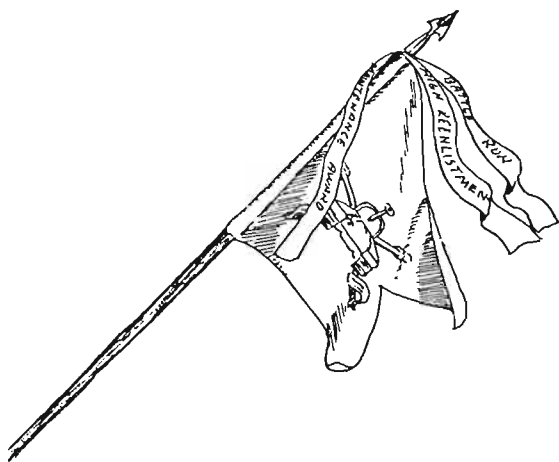
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A Tale of Two Guidons...

Leading the Company

by Captain Dale E. Wilson

As I walked through a battalion's area one day, a pair of company guidons caught my eye. What was interesting was that one stood starkly alone on a bent staff with "thousand-mile tape" wrapped around the joint where the two halves join, while the other bore streamers denoting the unit was "Honor Company," had received the battalion "Maintenance Award," had "High Reenlistment," and was tactically proficient as evidenced by a "Battle Run" streamer.

Those two guidons said a lot about the quality of the units they represented. My interest piqued, I decided to find out how the two companies differed and why.

The next day, I dropped by the motor pool during a scheduled command maintenance period. The first thing that caught my eye was the streamer-bedecked guidon I'd seen the day before. It was flying from the company commander's tank. The unit's vehicle line was alive with activity.

In front of each tank stood an NCO calling out items to be checked from the preventive maintenance checks and services section of the vehicle operator's manual. As an item was called, a crewman would perform the check and report his findings to the NCO, who logged it on the DA Form 2404.

In one instance, a young soldier appeared to be confused by his NCO's instructions, so the NCO patiently showed the soldier what to do, then had him perform the check.

Well, I thought, this company obviously has strong NCO leadership, but where are the officers?

I asked the First Sergeant, who was climbing in and out of tanks making spot checks. "You'll find them up at battalion maintenance, sir," was his reply.

As I walked through the motor pool toward the maintenance shop, I noticed the line of tanks belonging to the other company whose guidon I'd noted the day before. Only a few soldiers were there. Several tanks were still locked up, and those that were being worked on had only one or two soldiers performing the tasks. Few operator's manuals were out, and NCO supervision was conspicuously absent.

I walked up to a soldier who was greasing roadwheels. "What are you doing, soldier?" I asked.

"Pulling PMCS, sir," he replied.

"Where's your dash-ten, your tank commander, and the rest of your crew?" I asked.

"Well, we don't have a dash-ten, but it's on order. My tank commander called in this morning to

say his wife was sick and he had to take her to the hospital, and the driver's out by the front gate getting us a couple of sodas from the roach coach."

"Okay," I replied, "how about your platoon sergeant or platoon leader?"

"Oh, they're all up at the orderly room in a meeting with Top and the Old Man."

So much for "command maintenance" in this outfit, I thought.

At battalion maintenance, I found the first company's commander, executive officer, and platoon leaders hard at work reconciling the document register and checking out bins in the Parts Room. I hung back, listening to the conversation:

Commander: "Okay, First Platoon, talk to me about the parts in One-Two's bin."

1st Platoon Leader: "Sir, we received the transmission oil pressure sending unit on this morning's parts run. The motor sergeant knows it's in, and a mechanic is on his way now to get it and install it. We'll have One-Two up by close of business. As for the other parts you see, I realize that we've had them for more time than that allowed for installation on the vehicle, but we can't put them on until we get the required cotter pins."

Commander: "Right. Have you

"...Those two guidons said a lot about the quality of the units they represented..."

checked with quick service supply to see if they have any on hand?"

1st Platoon Leader: "Yes sir, but they're at zero balance, so I dropped a requisition on (he points to the document register) zero-one-nine. That's three weeks ago. You'll notice that they've been released for issue, so they should get here any day now."

Commander: "Good. Now, tell me what you'd have done if they weren't released for issue."

1st Platoon Leader: "That's easy. I'd wait one more week and, if the status was still good, send a follow-up. If I got a bad status on the follow-up, I'd reorder."

Commander: "Correct. Third Platoon, I know you're new at this, so I want you to pay attention. See those end connectors in Three-Three's bin? They've been laying there for six days now. I expect you to ensure your platoon sergeant gets your tank commanders up here every day to clean out their bins and get the parts put on the vehicles. If they can be installed by the crew, fine. If not, coordinate with the motor sergeant. If you have trouble getting a mechanic, let the XO know. Once the part is on the vehicle, make sure the TC goes to the dash-fourteen and closes out the entry. Got that?"

3d Platoon Leader: "Yes sir."

Hey, I thought, these guys are squared away. The CO gets personally involved and uses his inspection as a teaching vehicle for his platoon leaders. I wonder what that other company does?

I went into the PLL clerks' work area. The PLL clerk for the other company was making entries in the document register. At that moment, the XO walked up.

"Let me have the document register, Brown," he said to the clerk. "I need to initial off on the high-priority parts." After he'd finished, I asked the clerk if the XO usually did that.

"Yes sir, the Old Man delegated the authority to him."

"I see," I replied. "Does your commander get down here often to check parts status?"

"Nah," said the clerk. "The last time he asked to see the book was just before the AGI. That was about eight weeks ago."

Hmmmm, I thought, quite a difference in interest these two commanders take in their maintenance effort.

That afternoon, I decided to eavesdrop on training in the two companies. The difference again was like that between night and day.

In the company whose guidon sported the streamers, I found numerous activities going on simultaneously. The supply sergeant was working "one-on-one" with his clerk, showing him how to prepare Statements of Charges and Cash Collection Vouchers. In the back of the orderly room, the 1st Platoon was using a sand table to practice platoon battle drills. The second platoon was outside, tank commanders drilling their crewmen in the assembly, disassembly, and cleaning of the M-85. Third Platoon was in the motor pool practicing crew drills inside the tanks.

Throughout it all, the commander and first sergeant could be seen observing training in each element, and platoon leaders and platoon sergeants were active participants, training with the troops. In 2d Platoon's area, the commander participated in an M-85 field-stripping competition with the crewmen.

In the other company, I found a cluster of bored soldiers in the back of the orderly room listening while a junior NCO read a task to them from the 19E Soldiers Manual. No other officers or NCOs were present.

On the way back from the motor pool, where I'd been watching the first company's 3d Platoon perform crew drills, I ran into the company commander and introduced myself. "I hope you don't mind, but I saw your guidon yesterday and wanted to find out what makes your company tick, so I've been observing some of your training and maintenance today. I'm impressed."

"Thanks," he said, "but it's easy to have a good company when

you've got soldiers and NCOs like I've got. They're great."

"So I've noticed. Mind if we go up to your office and talk?"

"Sure," he said.

When we got to the orderly room, I asked him what his physical training program was like. He pulled out a notebook and handed it to me. In it were the PT test cards for everyone in the company. Glancing through, it looked to me like the average score was over 250.

He noticed my expression and said, "The average is 261. When I first took command, it was 209. They were in pretty bad shape. We had a high sick call rate on PT days, and attendance by officers and NCOs was terrible. The company had one NCO who led PT regularly, and they did the same thing every day.

"The first thing I did was have the 'first shirt' administer the PT test to me in front of the whole company. I scored a 288. I issued a challenge to the troops, offering a three-day pass and letter of commendation to anyone who beat my score. I told them I'd make it a four-day pass if they beat my score and my two-mile run time of 13:40. Since then, I've given a lot of passes and written a lot of letters, but the 52-point increase in average scores was worth it.

"I also changed the way we ran our PT sessions. We've now got three Master Fitness NCOs in the company. We give the troops a lot of variety — aerobics, grass drills, guerilla exercises, sprints, distance runs in ability groups, strength training, etc. And, we rotate all our NCOs as PT leaders.

"I'm a firm believer in the benefits of a rigorous PT program. I expect officers and NCOs to lead by example, so I challenged them to exceed 250 on the APRT. I also try to split our workouts equally between aerobic and anaerobic training. To help increase scores on the push-up and sit-up events, we do two minutes of push-ups and sit-ups at every PT session."

I asked him how the unit planned its other training activities.

"That's easy," he said. "We just



observe the Battalion Training Management System guidelines. We have a weekly training meeting at which we break out the time for unit training. The platoons have already assessed their needs, so they present the tasks they want trained, assign instructors, and request resources. I think our key to success is that we keep the classes small and allow first-line supervisors to function in their role as trainers.

"We also take our company NCO and Officer Professional Development Programs seriously. 'Top' is the personification of the perfect master trainer. He meets with all the NCOs twice a week. They work on Skill Level 3 and 4 tasks and other NCO duties and responsibilities. I work with the officers during those same periods and in 'one-on-one' sessions as often as possible."

"What about morale indicators?" I asked.

"No AWOLs in the past 12 months, and the lowest Article 15 rate in the brigade," he said matter-of-factly. "We also exceeded our reenlistment objective the last three quarters and give a lot of awards. I'm a firm believer in General Bruce C. Clarke's philosophy that the ratio of pats on the back to kicks in the butt should be 10-to-1 in favor of positive strokes. I don't mean we give medals out like candy, but I actively seek opportunities to recognize outstanding performance with letters of commendation or appreciation or certificates of achievement — in addition to decorations."

"Something else I do is send a copy of letters, certificates, and award citations to parents and wives with a personal note telling them how well their son or husband is doing and how proud I am to be their commander. That little touch gets a lot of mileage for the amount of effort expended. I've gotten calls from parents and had soldiers come up and thank me — it really lets them know I care about them as individuals.

"I also expect the officers and NCOs to come in and spend time in the billets after duty hours. They do it informally, usually in civvies, lounging in the day room or talking to the guys in their rooms. It makes the leaders' presence felt — lets the troops know we care how they live and that we're not 'flag soldiers'."

He was on a roll, and I didn't want to interrupt.

"I think the most important thing a commander can do is create a climate in which subordinate leaders and soldiers can work to their fullest potential. That means giving them the freedom to fail while the commander absorbs the flak from higher headquarters.

"When I was enlisted, I despised officers who sat in their offices drinking coffee and shuffling papers all day while trying to control every detail of every operation themselves. I swore if I ever got the chance to be a commander, I'd let my NCOs take care of NCO business.

"At the same time, I make it a practice to stay out of my office and be with the troops. Again, I think General Clarke summed it up best when he said 'the only things that get done are those things the boss checks.' But I don't just go snooping or stand on the side, observing. I participate with the troops. During maintenance periods, I put on my coveralls and work side-by-side with them as much as possible. When they train, I train right beside them. That does two things for me. It gives me a chance to informally check up on NCO performance and ensure standards are being maintained. It also gives me credibility with the troops because I prove to them I'm tactically and technically proficient and that I'm willing to share their hardships."

I looked at my watch. "Hey, time flies when you're having fun," I said. "It's time I got going, though."

"Yeah," he replied, waving at a

well-stocked in-box. "It's after 1730, so I'd best get started on this paperwork — my wife likes it when I get home at a decent hour."

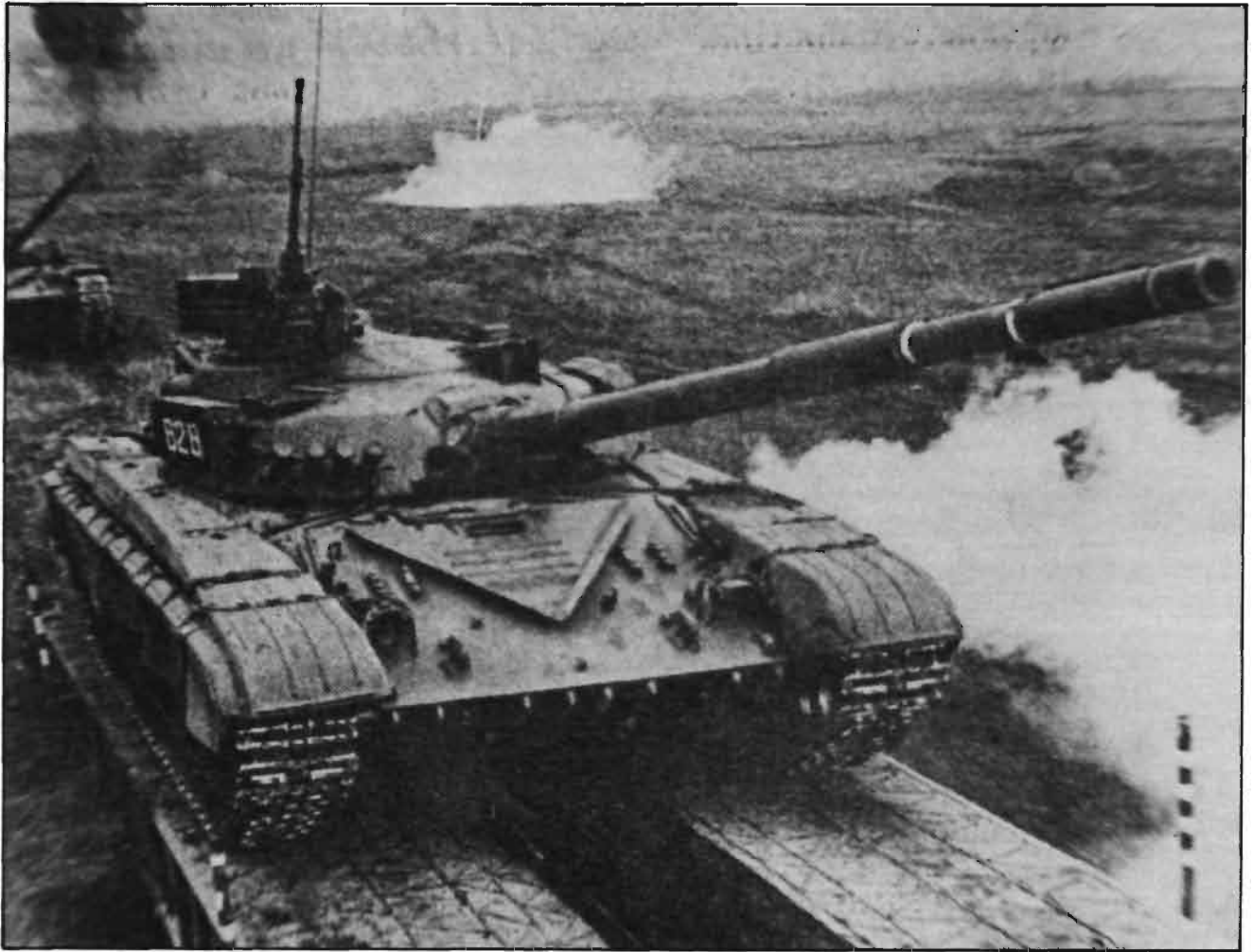
As I left the orderly room, a buck sergeant from another company passed me without saluting. Before I could say anything, a PFC coming out the door behind me said, nodding in my direction, "Excuse me, sergeant, but aren't you forgetting something?" The NCO seemed to notice me for the first time and sheepishly saluted.

It wasn't hard to see how that company earned all those streamers....



CAPTAIN DALE E. WILSON

was a Sergeant First Class before his commissioning as an OCS honor graduate in 1979. He has served as a cavalry platoon leader in the 194th Armored Brigade, Fort Knox; a tank battalion adjutant in Korea; a tank battalion S3 Air and company commander in the 2/34 Armor, Fort Carson, where his tank company was Fort Carson's 1985 Draper Award winner. He is now attending CAS³ to be followed by completion of a masters degree in history at Temple University. He is scheduled to be assigned to the U.S. Military Academy faculty in June, 1988.



Appearing in the 18 May 1986 issue of *Krasnaya Zvezda*, the official newspaper of the Soviet military, this photo shows T-80 on maneuvers. The laser-guided missile designator-tracker has been removed.

T-80:

The Newest IT Variant Fires a Laser-Guided Missile

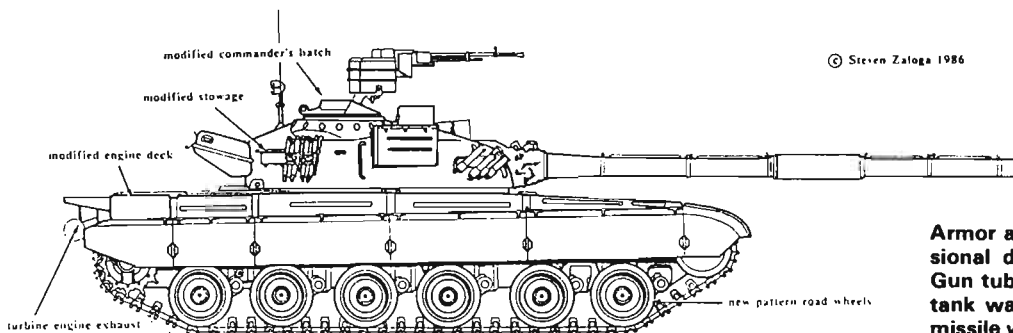
by Captain Gilberto Villahermosa

The T-80, newest tank in the Soviet inventory, is also the latest addition to the Soviet *Istrebitel'nyy Tank* (Destroyer Tank, Fighter Tank) series, with the capability of launching antitank guided missiles as well as firing conventional main gun rounds. First fielded in 1968, the IT series has made use of every Soviet medium tank since the T-55, firing wire-guided (for earlier models), infrared, and laser-guided missiles (for new model tanks). While every IT is thus a tank, every tank is not an IT. In fact, the overall number of ITs fielded in the Soviet

tank fleet is relatively small — only one battalion per tank division. Tanks not configured as ITs can be modified to carry missiles in a short period of time. For the newer series of tanks (T-64, T-72, T-80) this modification centers around the installation of an optical tracking/designation system on the turret roof of the tank.

The T-80 tank (as well as the T-64 and the T-72) can be modified to fire the KOBRA Tank-Launched Guided Missile (*Tankoviy Upravlyaemiy Reaktivniy Snaryad* — TURS). TLGMs are intended for the destruc-

tion of armored targets at extended ranges (3,000 meters and greater), when Soviet tanks are at a disadvantage against their western counterparts. TLGMs supplement — not replace — the tank's main gun, which has greater effectiveness at near and medium ranges. This is because of the inherent disadvantages of TLGMs as they currently exist, disadvantages which have been discussed in Marshal of Soviet Tank Forces Babadzhanian's book *Tanki i Tankovye Voiska* (Tanks and Tank Troops) (Voennizdat, Moscow: 1980). This is the first



Armor author Steven Zaloga's provisional drawing of the Soviet T-80. Gun tube would appear longer if the tank was an IT variant and KOBRA missile was mounted for firing.

Soviet military work to discuss TLGMs extensively. These disadvantages are: their slow speed in comparison to main gun rounds; their larger size, resulting in a reduced basic load of ammunition; the necessity of exposing the firing platform for long periods while the gunner tracks the missile onto the target; the requirement for a well-trained gunner who will not lose the missile during flight; the fact that missiles can only be used against targets vulnerable to shaped charges; and their great expense in comparison to main gun rounds.

It is interesting to note that the increased sophistication and complexity of main gun rounds — all aimed at better penetration in the face of improved types of armor — has resulted in a significant increase in their cost, while the revolution in microcircuitry has reduced the cost of antitank guided missiles. It is small wonder that the Soviets believe that the future will see wide deployment, throughout every army, of TLGMs, due to their increased usability.

Fielded in 1978, the KOBRA TLGM borrowed extensively from the technology used in the development of the French ACRA (Anti-Char Rapide Autopropulse), developed by GIAT in the 1970s. (It is interesting to note that Soviet missile development draws heavily on French technology, with the Soviets seeing French antitank guided missiles as the best in the world.) The KOBRA is an externally loaded missile, being manually loaded into the gun tube from the muzzle end. Once loaded, a canvas muzzle cover, reaching to the bore evacuator, is put on to protect the missile from damage prior to use. As the missile protrudes from the end of the gun tube, this gives the appearance that the main gun is longer than the standard 2A46 main gun found on the T-80 tank. This protective cover

“...One can well imagine the impact a well-placed TLGM can have on an armor formation, firing from 4,000 meters...”

is removed when action is anticipated. The missile is activated by a blank round which boosts it out of the tube and ignites the rocket motor. This requires that a blank round either be manually loaded or in a specific location in the automatic loading system prior to launching a missile. The missile is laser-guided, riding a modulated beam. The laser designator is located in an optical tracking/designation system located in an armored box on the right front side of the turret roof. The tank in the accompanying photograph has the optical tracking/designation system removed, but the mount is clearly visible. The KOBRA has a maximum range of 4,000 meters which it can cover in under 8 seconds, traveling in excess of 500 meters a second. Weighing approximately 25 kgs and approximately 1,200 mm in length, its armor penetration is between 600/650 mm of conventional armor.

While there exists a number of shortcomings to the TLGMs presently fielded by the Soviet tank forces (to include external loading and storage of the missile prior to its use), the KOBRA minimizes these. Yet the Soviets themselves seem to feel that much remains to be done in TLGM development. We will soon see, no doubt, the fielding of a Soviet TLGM small enough to be internally loaded, with a corresponding reduction in weight. It, too, will be laser-guided, with a speed and maximum range similar to that of the KOBRA.

Soviet ITs carry only a few TLGMs (probably 2 to 4 each). They

are intended for the disruption and demoralization of enemy armor formations. The ITs are to stall enemy movement long enough for conventional tank formations to close with and destroy the enemy, making use of the tank's main gun at ranges where Soviet tanks are “unstoppable.” One can well imagine the impact a well-placed TLGM can have on an armor formation, firing from 4,000 meters, especially if the existence of ITs were not previously known by those under fire.

Older model ITs — firing wire-guided missiles from the rear of the turret — are believed to be in service with the armies of East Germany, Poland, Czechoslovakia, and Romania. Smoke-launching derivatives are in service with the Egyptian Army.

CAPTAIN GILBERTO VILLAHERMOSA is assigned to the 73d Armor Regiment (Airborne), 82d Airborne Division as the battalion motor officer. He is an armor officer with a foreign area officer secondary, fluent in both Spanish and Russian, and has published numerous articles on the Soviet Armed Forces in *ARMOR*, *MILITARY REVIEW*, and *JANE'S DEFENCE WEEKLY*. Captain Villahermosa's articles are based on Soviet primary sources. He is currently working on *Istrebitel'niy Tank: The History of Soviet Missile-Firing Tanks*, for submission to *ARMOR*.



Random Recollections

Commanders Who Have Influenced My Life

by Lieutenant General Samuel L. Myers (Ret.)

My arrival at Camp Marfa, Texas in early September 1928, following my graduation from West Point, was less than auspicious.

The Southern Pacific train, "The Argonaut," unloaded me at 0200 in what looked to me — fresh from the beautiful Hudson Valley — like utter desolation. The only obvious living person, the telegraph operator, directed me across the street to the St. George Hotel. I floundered through ankle deep dust, dragging my foot locker and suitcase, and banged on the door of the hotel. A voice from above yelled, "Come up." I found the stairs on the outside of the building. St. George was on high. I was given a room where I flopped — plumb tired out.

Shortly after 0700 the next morning, even before I had a chance to

eat, the manager said, "They are downstairs looking for you." I went down the outer stairs and was greeted by a sloppy soldier with a sloppy salute who said,

"I'm Private Ike House. They sent me fur yuh." He awaited me with a shiny buckboard and a pair of beautifully matched mules. After loading my worldly possessions, we set out through the dust, and after about a mile, I was deposited at the front door of Headquarters Camp Marfa and 1st Cavalry. House said, "Leeutenint, I'll wait."

Entering the building and turning left into a large room marked "Adjutant," I was first greeted and welcomed by Master Sergeant Bee, the personnel sergeant major. He had me sign in and asked for three copies of my orders. At that time

the Army never settled for one copy of anything, and the onion skin copies of every correspondence formed a rainbow — almost. Sergeant Bee led me next to Second Lieutenant Cary B. Hutchinson, the personnel adjutant. He did not greet me, but did say, "I suppose you know you're a day late," followed by "No le hace. Second lieutenants are expendable."

While he was escorting me to Captain Wade Gatchell, the adjutant, I tried to figure out how I was a day late since I had left El Paso at 8:00 p.m. the night before. The captain was pleasant, and after a short briefing on customs and duties in Camp Marfa and notifying me that I was to be assigned to Troop E, commanded by Captain Donald R.

“...My arrival at Camp Marfa, Texas, in early September, 1928...was less than auspicious...”

Dunkle, he said, “Now we’ll go see the colonel.”

The CO, Colonel Conrad Babcock, was impressive from the second I walked in his door. He was tall and straight, beautifully groomed and dressed in the finest of boots and breeches, a tailor-made blouse, and a highly polished Sam Brown belt. I turned out my snappiest salute and reported. He said, “Myers, we’re glad to have you in the Black Hawks, the Army’s finest cavalry regiment. If you know your profession, work hard, keep out of trouble, and obey orders with dispatch, you’ll do well.”

He left no doubt in my mind what would happen if I didn’t do all those things. I had a very short wait to find out.

In the 20s and 30s, there was an extreme shortage of officers, yet all functions of a garrison had to be performed; hence, the term “special duty.” All the lieutenants, especially the new ones, were honored with this additional work. My share arrived at officer’s call about two weeks after my arrival. I was handed three sets of special orders. One appointed me post signal officer, one appointed me post E&R officer, and one appointed me Post Exchange officer. At noon mess that day, my older compatriots wasted no time in clueing me in.

Behind the BOQ, and about 75 yards away, was a large ramshackle building, much in need of repair (there was no money for temporary buildings), and painted a bilious green. I spent the first afternoon exploring. At one end was a small radio room, where two men kept us in contact with Fort Sam Houston (8th Corps Area) and Fort Bliss (1st Cavalry Division). I had no office there, but did have a great deal of property and the responsibility for the two men. The central and much larger part of the building was the movie theater, which held 200 seats and a small stage where the regimental band performed concerts during inclement weather. The other end was two stories high, housing the library and the chaplain’s office. This is the part of the

building on which we will soon focus our attention.

On a Sunday morning, shortly after becoming E&R officer, I was peacefully sleeping in when there came a loud banging on my door. It was 7 a.m. I opened the door and there was the colonel’s orderly.

“The Colonel wants to see you out back,” says he.

Dressing in record time, I went out back. There sat the colonel, majestically, on his horse, looking about 19 feet tall and as severe as an executioner. He said not a word, but pointed to the second floor of my building. After looking for an eternity (30 seconds), I did not see anything unusual. He then said, “There is a pane out of the bottom left-hand corner of the first window from the left.” You have one hour until (glancing at his watch) 8:15 a.m. to replace it.”

“Yes, Sir,” said I in my best manner, and saluted.

He rode off, and I scratched my head and started worrying.

The utilities at Camp Marfa, as well as the fire engine, were handled by our one civilian employee, whose name I did not know. His location was equally blank and where he kept his supplies was a mystery. Then I thought of 1st Sergeant Anamosa of E troop, my frequent savior, and I flew to his house. He was up, dressed and, most important, was not flustered. He had an idea. He led me to the utilities building near the hospital. It was locked, so he broke the door; we went in, found a pane of glass, some mixed putty, a putty knife, and a ladder.

With these items and a lot of energy, we double-timed to the seat of trouble. There I held the ladder, and he went up and put the glass in. At about that time, up on the hill, we saw the colonel come out of his house, so we carried the ladder to the kitchen of the BOQ, where Anamosa also hid, and I got back to the building before the colonel could arrive. He looked up at the new glass and turned to me:

“Well done, Lieutenant, well done.” That accolade, the most im-

pressive of my life, is still fresh in my memory 59 years later.

* * *

Came Spring of 1929, and it was time for the annual target season. E Troop was scheduled to go to the rifle range at daybreak on a Monday, but at officer’s call the Saturday before range Monday, Major Herb Watkins, S3 of the regiment, asked me out of the blue if I would like to accompany him and his wife, Geneva, to the Fischer Ranch on Sunday. I was overcome to have such rank show any social interest in me and I accepted with pleasure. I had met Lee and Catherine Fischer only once.

That Sunday afternoon, we toured the ranch. When we returned to the house, some serious drinking of tequila and grapefruit juice started. Poor stupid me. Here I was, a neophyte trying to keep up with experts. The result was inevitable. Before dinner, I was overtaken with a serious nauseating disease. After cleansing my innards, I was put to bed.

I woke up at 3:30 a.m. and suddenly remembered about the range. I asked Major Watkins to please take me into Camp Marfa, but the Watkins and the Fischers were hell-bent to watch the sun rise. Finally, Geneva took pity on me and agreed to take me to the post. As we passed the edge of the target range, I saw the troop already near the firing point, so I yelled at her to stop.

I jumped out, climbed the fence, and raced the 200 yards to the troop. When I arrived, I found that Sergeant Anamosa had brought the troop out and that the captain had not yet arrived. Most wonderful was the fact that Surouski, my orderly, had brought my horse out. He was on the picket line fully equipped. As the captain arrived, I was busy setting up, coaching, and scoring points. I was also relaxing and heaving sighs of relief. I had gotten away with my little indiscretion.

But at about 0900, here came the colonel’s orderly at a gallop.

“Lieutenant Myers, the colonel wants you in his office at once!”

So I mounted Snow Ball and off we galloped for the headquarters. As I walked in through the adjutant’s office, Lieutenant Hutchinson gave me the old thumbs down and Captain Gatchell glared.

After reaching the colonel's office and reporting, he let me stand rigidly at attention while he looked me up and down. Finally, he said, "That was quite a demonstration of speed and agility which you put on at the range this morning. What were you at the Academy, a sprinter or a long-distance man? You showed capabilities of both. To run like that with a hangover impresses me."

All I could say was, "Yes, Sir."

Then he said, "Where were you?"

I told him. He sort of squinted and grinned.

"I hope you have learned a lesson. Both of those families are noted for their ability to put away and hold their booze. You had better get more experience before trying to go that pace. You have violated no regulations, and you were on the job on time, so I can't give you a reprimand, either oral or written. However, you need some fatherly advice: Look out for people like that and go easy on the booze. I like my evening drinks, too, but with moderation. Dismissed."

From then on, Colonel Babcock could do no wrong. He was my hero, my example, my guide for life. Why he never became a general, I don't know.

Along about August of 1929, I got the urge to learn to fly. Probably the \$100.00 a month flight pay was the principal incentive. In September, I was ordered to Brooks Field for flying training, but by February, I had washed out and was back to Camp Marfa to find Colonel Babcock gone. I never saw him again.

The new CO was Colonel Jason S. Fairweather. In appearance — and as I later found out, behavior — he was almost completely opposite from Colonel Babcock.

* * *

The new colonel was not a snappy dresser like Colonel Babcock; he didn't ride much, and, in fact, he made no ripples on the placid surface of life on the Border. But he, too, had a decided influence upon my developing career.

During late Fall of 1930, my platoon had to go to Fort Clark for the Draper Trophy Test. Then we had the Escobar Revolution, so I was away a lot and didn't see the

colonel much until March or April, 1931.

One day that Spring, I was OD. At about 2:00 a.m. the sergeant of the guard came and woke me up with the news that a drunk coming up the Presidio Road had missed the turn at the corner of the reservation, had plowed through the fence out by the powder magazine, and was now sitting in his car sound asleep. I went out in my car (I now had a Model A Ford) and, sure enough, the sergeant was right.

Neither of us had any idea what to do, so I told the sergeant and the sentry to put the man in my car. I took him to the guard house and locked him up with the other prisoners.

At about 6:30 a.m., all hell broke loose. This time it wasn't the colonel's orderly, but the colonel himself, who pulled me out of bed. Such a cussin' I had never experienced! After awhile, the colonel simmered down and I found out that my "special prisoner" was Pearl Jackson, a rancher and a hunting companion of the colonel.

I was told in no uncertain terms to get Jackson out of the guardhouse and never, by God, *never* to again put a civilian in it. It might be one of the colonel's friends.

* * *

By this time, two and one-half years after I had arrived, a few of us bachelors in the BOQ had developed a Saturday afternoon ritual. During the week, we would manage to scrape together enough money to buy a bottle of tequila. So we would call Trini, who was the Marfa combination taxi driver and bootlegger, and soon we'd have our bottle. Then we would sit in someone's room, dissect the affairs of the week and of the world and split the bottle, mixed with grapefruit juice. A fifth of tequila split four or five ways, once a week, created no drunkards.

Sometime during the early summer, a major — who for reasons best known to me shall remain nameless — was ordered to Camp Marfa from Bliss. His reputation as a teetotaler and crusader preceded him. Less than a month after his arrival we, the clique, were enjoying our usual Saturday fifth when in he walked and caught us cold. He

dragged out his notebook, took our names, and left with the cheery remark, "You'll hear more about this."

Come Monday morning the colonel's orderly made the rounds and invited us all to meet with the colonel in his office at 1100. When we arrived, we found five chairs in front of the colonel's desk and, after reporting, we were asked to sit down. Then he started.

"Major _____ tells me you young men were drinking tequila in Lieutenant Ridge's quarters at 4:00 p.m. on Saturday."

"Yes, Sir."

"You know that Prohibition is the law of the land."

"Yes, Sir."

"I know it too, and I drink tequila, too. But there is a difference — I don't get caught. Your offense is getting caught. Surely you can do better than that." As a closing remark, he said, "Ask me next time."

We did, and he came. After that, we had no more trouble, except now we had to produce two bottles.

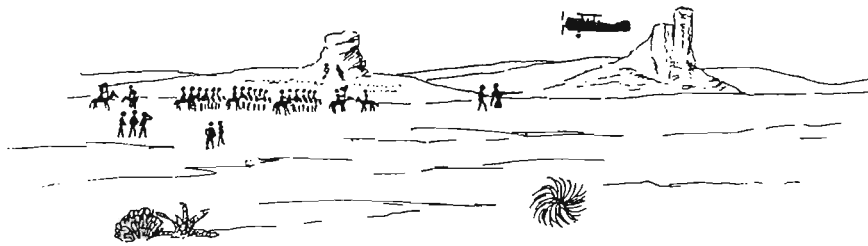
* * *

In July 1931, we were told that the 1st Cavalry was to leave soon and go to Fort Knox to become an armored regiment. The officers would choose — either go to Knox or stay with the horses. I chose horses and was, in August, ordered to the Cavalry School at Fort Riley, Kansas.

I graduated in May of 1932 and was ordered to Fort Ringgold, Texas to join the 12th Cavalry. The CO of my squadron, the 2nd, was Lieutenant Colonel Robert C. Rodgers.

In keeping with custom, to which I was now accustomed, several "special duty" jobs soon came my way. One of them was post ordnance officer. This duty carried with it one enlisted man, Staff Sergeant Kennedy, responsibility for the powder magazine, and the duty of firing the reveille and retreat gun.

The instrument for performing this latter duty was a Navy relic of the pre-Spanish American War, a pedestal mounted, three-inch gun. With it were shell cases, a small supply of black powder, a box of wads, a rammer and sponge, and a box of percussion caps. Ordinarily, it was Sergeant Kennedy who load-



“...We had only five rounds left and the general was due any minute...”

ed and fired the shells each day.

But in October of 1933 an unusual event occurred. Brigadier General Ben Lear, commanding general of the 1st Cavalry Division, announced that he was coming to inspect us and that he was coming in an AIRPLANE! No general had ever done this before; it was a real first. In fact, no one could find anywhere in the files or records any evidence that *any* general had *ever* visited Ringgold since Winfield Scott supervised the building of Ringgold Barracks in 1847.

The garrison became a beehive of activity and the study of regulations. Sergeant Kennedy and I practiced loading the shells fast and firing a salute for days. We were soon congratulating ourselves on being able to fire a round in seven seconds — almost the time required by regulations.

Then came the fateful day. We did not know exactly when the general would arrive, but we did know it had to be fairly early to enable him to inspect and fly back before dark. Just before 0900, we heard an airplane, so E Troop, the escort troop, readied itself behind the barracks and Sergeant Kennedy loaded a round while I stood poised with the lanyard in my hands. The plane landed and taxied toward the hangar. E Troop advanced at a smart trot, executed 4s right into line in front of the plane.

Captain Thomas commanded, “Draw saber. Present saber.” And as the sabers came up to Present, I pulled the lanyard. I kept on pulling the lanyard as fast as Sergeant Kennedy could load and had fired eight rounds before we saw the E Troop bugler waving his arms and galloping toward us yelling at the top of his voice. We stopped. He

arrived with the news that the plane was from the Coast Guard in Corpus Christi. The pilot had landed to find out where he was.

It was easy for E Troop to return sabers and return to its position of readiness. Not so for Myers and Kennedy. We were between a rock and a hard place. We had only five rounds left and the general was due any minute. We rushed to the magazine and started frantically loading more rounds. We had it almost done when we heard another plane. So we rushed back to the gun and got ready to fire. This time it was the general. So I said to Kennedy, “Let’s fire slowly and maybe they won’t count.” There was no immediate reaction to a nine-round salute.

I hurried back to my troop. After missing the inspection of barracks, supply room, and mess, I joined my platoon at the picket line where the men were standing to heel prepared to groom.

When the general appeared, he at once asked me, “How do you fold a saddle blanket?” Well, the grapevine had told us that the general always asked lieutenants this question, so I had “spec’ed” it cold. I made a max.

Then he walked down the picket line and near the end he grabbed a handful of a horse’s skin and pinched. I noticed the skin was slow in returning to normal, but I hadn’t the least idea why. He asked me, and I had to say, “I don’t know, Sir.” He said, “Hidebound. Find out.” Strike Two. Then he went to F Troop.

I asked the captain for permission to go help Sergeant Kennedy load shells for the departure salute. “Yes,” he said, “And you better, by

a damn site, do better than nine rounds.”

While at home for lunch, a messenger came with orders to assemble in the colonel’s office at 1:00 p.m. At 1:00 all 12 of the officers were in attendance. The general came in with the colonel, and we were told to line up around the office with Colonel Rodgers on the right, next were three old captains — ex-enlisted men from WWI — then the lieutenants. Many of the old officers did not have their brass shined, nor were they in neatly pressed uniforms. The general looked them over and sarcastically pointed out their lack of evident pride in appearance.

Then he came to me. He looked me over very carefully then said, “Appearance good. But, my God, a nine-round salute!”

Then he stepped to the last officer, Lieutenant Neil K. Kane, fresh from West Point. The General looked him over carefully, then said, “Humpfh! You look pretty good, but give you a year or two here and you’ll look as bad as the rest.”

He then turned to Colonel Rodgers:

“Colonel Rodgers, no departure salute. Your critique will arrive in the mail. You may soon expect a new assignment. Let’s go.”



LIEUTENANT GENERAL SAMUEL L. MYERS, retired in 1963 after serving as deputy CG, Eighth Army. He served as a cavalry officer in Texas and Kansas after commissioning from West Point in 1928, and with the 26th Cavalry in the Philippines in the late 1930s. During his long and distinguished career, he also commanded the Armor Training Center at Fort Knox.

Bring Back the Beret

As a noncommissioned officer, I feel it's my duty to make my fellow soldiers aware of an injustice being done to them. I have no concrete answer to solve the injustice, but I feel that somewhere out there in the Armored Force, someone will come forth to take up the challenge.

The challenge that I refer to is the reinstatement of the tanker's black beret and the development of a distinctive badge to be worn by all armor soldiers.

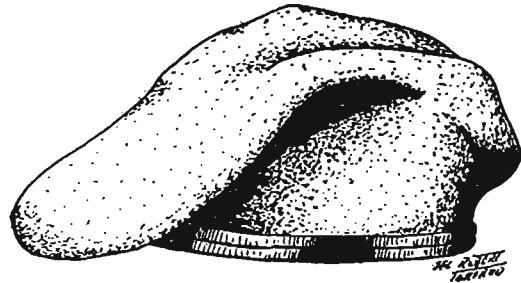
After many years of standing by and waiting for someone else to come forward and fire the first shot in what will probably be a hell of a battle, I decided that instead of waiting, I'd pull the trigger.

Let's take a look at our surroundings. One of our brother professions, the infantry, has acquired over the years more distinctive items of qualification than any other branch of the Army. Some items, they say, are solely to foster *esprit de corps*, yet the black beret for the armor branch lost out miserably to that argument in the middle 1970s.

Let's just list a few of the items worn by our fellow soldiers, the infantry. There's the CIB, EIB, parachute wings, air assault badge, Ranger tab. (The Rangers, who pride themselves on being the best patrol force in the Army, do not wear patrol caps, but have decided instead that armor's black beret is more befitting. That way, they could stay closer to their rivals, the Special Forces Green Berets.)

Then we have the 82d Airborne Division, which decided to copy their fellow parachutists in the British Airborne and wear maroon berets.

If we look back to — I believe — the late '70s or early '80s, the Chief of Staff decided that the maroon beret had to go, but the Airborne rose to the occasion, openly challenged the decision, and won! So don't tell this old cavalry trooper it can't be done if you have the organization and the leadership to wage the battle.



Let's be objective, gentlemen. A finance clerk in the 82d Airborne wears more distinctive garb on his or her uniform, to include the beret, than any platoon sergeant we have in any armored division or cavalry regiment. Doesn't this seem a little ridiculous?

Let's talk about the EIB (Expert Infantryman's Badge) as an example. While in Germany, serving in the 1/64 Armor, I had the pleasure of observing the testing for the EIB, conducted by the 1/15 Infantry.

The test looked very demanding, requiring the soldiers to accomplish tasks geared to simulate a wartime environment. They placed their squad weapons into operation, threw hand grenades, performed map-reading exercises, and conducted speed marches.

While watching all this, one of my men asked what all the activity was about. I informed him that the infantry were conducting tests for the EIB. He then asked me what the infantrymen received when they completed the testing successfully. I informed him that they receive an EIB to be worn on their uniforms, both dress and fatigue.

When I thought back to his conversation, I decided it was time to act. Why can't Level 1 gunnery be the basis of our EAB (Expert Armor Badge)? Do we not require our men to go through extensive testing on the TCGST and TCPC courses? What about the firing of the tank tables, culminating in both individual and platoon qualification? Our men's hard work doesn't even win them a cloth gunnery patch anymore!

What of the extensive training a noncommissioned officer goes through to become a master gunner? Don't you think he's deserving

of something equivalent to the Ranger tab for his hard work, something to separate him from the other soldiers?

And what happened to the black beret worn by Armor when I first entered the Army in the early '70s? Where did it go?

Every NATO armored unit that I've come into contact with has been attired in the same headgear, the black beret. Armor units of Germany, Britain, France and Canada all wear black berets and are considered an elite force in their military organizations. Even while serving in Thailand as an advisor to the 5th Royal Thai Cavalry, I saw that their headgear was the famous black beret.

CSM Gillis and General Starry, in the not-too-distant past, had proposed the implementation of a badge to be worn by all tankers and cavalry troopers as long as they demonstrated their proficiency through gunnery and evaluated training. But that proposal, like others in the past, seems to have withered and died.

No, I don't think that it takes a hat or a badge to instill *esprit de corps*. On the contrary, that can only happen through good, effective leadership and dedication to God and country. Our branch has been setting the example for years without any special identification. And I don't begrudge the 82d their maroon beret or the 101st their Air Assault Badge. But history shows that during the Battle of Bastogne in WWII, before Air Assault Badges or maroon berets were worn, it wasn't the 82d Airborne or the Rangers or the Green Berets who fought through the steel ring encircling the 101st Airborne. It was Colonel Creighton Abrams in his

tank, with the rest of the 4th Armored Division, who punched through and saved the day.

Because I am a military buff, I recently purchased a book about the French Foreign Legion. It showed how the Legion selects, trains, and assigns its soldiers. While reading the book, I discovered a couple of points that added further ammunition to my argument.

One was the importance of the white kepi worn by every member of the Legion, and only by its members. You see, the Legion has no commissioned officers of its own. They come from the French Army. It is considered an honor and a privilege to command in the Foreign Legion.

But when an officer retires or leaves a Legion unit for another assignment, the Legion gives him a huge ceremony, and after the ceremony, the officer is stripped of his red officer's kepi and all the other badges of the French military. When he is standing there in his uniform and boots, the legionnaires — with great reverence — present

him with a white kepi. For the remainder of the day, he is an honorary legionnaire.

All of the officers interviewed by the book's author stated that this was the most memorable and meaningful thing that had ever happened in their military careers.

Reading further in the book, I found that the legionnaires seemed to have a preferred unit. I found out that it wasn't the cavalry regiment (who, by the way, wear black berets) but the 2d BEP, or 2d Parachute Regiment. When the soldiers were interviewed as to why they preferred this unit, they responded that they liked the extra parachute pay, the camouflaged uniforms, and the distinctive green beret with winged dagger. They felt that his set them apart, made them different, an elite force.

After all of this, I came to the conclusion that the "Combat Arm of Decision" needed a badge to set it apart, to make its soldiers a little special, to show their remembrance for Colonel Abrams, George S. Patton, Jeb Stuart, and all that they

had stood for. It's time for the EAB and it's also time for the reinstatement of the black beret. But this will only happen if we, as one concentrated group, state in the loudest voice that this is what we want and need.

Gentlemen, if the 82d Airborne can win reinstatement of their maroon beret and can continue to wear the glider patch on their garrison caps (even though a glider hasn't existed in the Army's inventory for four decades) don't you think that with a good, hard cavalry punch, we could win back the right to wear the one thing that would unite us with all the other armored forces, the black beret? And with a good study, a study I know we are capable of, we could design and implement the Expert Armor Badge.

Let's Forge the Thunderbolt, men!

STEPHEN D. KENNEDY
SFC, Armor
USASMA

Army Reserve Personnel Center Armor Branch

The Armor Branch of the Army Reserve Personnel Center (ARPERCEN), provides personnel management support to armor officers of Troop Program Units (TPU), Individual Mobilization Augmentees (IMA), and members of the Individual Ready Reserve (IRR). The branch has as its primary responsibilities the planning, coordination, assignment, and training of armor officers not on active duty, assigned within CONUS, based on current Army requirements.

The subsequent professional development of those officers, in order to meet those requirements, is tasked to the Personnel Management Officers (PMO) assigned to the branch. The PMOs provide these management services:

- Monitors all Reserve armor officers throughout their careers.
- Acts as point of contact for assistance and information.
- Coordinates Readiness Training Tours and other training opportunities for qualified officers assigned to the IRR.
- Counsels and coordinates profession-



LTC William S. Richards
Armor Branch Chief
All LTCs



MAJ David E. Waincott
All Majors



MAJ Harold D. Lathrem
All Captains



MAJ David R. Baites
All Lieutenants

al development schooling for all Reserve armor officers.

- Provides information on available assignment opportunities for Troop Program Units based in CONUS.

- Provides Reserve officers to other Army agencies for tours of temporary duty such as annual training site support, exercises, and schools.

All armor officers assigned to the USAR should contact their PMO a minimum of twice annually. This assists in updating records, keeps a current address and telephone number on file, and provides a conduit for information concerning pro-

fessional development as well as status for participation with readiness training tours designed to keep needed armor skills sharp.

Mailing Address:

Commander, ARPERCEN
ATTN: DARP-OPC-AR
9700 Page Blvd.
St. Louis, MO 63132-5200

Telephone Numbers:

Autovon 693-7874/7883/7884
Toll Free 1-800-325-4953/55
Within Missouri — Officers should call collect 314-263-7874

Fighting to the Heart

The setting is the National Training Center. To the east of the battle position, a seemingly endless stream of Soviet tanks pours into the Valley of Death. As the U.S. forces engage with deadly accuracy, they are awed by the enemy's total disregard of danger and destruction. It seems that for every enemy "kill" light that goes on, two more tanks appear and continue the drive towards the objective.

Although this is a frequent Ft. Irwin scene, is this what we can expect from future, real-life enemies?

Unlike the pieces moved around a wargame board, the forces in real battle are controlled by human beings. It is not the rifle that kills; it is the soldier pulling the trigger and the leader directing the fire. Therefore, it is the moral, rather than the physical, influence that is dominant in warfare. What exactly is meant by the phrase "moral influence in war"? In this context, the phrase does not mean the social mores of a society, but the moral forces that act on the will of the soldier and the effectiveness of the organization. Fear and chaos are certainly negative moral forces, while discipline and calm are positive forces. Fear erodes the soldier's will and discipline serves to bolster it. Chaos and calm act similarly upon the control of the organization. Thus, moral influences are the forces that make effective action possible.

In *Men Against Fire*, a study of the human element in battle, Brigadier General S. L. A. Marshall states that, according to his battlefield research, less than one quarter of the infantrymen involved actively engage the enemy. This figure comes from WWII interviews with American infantrymen fresh from battle and may seem unbelievable when first read. To the mind accustomed to the rifle range and the rigors of peacetime maneuvers, this seems a pathetic indicator of the willpower of our predecessors. If 25 percent were fighting, then 75 percent were more or less cowering. General Marshall, however, saw this as a normal reaction of human nature given the situation.¹

According to General Marshall,

fear and confusion freeze the actions of the individual soldier. It is the physical proximity of companions — and simply seeing that others are doing "something" — that makes effective action happen. But the circumstances of the battlefield act to increase fear and confusion by isolating soldiers. For example, simple tactics tell us that when under fire, we disperse and seek cover. The immediate benefit of this is to limit the destructiveness of enemy fire. But an additional result is to create a feeling of isolation within the average soldier. He is suddenly unable to feel the security of human companionship. The fight is reduced to the perspective of his own life weighed against the enemy bullets. By acting logically to physically disperse, we diminish the moral strength of the unit.

We also see this effect in the movement techniques of armored formations. As the expectation of enemy contact becomes greater, we disperse. The crew of an armored vehicle shares human companionship, and tank crews are thus more likely to fight than a lone infantryman hiding behind a tree; however, the commander of a seemingly isolated tank must alone issue the order to "move out" in the face of a deadly enemy.² This is not to say that dispersal under fire is the wrong solution. But it is useful to understand its moral impact.

If it is true that confusion detracts from the activity of the soldier and seeing others taking action enhances it, then the leader becomes a vital element. In this context, the leader's rank or position has little to do with it. The leader can be anyone who — through verbal command or personal intervention — spurs others to action. The probable outcome of an engagement may well hinge on the extent to which he is capable of accomplishing this.³

At the next higher level in the organization, we see that small unit leaders must also have direction from their chain of command to act in concert and towards the appropriate objective. Information flow becomes a key element in doing this. For higher commanders to

"see the battlefield," and for front-line leaders to act together for a common goal, they must be able to communicate. On a battlefield where there are heavy casualties among leaders and the situation is changing often, the information link is very fragile. Because of this, preparations for an upcoming fight are made as thoroughly as possible.

Prior to an operation, commanders are briefed on the expected situation, the objective, and the means of attaining it. The leader ensures that all soldiers understand these points to offset the effects caused if he becomes a casualty. Once in battle, if the enemy force is encountered in the manner expected, the leader can be fairly sure what courses of action to take. Even if the designated leaders are killed and outside communications are lost, whoever assumes command should be able to deduce the proper action to pursue. But when the situation does not develop as expected and the enemy is met in a location or in a manner not anticipated, effective action becomes much more difficult. The leader is likely to find his unit in a vulnerable position, with the enemy's disposition unclear and himself unsure about what to do. Add to this the loss of communications, or the loss of the leader, and the unit is not very likely to act effectively. Through the use of surprise, the enemy is able to disrupt the vital link between the leader and the unit. Once that is done, the individual soldiers are not likely to act effectively, if at all. If the disruption is sufficient to bring chaos to the organization, the unit will break up and no longer be of consequence.

The heightened dispersion brought about by the increased lethality of weapons brings to light a principle that has always been true, but has been often overlooked. Battles are not won by killing, but by breaking the moral fiber of the enemy organization. Killing is simply a means of achieving the end. For Hannibal to break the Roman legions, he had to kill a great number of legionnaires. This is because the compactness of ancient formations produced a very strong moral force within a unit. Consequently, great-

er attention was paid to the act of violence than to the effect it created. As the lethality of weapons has grown, the ratio of captured to dead soldiers has increased dramatically. The increased dispersion within units has weakened the moral bond: while Hannibal killed many times more enemy than he captured, the WWII experience was the opposite. This phenomenon highlights the point that an army's ability to resist depends upon the cohesion of its units.⁴

There is a limit to what we can do to counter the negative moral effects that we will find on future battlefields. Fear will bite into our will, and we do need to disperse when under fire. We will not always be able to anticipate the enemy. We can, however, use the understanding of the moral forces on combat organizations to our benefit.

Future enemies may well exhibit the kind of audacity we've seen in Ft. Irwin OPFOR tank commanders. If a unit can remain cohesive under a hail of bullets, a forceful leader may well induce his soldiers to face any danger. But we can break down the link between the leader and the led and create emptiness out of strength by taking actions aimed directly at the moral fiber of the enemy organization.

All too often, the planning of military operations concentrates on the geometric and materiel-related factors of battle, but ignores the moral forces. If we kill a thousand of the enemy, but his unit remains effective, we will have no victory. But if we kill ten, and break his

unit's ability to act effectively, we have conquered him. Bringing death alone upon the enemy will never defeat him. But breaking his ability to function as a unit will allow us to crush him. Certainly, violence and death are crucial in achieving this kind of dissolution, but by applying them in such a way as to bring maximum chaos, we can make these methods of destruction all the more potent.

To do this, we must plan to confuse the enemy with the unexpected and take advantage of situations which make him particularly vulnerable. By using reverse-slope defenses, small units can ambush and decimate considerably larger forces. The history of the Arab-Israeli wars contains many examples of armored units being destroyed by much smaller forces in this way, before the direction of fire could even be determined. Well-timed and well-placed counterattacks against advancing formations sow confusion and chaos and break down the enemy's coordination. No unit is more poorly prepared to defend than one that is attacking. Striking an enemy force that has just assaulted an objective allows us to face a unit that already has its organization disrupted. The recent loss of leaders, the expenditure of ammunition, and the general confusion brought on in the assault makes it ripe for attack. Deception, though a seldom-stressed idea, can often provide the edge that wastes enemy strength and brings victory.

There are numerous ways the enemy's moral structure can be at-

tacked, but the key is change. By changing the situation from what is expected, we force the enemy to change the actions he planned and prepared. His present courses of action become invalid, and he is forced to find a new, proper course amidst the fog of battle. The appearance of aggressors from unexpected directions and at unexpected times strains the already fragile line that separates a fighting force from an impotent, lifeless body.

The demands of modern war pose a greater threat to our combat units' moral fiber, but also provide new opportunities for attacking that of the enemy. The mobility of recent combat vehicles far outstrips the opponent's ability to command, control, and communicate as he reacts. Therefore, the side which can use this mobility to create and take advantage of opportunities to disrupt the other's control over his own forces will be able to steal the initiative. By destroying the vital link between the leader and the led, we render concerted enemy action impossible and with it, his resistance.

Footnotes

¹Marshall, S. L. A., *Men Against Fire*, The Infantry Journal, Washington and William Morrow and Company, New York, 1947, pp. 50-68.

²*Ibid*, pp. 42-43.

³*Ibid*, pp. 60-68.

⁴Dupuy, Trevor Nevitt, *The Evolution of Weapons and Warfare*, Bobbs-Merrill and Co., Inc., New York, 1980.

RICHARD D. PHILLIPS
Captain, Armor
Fort Knox, KY.

Recognition Quiz Answers

1. **T-55 MBT (USSR)**. Crew, 4; combat weight, 36,000 kg (79,380 lbs); maximum road speed, 50 km/h; maximum road range, 500 km; armament, 1 x 100-mm main gun, 1 x 7.62-mm coaxial machine gun, 1 x 12.7-mm AA machine gun; maximum armor, 97mm at 58 degree slope.

2. **SO-122 SP Gun/Howitzer (USSR)**. Crew, 5; combat weight, 16,000 kg (35,280 lbs); maximum road speed, 60 km/h; maximum road range, 500 km; armament, 1 x 122-mm howitzer.

3. **BMP-1 IFV (USSR)**. Crew, 3 + 8 infantry; combat weight, 13,000 kg (28,665 lbs); maximum road speed, 80 km/h; maximum road range, 500 km; armament, 1 x 73-mm main gun, 1 x 7.62-mm coaxial machine gun, 1 rail launcher for AT-3 Sagger ATGM; maximum armor, 19mm at 57 degree slope.

4. **OT-64A SKOT (CZECH)**. Crew, 2 + 18 infantry; combat weight, 14,300 kg (31,532 lbs); maximum road speed, 94.4 km/h; maximum road range, 710 km; armament, 1 x 7.62-mm machinegun; maximum armor, 10mm.

5. (a) **BTR-60PU (USSR)**. Crew, 2 + 8 infantry; combat weight, 9,980 kg (22,006 lbs); maximum speed, 80 km/h; maximum road range, 500 km; armament, none; maximum armor, 9mm at 47 degree slope.

(b) **ZSU-23-4 (USSR)**. Crew, 4; combat weight, 19,000 kg (41,895 lbs); maximum road speed, 44 km/h; maximum road range, 260 km; armament, 4 x 23-mm cannon; maximum armor 15mm at 55-degree slope.

6. **PT-76 (USSR)**. Crew, 3; combat weight, 14,000 kg (30,820 lbs); maximum road speed, 44 km/h; maximum road range, 260 km; armament, 1 x 76-mm main gun, 1 x 7.62-mm machine gun; maximum armor 14mm.

REGIMENTAL REVIEW



An honor guard from 4/64 Armor unveils monument to WWII and Korean casualties at Fort Stewart ceremony in May.



Participating in Fort Stewart Ceremony were Honorary Commander, COL McPherson LeMoyné, at left; MG Andrew L. Cooley, center; and Honorary CSM Clarence Kimbrough, right.

Ft. Stewart Ceremony Honors 4/64 Armor

A pre-regimental ceremony for 64th Armor, honoring the 45th anniversary of the activation of the regiment, was held at Fort Stewart, GA, May 30 and 31. An honorary colonel and command sergeant major were appointed for the unit.

The 64th Regiment has the distinction of being the first and the last all-black unit in the Army, formed in 1941 and integrated in 1952.

During the ceremonies on May 31, old company guidons were retired and new guidons were presented by five former members of the regiment. A dining-in was held, and a memorial was dedicated to the regiment's casualties of World War II and the Korean Conflict.

MG Andrew L. Cooley, commanding general of the 24th Infantry Division and Fort Stewart, is acting colonel of the regiment. He formerly appointed the newly selected regimental colonel and sergeant major, the first ones to be designated for 64th Armor. COL McPherson LeMoyné (Ret.), who served as battalion commander from 1946 to 1948 at Fort Knox, KY, is the honorary colonel. He is the oldest living commander of the unit. His son, LTC John LeMoyné, is scheduled to become the assistant chief of staff, G-3, of the 24th Division this summer.

CSM Clarence Kimbrough (Ret.), who is among the oldest surviving members of the unit, became honorary sergeant major. Kimbrough served with the unit when it was activated in 1941.

The ceremony reunited 30 former members from the World War II and Korean eras with current members of the unit. During World War II, the unit was designated the 758th Tank Battalion and was redesignated the 64th Heavy Tank Battalion in November, 1949.

A static display of current Army equipment, vehicles and aircraft, as well as open house activities, were part of the event. Heritage Chapel, one of the oldest chapels on Fort Stewart, was designated the home chapel of the regiment. It will be the final resting place for retiring of old battalion colors and company guidons, including European battalions that may desire that their colors be rested at the home chapel.

The 4th Battalion of 64th Armor is the first unit of the regiment to occupy the regiment's home base, which is Fort Stewart. In the next few years, 5th Battalion, 32d Armor will be redesignated 1st Battalion, 64th Armor,

bringing to two the number of battalions in the regiment at Stewart, as part of the 24th Infantry Division. The 2d and 3d Battalions are with the 3d Infantry Division in Schweinfurt, Germany.

Keeping Faith by Keeping Track

Jim Hardy of Dunbar, PA, was a tank driver in the 702nd Tank Battalion, a unit attached to the 80th ID as it fought through Western Europe during WWII as part of the Third Army. Today, the 61-year-old Hardy, now a retired Teamster, remains in touch with his wartime buddies through *The Hotline*, a newsletter he began publishing in the early 1970s.

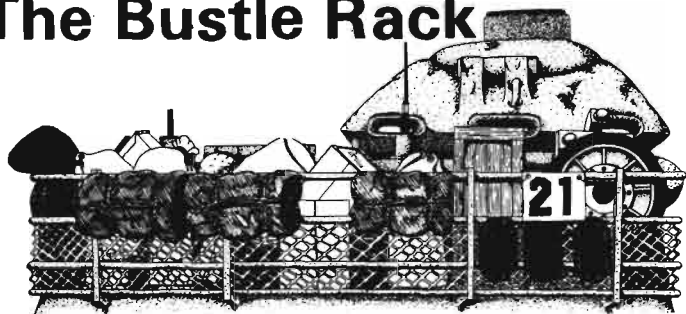
Hardy was an original member of the 702nd "Red Devils" when the unit was formed in 1943 and remained in the same unit until his discharge in 1946. The members of the unit — many from Pennsylvania — kept in touch by phone and letters, but in 1970, about 75 unit members decided to fund the newsletter, which began as a one-page mimeographed publication and has grown to four pages today.

The unit also maintains a small museum in Dunbar, exhibiting photos, company diaries, after-action reports, and captured gear. A memorial roll lists the names of deceased members of the 702nd, and the unit members contribute to Cancer Society and Heart Fund drives. The newsletter mailing goes to 380 of the battalion's 706 surviving members, many of whom gather each August for a reunion. Those interested in attending the reunion this year, which will take place in Erie, PA, can contact Hardy at (412) 277-8450 or (412) 277-4467.

1st Armored Division Reunion

The 39th reunion of the 1st Armored Division will take place at the Raffles Hotel, Denver, CO, on 3-7 September. For further information, contact CSM W. S. Beasley, P.O. Box 5675, Anderson, SC 29623 or phone (803) 225-2643.

The Bustle Rack



1986 Armor Conference Tapes Available

Videotapes of speeches and presentation given at the 1986 Armor Conference are available upon request. In order to receive a copy, send blank videotapes to: US Army Armor School, ATTN: ATSB-DOTD-TV (Mrs. Sharkey), Fort Knox, KY 40121 (AUTOVON: 464-3725; commercial: 502-624-3725). Ensure that you indicate which speeches or presentation you desire.

Speeches/Presentations

- MG Brown — Opening Remarks
- GEN Richardson — Keynote Address
- BG Franks — Application of FM 100-5
- BG Mallory — Combined Arms Training in USAREUR
- BG O'Connell — Is the RC Training for War?

Panel Reports

Developing
Supporting
Manning
Training

- Prescriptive Training Strategy
- Unit Conduct of Fire (UCOFT) Training Strategy
- Basic Noncommissioned Officers Course (BNCOC) Update
- Simulation Network (SIMNET)
- Fire Coordination Exercise — Present to Future
- Excellence in Armor
- Combat Lifesaver
- Heavy Division Cavalry Study

- Close Combat (Heavy) — Needs and Initiatives
- Cavalry in AirLand Battle
- The Heavy Division Cavalry Study
- Turning Concepts into Capability:
 - Doctrine — Mission Training Plan — SOP
 - The Reconnaissance/Counter Reconnaissance Battle
- Task Force 1-112, Assessment of Air Cavalry
- Steel on Target — Abrams/Bradley Gunnery Update
- The Excellence Track — 19D/19K in Review: SCCT I-III



Arrow indicates the electromagnetic coil system under development to protect tanks from magnetic-influence-fuzed land mines. Called VEMASID, for Vehicle Magnetic Signature Duplicator, the system projects an electromagnetic signal that explodes mine ahead of the vehicle.

New Mine Killer in the Wings

A vehicle magnetic signature duplicator at the Troop Support Command's Fort Belvoir RD&E Center is ready to enter full-scale development as a unique countermine system to protect fighting vehicles.

Called VEMASID, the system will enable the Army to counteract magnetically-fuzed mines. It works by projecting an electromagnetic signal ahead of a vehicle to explode mines in its path. In operation, VEMASID will be used as a complementary system with other countermine equipment, like the blades and rollers used with the Army's M1 and M60 tanks. It will be adapted for use with other vehicles later.

A contract for full-scale engineering development of the system is scheduled to be awarded this fall.

Armor Branch News Notes

Under the Army's Force Alignment Plan III (FAP III), a significant number of Armor's Other Than Regular Army (OTRA) lieutenants will be rebranched. Currently the Army plans to rebranch about 55 percent of the OTRA lieutenants in Year Group 83 and about 76 percent from Year Group 84. These percentages are based on the number of Armor lieutenants accessed, the number who will apply for and be granted Conditional Voluntary Indefinite (CVI) status, and the number of Armor captains that the Army will need to man the force in future years.

The Army implemented FAP III in 1984 to ensure that the combat arms branches had enough lieutenants to man the turrets, foxholes, cannons, and cockpits while enabling the Army to realign to meet its requirements for captains in all branches. Current procedures call for the Rebranching Board to meet approximately one month following the Captain/CVI Board. Each branch proponent will send a representative to MILPERCEN to select officers for his branch, based on their order of merit number from the Captains Board. This procedure ensures that a redistribution is made in both requirements and quality across all branches.

A new policy is that all combat arms officers, RA and OTRA, will receive a letter from their branches asking them to volunteer for one of the understrength branches (MI, SC, QM, OD, or MP). Officers who believe that their skills and professional interest are more suited for one of these branches and who desire to volunteer for another branch may submit their request direct to their current branch. OTRA officers must continue to submit their requests for CVI in accordance with AR 135-215 and through the chain of command.

In the past, Armor commanders tended to encourage their best officers to remain in Armor. The numbers and current policy dictate that we enable those officers, regardless of quality who desire another branch, to transfer. We should keep only those officers who have the passion to lead armor and armored cavalry units and soldiers. Again, the commander's recommendation and the justification on the CVI application on a *select few* in the commander's unit who have that special branch tactical and technical expertise will have great impact on the branch proponent's decision when he works as part of the Rebranching Board.

A Comment on Vigor's "Soviet Blitzkrieg Theory"

Could the Soviets Carry Off A Blitzkrieg in Europe?

by Dr. John E. Tashjean

P. H. Vigor's *Soviet Blitzkrieg Theory* (1983) follows brilliantly in the British tradition of deep expertise readably presented. It is widely cited and much used but little enough reviewed and examined. The *Times Literary Supplement* of July 22, 1983 and *Slavic Review* (summer, 1985) both discussed it, but neither is read by many military men. Among our military journals, only *Armor* and *Military Review* seem to have reviewed it.¹ The scenario which Vigor presents expertly and artfully is one of conventional surprise attack succeeding so swiftly and widely that Western Europe falls before the U.S. comes into play. Conventional decoupling is, surely, so momentous a contingency as to call for the most thorough examination. This analysis does not claim to be any such exhaustive or definitive effort, but merely a small step in that direction. Air war, and intelligence and warning, are two major aspects which will not be discussed. We focus first on the internal logic of Vigor. Secondly, we draw attention to the challenging task of evaluating Vigor, without attempting a complete evaluation. Ample room remains for workshops, conferences, and joint and combined wargaming.

The western concept of "outbreak scenarios" current in studies of war and war prevention is too broad to fit the subject of Vigor's analysis. If an "outbreak scenario" refers to a politico-military context in which one or more states decide to go to war, the term sits too loosely on Vigor's subject. Concentration produces penetration: Vigor has applied this great military maxim to the exposition of current Soviet military doctrine. Here we do not get buried under mountains of old, obscure, and debatable tomes, gray theories, and turgid quotations. Vigor makes Soviet military doctrine come to life by showing us how things look to a Soviet operational planner. The framework of his thought is drawn in clear outline. Institutional dogmas are explained by showing the interplay of Soviet strategic experience with doctrinal innovation. Lessons learned in Manchuria (1945), Czechoslovakia (1968), and Afghanistan are integrated with the increasing capabilities of the postwar era, notably helicopters and rockets. The presentation is thus so rich in historic depth and operational relevance that the book will remain a classic contri-

but ion to the study of strategic cultures. Not a Western-style outbreak scenario, but the Soviet concept of the *initial period of war* is Vigor's well-chosen subject. Even that overstates his scope. He deals with the initial period of war, but only in a war of *deep operations*. "Deep operations" is a French military term of the thirties, born of reaction against stalemate in the trenches of WWI, and adapted by the Russians easily enough to their own experience in WWII, including their own very successful *blitzkrieg* against the Japanese in Manchuria in 1945.

For the specialist in Soviet military doctrine, not to mention the general reader, one great merit of Vigor is that he helps us around a major roadblock. To this day, the Soviet Union has published no official military history of WWI.² It would, therefore, be natural to conclude that military history before the Bolshevik triumph in the Russian civil war is not negligible in Soviet thinking. Yet this natural conclusion is false. Vigor shows, in his second chapter, how closely and profitably the Soviets have analyzed Prussian-German victories in short wars and defeats in long wars from 1848 to 1914. At all costs the Soviets must avoid getting into the position of Germany after its first victories in WWI and II, bogged down and encircled by a global coalition of superior strength in the long run. "The Soviet need to defeat NATO quickly" is the title of Vigor's first chapter and the justification of the whole book.

Tracing the logical structure of Vigor's analysis, we begin with that very first theme. Vigor's most fundamental historical premise is that aggressors may win short wars, but a massive coalition of defenders will win a long one. This premise seems so self-evident to so many readers that a healthy challenge is in order. The premise is just an abstract generalization of Allied public perceptions in WWII, resting shakily on all the censorship and groupthink of wartime. This generalization has been decaying under sharp questioning ever since the revelations of Ultra cryptanalytic successes began in the seventies. In retrospective terms, the question is this: what was the contribution of cryptanalytic success to Allied victory, as compared to the attrition warfare conducted by the gathering global coalition?



A column of T-62s moves into Czechoslovakia to put down the 1968 uprising. White stripes on turrets identified invasion force.

In strategic terms, the question becomes: would the Allies have won had Ultra not given them a secret advantage? Without Ultra, the Battle of the Atlantic would have gone the other way; as late as the Normandy invasion, Ultra was indispensable to Allied success because it allowed a check on German responses to Allied deception.³

The whole problem remains a brooding omnipresence. Assume that in a Soviet *blitzkrieg*, the West has no Ultra advantage, and that the massive Soviet Waraw Pact superiority in forces in being comes quickly into play.⁴ Even if the *blitzkrieg* slows down and is protracted, Soviet operational art, fighting on even terms, *i.e.* unopposed by Ultra, *might* win out. The threatening scenario presented so vividly by Vigor is, in short, not the only one.

There is a second historical premise on which he relies, and rightly so. He brings out beautifully that the Soviet concept of war is part of the self-definition of the Soviet Union and of its view of its role in the growth of world communism. *Imperium mundi in statu nascendi* — world empire in process of birth — is the phrase with which a political theorist once de-

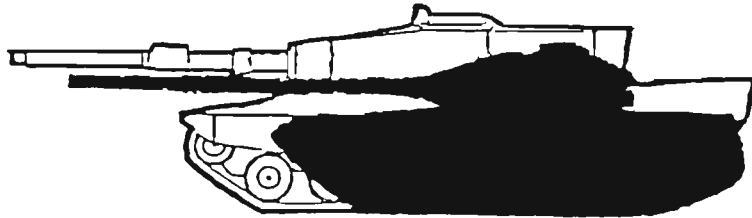
finer Mongol imperial theology, an instructive analogue of the Soviet view.⁵ The Brezhnev doctrine is the most recent major formulation of this, and explains the symbolic importance of the Grenada reversal. The distinctiveness of the Soviet view emerges when it is compared to the two chief Western views of war.

International lawyers, constitutional lawyers, and many publicists in the West think of war as something that can happen between any states, repeatedly between the same states, and is meant to seek and attain genuine peace. The Western military concept of war, accordingly, conceives of it as the neutral instrument of an unspecified and therefore abstract state. In utter contrast to both of these Western views, *the Soviet view of war is a revolutionary's view*. War is all about the conquest of state power, and plays for keeps. Vigor makes all this clear in chapter 4, which alone is worth the price of the book. This philosophy of history of preordained hegemony enters directly into strategic and operational thought.

Playing for keeps about state power means *conquering and holding* all significant demographic and economic assets in the target country. Thus we come to the conceptual core of Vigor's analysis, a formula for permanent conquest. This is not operationalized and quantified enough to satisfy model builders and computer gamers, but is very meaningful to students of operational art. Vigor's core concept is relational. It specifies offensive assets relative to a specified target. The target is defined by the size of its armed forces, potential additional mobilization, extent of territory, locations of significant economic regions, and ethnic divisions in the body politic. On this target are brought to bear surprise and the exploitation of surprise. Surprise denies the target country time for deployment and, ideally, even the time for mobilization. The exploitation of surprise is defined by speed and weight of attack, weight referring to troops and weapons. The formula, then, is a predictive equation: adding up surprise and its exploitation, relative to the target, we get the conquest thereof.

The next logical step is to consider the left or input side of this equation: namely, forces powerful enough in speed and mass but not so large or so distant that deployment would sacrifice surprise. Here Vigor's reasoning is suitably undogmatic and neatly complements the current American emphasis on deep battle and Follow On Forces Attack (FOFA). Vigor opts for an attack from a standing start, using the Group of Soviet Forces in Germany, together with the East German divisions and Soviet and Czech divisions in Czechoslovakia (page 185).

Now the camera zeroes in on one element of this force, Third Shock Army around Magdeburg. Surprise dictates close consideration of the timing of attack. These considerations are spelled out and point to the first hours of Christmas Day.



Size comparison of T-72 and Leopard II.

Source: Europ. Wehrkunde, Jan. 1986, pg. 38

Vigor draws attention to the problem posed for Third Shock Army by its need to remove *unobserved* the land mines buried on its side of the inner-German border. By 0400, Vigor has Third Shock Army well past Brunswick, "at least to Hanover and perhaps beyond" (page 198). It will be a day or more, Vigor reckons on the basis of official NATO statements, before NATO is fully mobilized; and it may never get a chance to deploy. When LTC John A. Hurley, USAFR reviewed Vigor in *ARMOR*, he put his finger on a "no-notice, broken-backed, 'come as you are war'."

tance in the first six to eight hours. This quick reaction force must have high mobility and high firepower; only attack helicopters fit the bill. AH-1 COBRA TOW comes to mind, and 1,500 are hoped for by the end of the decade.⁷ Unfortunately, TOW is wire-guided; which does not encourage ruthless commitment; besides, COBRA is "largely limited to fair weather."⁸ So there is a question about how much we can rely on it in a German winter. The gap may now be getting filled by AH-64 APACHE, production contracts for 309 of which are now ongoing.⁹ "The

Considering how many elements compose the equation of forces, one understands how difficult it is in some cases to determine which side has the upper hand. Often it all hangs on the silken threat of imagination.

— Clausewitz, *On War*, VII:5
(Author's translation.)

Third Shock Army moving west from Hanover does not, of course, mean the collapse of Western Europe. This Army is used by Vigor as a warning to BAOR and for illustration: one may assume, as he points out, similar and simultaneous offensives on several other axes. All of the central region would erupt into high-intensity war. Simultaneous offensives on multiple axes gave victory to Brusilov in WWI.⁶ Vigor does not mention Brusilov, but one must assume that the Soviets are not counting on some one breakthrough on which everything depends. And, Vigor adds in a throw-away line after mounting suspense, remember that operational maneuver groups will be disrupting your rear.

Let us assume, for the moment, that so far Vigor's analysis is correct. If so, it leaps to the eye that NATO's deployment in the Central Region must not be left totally dependent on strategic warning. In other words, a ground forces counterpart to runway alert forces seems called for by the crucial importance of effective resis-

Apache is a quick-reacting, airborne anti-tank weapon...to navigate and attack in darkness and adverse weather...with the Hellfire missile,...a 30-mm Chain Gun and Hydra 70 rockets."¹⁰ Contracts have been let for only 309, but the current program calls for 675 Apaches to be produced.¹¹

We have traced the logical structure of Vigor's analysis from his first premise to his operational and tactical conclusions. The general scheme is one of conventional conquest: decoupling is the suggested geopolitical result. *Would the scheme work?* That is the supreme question which Vigor does not answer. He strongly *suggests* a grim answer by taking us into the mind of Soviet Russia on the march. It would be easy to adduce additional literature to confirm, and even to increase, the menace he depicts. Several hundred T-80 tanks have been deployed with the Group of Soviet Forces in Germany; this model is marked by active armor, making it largely immune to existing ordnance.¹²

How should Vigor's scenario be evalu-

ated? Gaming is the obvious answer, but beyond the scope of this article and, in any case, very sensitive — perhaps too sensitive. Nevertheless, Vigor's scenario has enormous value for higher military education and perhaps also for operations and intelligence specialists. One can imagine a course at senior service schools organized around Vigor's book, using it as a point of departure for unclassified and classified evaluations and research.

In any case, additional perspectives are relevant for readers of this journal. It would be naive to say that Vigor makes a strong case for "his" offensive, and to let it go at that. After all, he is making his case in the public domain, within earshot not only of the Pentagon but also of the Soviet Ministry of Defense. Is he sounding the alarm and warning the Russians off? Is the book meant to be a self-defeating prophecy? Consider the following passage:

"They started their offensive in Manchuria at 10 minutes after midnight; while in 1968 they moved into Czechoslovakia at 11 p.m. on the night of 20 August. It seems reasonable to conclude, therefore, that where the Soviet troop movements are aimed at securing strategic surprise, the hour just around midnight is the one they are likely to choose. Of course, if the Soviet generals (as a result, no doubt, of reading this book) perceive that their enemies have become aware that they have acquired this habit, they will naturally choose another hour in the future, because no habit is a surprise." (Page 160).

And, if so, Vigor will have succeeded in denying the Soviets an important tactical advantage. On the other hand, Vigor's writing about the consequences of his book opens the door to an infinite guessing game about future dates and times of attack. The book, then, may be evaluated as psychological warfare against Soviet strategy, for it imposes increased uncertainty on the Soviet operational planner.

In any case, significant changes are under way in the central region. The British Army of the Rhine may, in the wake of the Falklands and financial stringency, undergo major reductions. If so, static defense missions would seem even less attractive. Maneuver thinking is already surfacing at the highest level.¹³ A Franco-German agreement of February, 1986 provides for operational cooperation between the *Bundeswehr* and France's 47,000-man rapid deployment force.¹⁴ It is worth noting that the French field 1,200 tanks.¹⁵ The net effect of these two developments is adverse to Vigor's scenario.

Franco-German cooperation may be enhanced by foreseeable progress in French national technical means of satellite reconnaissance. The chief topic here is the expected succession to the SPOT civilian remote-sensing system launched in February, 1986. This system, SPOT-1, is a low orbit (832 km.), high-resolution

(10m.), polar-orbit, satellite system with vertical, oblique, stereoscopic (117 kms. width), and infrared capability.¹⁶ For 1992, France plans the launching of a reconnaissance satellite, Helios, with imaging capabilities superior to SPOT-1.¹⁷ This can only complicate the Soviet planner's task.

Two other developments will work against Vigor's scenario in the foreseeable future. First of all, the French discovery of and NATO measures against massive Soviet technological espionage will reduce, perhaps reverse, qualitative advances in Soviet weaponry.¹⁸ Secondly, NATO has for the first time put alliance planning on the steady basis required by the long-lead production times of contemporary weapons.¹⁹

Meanwhile, about 300,000 trucks from Pact countries will still drive through the Federal Republic each year, many, doubtless, on innocent commercial business and some, equally doubtless, observing NATO exercises and doing terrain analysis.²⁰ So the suspense continues, and the analytical power provided by Vigor continues to be relevant.

Footnotes

¹ARMOR, May-June 1984, page 52; *Military Review*, June, 1984:89f.

²See Norman Stone, *The Eastern Front, 1914-1917*, NY, Charles Scribner's, 1975, and the review of this book by John Erickson in the *Times Literary Supplement*, June 4, 1976, page 675.

³Christopher Andrew, *Her Majesty's Secret Service*, NY, Viking, 1986, page 487; cf. pp. 505f. about Professor Michael Howard's official

history of the role of deception in the strategy and operations of WWII.

⁴In view of scenario-dependent combat effectiveness see Daniel N. Nelson, "Empirical Estimates of 'Reliability' in the Warsaw Pact," *Millennium: Journal of International Studies*, vol. 14, 1985, pp. 292-316.

⁵Eric Voegelin, "The Mongol Orders of Submission to European Powers, 1245-1255," *Byzantion*, vol. 15, 1941, esp. pp. 402-406.

⁶Stone, op cit, pp. 236-240.

⁷DOD, *Soviet Military Power 1984*, page 61.

⁸US Army Weapons Systems 1986, p. 23.

⁹*Ibid.*, p. 19.

¹⁰*Ibid.*, p. 19.

¹¹*Ibid.*, p. 19.

¹²"Für Sowjetpanzer hat die Zukunft schon begonnen," *Europäische Wehrkunde*, January, 1986, p. 40.

¹³General Sir Martin Ferndale, COMNORTHAG, GOCinC BAOR, "Counter Stroke: Future Requirements," *Journal of the RUSI*, December, 1985, pp. 6-9.

¹⁴M. Dobbs, "Paris Boosts Defense Cooperation with Bonn," *Washington Post*, March 1, 1986, p. A14. The agreement also calls for the largest joint Franco-German military exercise since 1945, involving 150,000 troops, in 1986.

¹⁵"Für Sowjetpanzer hat die Zukunft schon begonnen," as in note 12, page 38.

¹⁶*Quotidien de Paris*, February 22-23, 1986, p. 2.

¹⁷"Spot: un oeil francais dans l'espace," *Figaro*, February 21, 1986, p. 15.

¹⁸See Thierry Wolton, *Le KGB en France*, Paris, Grasset, 1985, extracts of which appeared in *Le Point*, January 12 and January 19, 1986. These extracts are vastly more informative than the brief item in *Time*, January 20, 1986, p. 31.

¹⁹Michael Reynolds et al., "The Conceptual Military Framework," *NATO's Sixteen Nations*, December 1985, pp. 31-35.

²⁰"Die Kundschafter," *Der Stern*, January 9, 1986, pp. 14-20, 130.

A New Book on a Well-Kept Secret

THE INVASION BEFORE NORMANDY: THE SECRET BATTLE OF SLAPTON SANDS, by Edwin P. Hoyt. Stein & Day, New York. 212 pages. \$18.95.

Last year, *The New York Times* reported the mysterious 1944 burial of hundreds of American soldiers in a mass grave in southwestern England. This book answers the questions raised by that article and previous corroborating stories.

Hoyt describes how 749 American soldiers and sailors died during a Normandy invasion rehearsal at Slapton Sands, a seacoast village in Devon, just six weeks before D-Day. A convoy of eight LST landing vessels was attacked by German E-boats, and the heavy losses were the result of a lack of escorts for the landing ships. The engagement was kept secret for security reasons, but the bodies were eventually removed and buried properly.

Hoyt explains how the E-boat attack temporarily threatened the entire invasion until the planners discovered that

none of the survivors had been captured by the Germans.

The book begins with the 1942 plans calling for a British-American cross-channel attack and highlights the problems of joint-operations, Eisenhower's role as commander, and the problems of maintaining the secrecy of the "when" and "where" of the invasion.

The lessons learned during the rehearsal are related to the Allies' actual combat performance during the June 6 invasion. Hoyt maintains that even with the losses from the E-boat attack, Slapton Sands was a success. He calls the operation a "prelude to victory."

Although the book is enjoyable and fast-moving, it is disappointing that over one-third of the work is devoted to background before getting to the theme of the book. More material on the operation and less on the general aspects would have made this good book even better.

THOMAS J. VANCE
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General Jacob L. Devers

He Guided Armor Through WWII Expansion

Major General Jacob L. Devers assumed the duties of Chief of Armor in August, 1941, on the death of Brigadier General Adna R. Chaffee. Commissioned in the Artillery, he gained his first exposure to Armor in 1930-31, when he was detailed to participate in planning operations with mechanized troops while assigned to the office of the Chief of Artillery in Washington.

It was General Devers who first bestowed the accolade, "Father of the Armored Force," on Chaffee, his predecessor. But while Chaffee served in the pioneering days of mechanization, it was General Devers who guided the force through its rapid wartime expansion. Serving as Chief of Armor from 1941 to 1943, he saw America's armored force grow from two struggling divisions, cobbled together from existing Army units, to a war-winning force of 16 armored divisions and 63 separate tank battalions.

General Devers' tenure as Chief of Armor also spanned a period of great technological change, as armored units adopted the M4 (Sherman) tank as the main battle tank of the U.S. Armored Force. General Devers was instrumental in adopting the M4 and in developing the design so that America's three major automotive firms could mass produce it in sufficient quantities to meet wartime demands. At one point, General Devers traveled to Detroit, invited the presidents of Ford, Chrysler, and General Motors to his hotel room, and "sequestered" them there until they could agree on the tank's basic features. He wanted a tank that could be produced quickly, with minimum retooling, a standard design that all of the firms — and others later — could produce in unprecedented quantities.

Before the war was over, more than 50,000 Shermans had been built in the U.S. and Canada, some of these serving — with modifications — up through the Arab-Israeli War of 1973.

Before his reassignment overseas in May, 1943, as commanding general of U.S. Forces in the European Theater, General Devers' leadership brought continuing innovation. One change he brought to troops training at Fort Knox was the introduction of artillery spotter planes to increase the fire accuracy and speed of targeting of the then-new armored field artillery battalions. His interest in Army air continued in the post war period; he later pioneered the force development concept that introduced the organization of helicopter-borne units.

A native of York, Pennsylvania, General Devers graduated from West Point in 1909, 39th in his class of 109 — a class that included such future Army greats as George S. Patton, Jr. (Cavalry); Robert L. Eichelberger (Infantry); William H. Simpson, (Infantry), and John C. Lee (Engineer). Devers was commissioned a second lieutenant of field artillery.

He served 40 years, was promoted to four-star rank in 1945, and retired on 30 September 1949.

Prior to and during WWI he served as an instructor at West Point, in Hawaii, and then at the Artillery



General Devers addresses the 4th Armored Division in 1945 at Presidential Unit Citation ceremony in Landshut, Germany.

School at Fort Sill, Oklahoma. During WWI, he was promoted to the temporary rank of lieutenant colonel, and like so many officers who remained in the Army after the war, was reverted to his substantive rank of captain. It was not until 26 February 1934 that he once again wore the silver leaves of his wartime rank.

In the decades between wars, Devers served with — and commanded — a number of field artillery units, culminating in his promotion to brigadier general on 1 May 1940. Shortly thereafter, he returned to the U.S. from the Panama Canal Department, where he had been Chief of Staff, to command the Washington Provisional Brigade. In October 1940, and now a major general, Jacob Devers assumed command of the 9th Division at Fort Bragg, North Carolina, and also command of the post.

At Fort Bragg, General Devers moved with alacrity and forcefulness. His job was colossal. He had to expand his forces threefold to 66,000, provide all the necessary buildings and support elements while running a training program for both draftees and National Guardsmen who had been called to active duty. And he reduced the stockade population from 200 to 60. He could handle men as well as he could handle paper.

General Devers' success at Fort Bragg was instrumental in his assignment as Chief of Armor at Fort Knox. Hand-picked for the assignment by General George C. Marshall, Army Chief of Staff, he revolutionized the development of the Armored Force.

Overseas, Devers also served as Commanding General of the North African Theater of Operations, Deputy Supreme Allied Commander, and Commanding General, Sixth Army Group. In this latter position, General Devers not only commanded the American Seventh Army and the French First Army but also the French Army Detachments of the Alps and the Atlantic. He commanded more French soldiers in combat than any other American in history.

On 24 July 1945, General Devers was named Commanding General, Army Ground Forces, the position he held until his retirement on 30 September 1949.

General Devers died in October 1979 and is buried in Arlington National Cemetery. His portrait hangs in the Patton Museum of Cavalry and Armor at Fort Knox, Kentucky.



Symbolism

The shield is yellow for armor. It also alludes to the regiment's cavalry background. The two fleurs-de-lis represent the organization's service in France during World Wars I and II; the horse's head is the old crest of the Essex Troop, formerly an element of the regiment.

Distinctive Insignia

The distinctive insignia is the shield, crest, and motto of the coat of arms.

102d Armor

Fide et Fortitudine

Lineage and Honors

Organized 29 May 1913 in the New Jersey National Guard as the 1st Cavalry Squadron with Headquarters at Newark to include the following troops: Troop A (organized 3 June 1890 as the Essex Troop of Light Cavalry at Newark); Troop B (organized 24 April 1895 as the Monmouth Troop); Troop C (organized 29 May 1913 at Newark). (Troop D organized 27 August 1914 at Plainfield.) 1st Cavalry Squadron mustered into Federal service 21 June 1916 at Sea Girt for service on the Mexican border; mustered out 21 October 1916 at Newark. Mustered into Federal service 28 July 1917 at Sea Girt; drafted into Federal service 5 August 1917.

Squadron broken up 15 September 1917 and its elements reorganized and redesignated as follows: Squadron (less Troops B and D) as the 104th Train Headquarters and Military Police, an element of the 29th Division; Troops B and D consolidated to form Battery F, 110th Field Artillery, an element of the 29th Division.

After 15 September 1917, the above units underwent changes as follows:

104th Train Headquarters and Military Police (less Company B) redesignated 1 November 1918 as the 29th Military Police Company. Demobilized 30 May 1919 at Camp Dix, New Jersey.

Company B, 104th Train Headquarters and Military Police, redesignated 29 October 1918 as Company C, First Army Military Police Battalion. Redesignated 15 March 1919 as the 216th Company, Military Police Corps. Demobilized 14 July 1919 at Camp Dodge, Iowa.

Battery F, 110th Field Artillery, redesignated 27 November 1917 as Battery F, 112th Field Artillery. Demobilized 31 May 1919 at Camp Dix, New Jersey.

1st Cavalry Squadron reorganized during 1919-1920 in the New Jersey National Guard; Headquarters Federally recognized 29 September 1920 at Newark. Reorganized and expanded 1 March 1921 to form the 1st Cavalry. Redesignated 17 August 1921 as the 102d Cavalry. Assigned in June 1937 to the 21st Cavalry Division. Reorganized 16 November 1940 as the 102d Cavalry (Horse-Mechanized) and relieved from assignment to the 21st Cavalry Division. Inducted into Federal service 6 January 1941 at Newark. Reorganized 6 April 1942 as the 102d Cavalry (Mechanized):

Regiment broken up 30 November 1943-2 January 1944 and its elements reorganized and redesignated as follows: 2d Squadron on 30 November 1943 as the 117th Cavalry Reconnaissance Squadron, Mechanized (Headquarters and Headquarters Troop on 2 January 1944 as Headquarters and Headquarters Troop, 102d Cavalry Group, Mechanized; 1st Squadron on 2 January 1944 as the 102d Cavalry Reconnaissance Squadron, Mechanized—hereafter separate lineages).

117th Cavalry Reconnaissance Squadron, Mechanized, inactivated 25 November 1945 in Germany. Reorganized and Federally recognized 20 November 1946 as the 117th Cavalry Reconnaissance Squadron at West Orange. Reorganized and redesignated 1 November 1949 as the 2d Battalion, 102d Armored Cavalry.

Consolidated 1 February 1968 with the 6th Battalion, 50th Armor (see ANNEX); consolidated unit reorganized and redesignated as the 102d Armor, a parent regiment under the Combat Arms Regimental System, to consist of the 1st and 2d Battalions.

ANNEX

Organized and Federally recognized 13 February 1951 in the New Jersey National Guard as the 3d Battalion, 102d Armored Cavalry, with Headquarters at Phillipsburg. Converted and redesignated 1 May 1954 as the 250th Tank Battalion.

Reorganized and redesignated 1 March 1959 as the 2d Medium Tank Battalion, 53d Armor. Redesignated 31 January 1963 as the 2d Battalion, 53d Armor.

Redesignated 15 April 1964 as the 6th Battalion, 50th Armor.

Campaign Participation Credit

World War II

Rome-Arno
Southern France (with arrowhead)
Rhineland
Ardennes-Aisace
Central Europe

Company C, 1st Battalion (Flemington), additionally entitled to:

World War II-EAME

Northern France

Headquarters Company, 2d Battalion (West Orange), additionally entitled to:

World War II-AP

Aleutian Islands

World War I

Meuse-Argonne
Alsace 1918

Decorations

French Croix de Guerre with Palm, World War II, Streamer embroidered PROVENCE TO LORRAINE (117th Cavalry Reconnaissance Squadron, Mechanized cited; DA GO 43, 1950)

Company C, 1st Battalion (Flemington), additionally entitled to: Meritorious Unit Commendation, Streamer embroidered EUROPEAN THEATER (44th Quartermaster Company cited; GO 12, Headquarters, 44th Infantry Division, 31 January 1945)