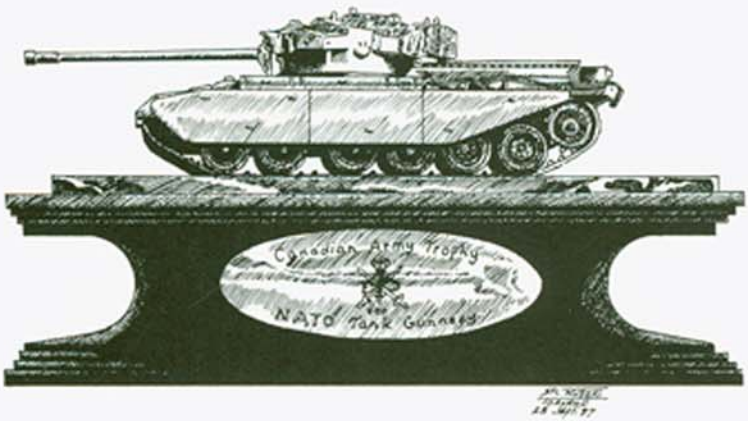
ARMOR

WINNING IN EUROPE:

How Two USAREUR Cavalry Units Trained to Win the CAT Trophy And the Boeselager Cup

see Page 17 and Page 21



PB 17-87-6

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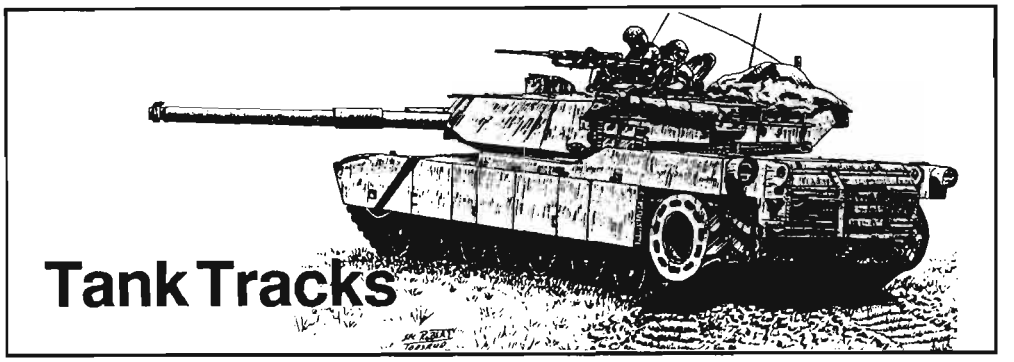

Tank Tracks

Technology has been both a boon and a bane to commanders since someone organized the first military unit. Each new development spawned reassessment and adaptation of thought, theory, and tactics. For every technological advantage, there has always been and will continue to be a method or technique to overcome it. This process has not always been quick, but eventual.

The Roman legionary's pilum and gladius dominated the world for centuries. But by the time of Hastings in 1066, the mailed rider rode supreme across Europe. The armored knight, in turn, proved vulnerable to the crossbow in the next century. By 1346, English longbowmen proved their weapons' superiority in accuracy, range, and penetration. At Crecy, they were able to dispatch six arrows for each one they received. The crossbow was obsolete.

Almost a century earlier, Roger Bacon announced the formula for gunpowder. But it took a generation for it to be well known, 60 years for its application in missile propulsion, and nearly two hundred years until its use in the arquebus, the first matchlock arm, which was to dominate infantry tactics for two centuries.

For the last eight decades, technological development has moved at an exponentially increasing rate, outdistancing all that came before. Since World War II, we have witnessed an explosion of technology that was incomprehensible in 1940 to all but a few. That explosion has compressed time and its corresponding learning curve to weeks and months instead of generations and decades.

Consider the impact of technology in just the last ten years. In our profession we have laser rangefinding, stealth aircraft, SDI, helmet-mounted aircraft sights, robotics, multiple-warhead munitions, and turbine-powered tanks. We go home at night to our satellite-transmitted newspaper and satellite TV. We might talk to the folks on a fiber-optic line about our new compact laser disc player, video camera, or computer. If we get sick, we can opt for orthoscopy, laser surgery, or an artificial heart.

How can leaders deal with or possibly keep up with what the microchip has done to our warfighting capability? It seems that no sooner do we learn one system, than another more advanced one takes its place. While it took 20 years to go from the M4A3E8 Sherman to the M60A1 Patton. some armored units transitioned from the M60A1 to M60A3 to M1 to M1A1 in only about five years.

The obvious answer is that we cannot keep up. We cannot cost-effectively fund and field the latest technological gizmo continually. We can master what we have this month, this year, this decade, and that means training. (See "Commander's Hatch," page 5). We do not have the time to divert a tank crewman from his job for long. There is too much to know, too much to practice.

We can have a firm reliance on those principles that have essentially changed little since the times of Alexander or Caesar: readiness, surprise, ingenuity, and leadership. When you strip away the steel, you find the operating element that makes the weapons system valuable: men. As a former military editor of the "New York Times," Hanson W. Baldwin, put it, "Neither policies nor machines will determine the history of tomorrow. Man is the measure of all things... This, then, is the ultimate battlefield: the hearts and minds of men."

— PJC

By Order of the Secretary of the Army:

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

CARL E. VUONO
General, United States Army
Chief of Staff

ARMOR

The Professional Development Bulletin of the Armor Branch PB 17-87-5 (Test)

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FEATURES

DEPARTMENTS

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LETTERS

Shermans Could Do the Job

Dear Sir:

Having read LTC Robert P. Kingsbury's letter, "WWII Tank Deficiencies," (ARMOR, September-October, 1987), I felt that LTC Kingsbury was probably very sincere, but misinformed at the same time. While it is true that the M4 Sherman was nowhere near the German Tiger with its 88-mm main gun, it certainly had no real problem with the Mark IV and the Mark V Panther.

I would recommend that LTC Kingsbury, and anyone else who is interested in this subject, read the history of the 740th Tank Battalion.

My battalion entered combat on December 19, 1944. three days after the Battle of the Bulge began. Its first action that day was at the Stoumont (Belgium) railway station where, with war-weary used tanks picked up at an ordnance depot, the 740th proceeded into combat without radios and without much of the standard equipment that a Sherman was supposed to have. After exactly one half hour of combat, our Company C had knocked out three Panthers while supporting the 119th Infantry Regiment, 30th Infantry Division.

Later on, the 740th supported the 504th Parachute Infantry Regiment, 82nd Airborne Division, in the Bulge, and was the only tank battalion to receive a much coveted letter of thanks from the 82nd's CG, MG James Gavin. (Check our history book, "Daredevil Tankers", by LTC Rubel. It's in the Patton Museum – I put it there.)

Sure, the Sherman had shortcomings, but so did the German tanks. What it all

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boiled down to was training. Our battalion had the best training under our LTC Rubel. Other tank units did not have this training and, because of this, many would not advance when things got hot. Perhaps this was the problem LTC Kingsbury ran into.

While I'm at it, I'd like to comment on the "beret controversy."

First of all, what is so wonderful about a beret? We never had them and, in fact, used to laugh at the foreign armies that wore them. We, as Armor troops, were proud of the fact that we and Cavalry were the only troops authorized to wear our overseas caps on the LEFT side of the head. while all other troops wore them on the right side. When we wore the Fort Knox-style cap with the front peak lower than the back peak, we thought we looked pretty sharp. While we're at it, what ever happened to the branch colors? Green piped with white was Armor's color.

Sure, I'm old-fashioned, and an old soldier that won't fade away, but gosh, tank troops look sharp with a crash helmet on while in a tank and with a Fort Knox-style overseas cap with green and white piping when in dress uniform.

Why do today's troops want to look like the British Army? Let them look like us.

HARRY F. MILLER
Secy., 740 Tk. Bn. Assn.
Fort Worth TX

Dead Tigers, Indeed!

Dear Sir:

A fellow tanker from the 704th Tank Destroyer Battalion, 4th AD, sent me a copy of your September issue. He and I are quite enraged over the letter from Robert Kingsbury about WWII tank deficiencies. The letter referred to the action at Bannholtz Woods.

I was a Tech Four driver at the time, in first platoon of B Co., using M18 Hellcats. We were called upon by the 94th Infantry to knock out a makeshift pillbox. One shot, and that pillbox was history.

The first platoon was then called upon to attack the Bannholtz Woods. As always, we responded, but a strange turn of events then took place: we were to take our orders from none other than one of Kingsbury's famous sergeants that he praises so loudly in his letter. Our company commander was furious that we were being led by an infantry sergeant in the attack. Well, the five M18s from the first platoon of B Co. followed the sergeant – we'll call him Sergeant York here – to our doom.

M18 "Hellcat" Tank Destroyer

He led us to the edge of the woods and said there were two dead Tigers at the edge of the woods that he and his men had knocked out. We made one mistake: we didn't ask him how or with what.

I went first, with at least 500 yards between each tank. Our tank, called Blondie, lurched forward, and we soon came abreast of the two Tigers. They seemed dead enough, at the time. We then almost took one across our turret from a (German) bazooka team. We sent them to glory. Suddenly, a Panther tank came upon us, but one shot with our armor-piercing shell, and we got him. We made it to the edge of the woods and locked ourselves in between two large trees.

Looking down the slope, we nailed a Tiger heading toward us in the woods, and suddenly, it looked like the whole damn German army of panzers was coming at us.

Johnny, my tank commander, barked, "Let's get the hell out of here!", but Blondie didn't respond (batteries were always her downfall.) With that, the sleeping Tigers to our rear suddenly came to life (Thanks, Sarge!) and we took a direct hit in the engine compartment. All the TDs to my rear also got nailed.

In 1989, the 704th TD Bn. is going back to Europe, following the route through the same towns we fought through – Avranches, for one, where the first platoon destroyed 20 tanks while only losing one. A monument is standing in that town in memory of our battalion. We then went on to the Battle of the Bulge, and history speaks for itself of what we did there, along with the 4th AD and cigar-chewing COL Creighton Abrams (later, the M1 Abrams tank was named after him). The 704th was the constant point for Abrams 37th Tk. Bn. of M4 Shermans.

But to die at the hands of "Sergeant York" in the Bannholtz Woods is a disgrace, to be lied to by a Silver Star-seeking sergeant... I'd pay his fare and take him with us when we stand at the grave of my tank sergeant and his crew, at Hamm Cemetery, Luxembourg, when we go in 1989...

HARRY E. TRAYNOR
Erial, NJ

Author's Correction

Dear Sir:

In reading through my article in your September-October issue ("Combat Gunnery: Observations from the NTC"), I noticed that you listed me as chief of live fire for three years. I am not sure how I managed to create that impression. I was assigned to the NTC for 18 months, not three years. All other facts are correct.

DOUGLAS B. CAMPBELL
LTC, Armor
FRG

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Two-man Tank Not Offense-Oriented

Dear Sir:

The article, "The Two-Man Tank" (January-February, 1987 ARMOR). is an interesting idea, but the design is highly impractical. Here are just a few reasons why:

- In the two-man tank design, neither crew member has clear observation of the flanks or rear from his position in the hull. This is a critical flaw, as no tank battle will be fought with purely frontal engagements. Further, neither crewman has a commanding view of the battlefield. Target acquisition time would be greatly increased because of this, plus only two sets of eyes are scanning, instead of four. Also, none of the crewmen are in a position to guide the tank through difficult terrain (part of the TC's job presently). All-around observation would be poor, making command and control totally dependent on radio.

- Another point is crew size. A two-man crew would be dogged in combat. Breaking track and other maintenance would take considerably longer or be impossible if one man is to remain on radio watch. In addition, security requirements, such as manning OPs, would reduce the effectiveness of the two-man crew greatly over a short period of time.

- The 15-percent weight reduction is not really enough to make this concept attractive (considering that 15 percent from 60 tons is 51 tons, still a large vehicle).

- What this tank amounts to is a purely defensive weapons platform that would rely heavily on infantry support. Not only would this change AirLand Battle Doctrine, which is offense-oriented, it would limit the mobility of the tank (one of the calling cards of Armor).

Personally, I would rather see the battle and have a four-man crew, in lieu of a less expensive, supposedly more survivable two-man tank.

JAMES P. MARSHALL
2LT, Armor
FRG

He Misses the Bio Photos

Dear Sir:

The new layout and text of ARMOR is fine, except for the omission of the authors' photograph.

I feel that this should continue as it adds both a personal and professional touch.

GARY H. PENDLETON
LTC, ARMOR
NCARNG

Speculation on the AT-8 Kobra

Dear Sir:

...Captain Nimon's letter concerning the AT-8 system (May-June ARMOR) struck a particular chord with me, although I wonder if the system is not perhaps even simpler than he suggests.

*Does the projectile in fact need to guided? Might it not rather be a homing projectile for which the target can be designated by the rangefinding laser, perhaps operating in an additional mode? This would do away with the need to tie in a sometimes-mounted, poorly-protected external box on the turret with an otherwise well-thought-out system. The idea of that box forming part of the AT-8 system has never struck me as convincing.

*The concept of a homing rather than a guided projectile would also fit in well with firing by platoons. Only one tank of the platoon would need to expose itself to initiate effective engagements at long range by designating targets for the other two or three tanks, which could remain turret-down. With two to four rounds homing on the designated target at the same time, the actual homing system would not need to be particularly good - a 50-percent hit rate would be quite adequate. The designating tank might itself not fire at all during this phase of the engagement, thereby further reducing the chances of being observed and engaged. While certainly more suited to a defensive role, this approach could also have its uses in taking out point targets in an attack and, of course, in dealing with counterattacks.

*Does the projectile need to be a sophisticated HEAT top-attack one? Given the very thin top armour of almost all armoured vehicles, would not HESH/HEP or a simple forward firing HEAT round do the job just as well, given only that its fusing can handle the very oblique impact angle? Would a simple solid penetrator - perhaps with a soft cap to reduce the chance of it glancing off - not in fact do the job just as well once it has been homed to this vulnerable area?

*This leaves the turret-top box to be considered. Given that a special spot has been created for it by reshaping the actual turret armour, it must be something fairly important. Perhaps the present "box" is not in fact the actual item of equipment for which this spot was created, but is merely something else which has been placed there for the time being as a matter of convenience. One possibility might be a system intended to complement the smoke dischargers in their role of defending the tank. Perhaps something to confuse the seekers of top-attack weapons deployed by cargo-rounds and CBUs?

Its forward position on the turret does, however, suggest that it is intended to deal with something which will be in front of the tank at least some of the time. Were this not so, it would surely have been placed in a less vulnerable position more to the rear of the turret top. Let us see some more thoughts on the AT-8 and the mysterious box.

HELMOED-ROMER HEITMAN
Lt South African Infantry Corps
Cape Town, SA

Editor's Note

Because of a production foulup in our last issue, we placed the wrong unit crest in the unit history of the 263d Armor, which appeared on the back cover. In this issue, we are re-running the unit history with the proper crest. —Ed.

AGS Obit Premature

Dear Sir:

This letter is in response to 1LT D.B. Miller's letter in the July-August issue of ARMOR. LT Miller makes a number of interesting and cogent points.

I take issue with him on one critical item, however. The Armored Gun System is not dead. It is very much alive. The U.S. Army Tank-Automotive Command (TACOM) has crafted a fine acquisition strategy to place the AGS in the hands of the troops in the 4th quarter of Fiscal Year 1992. As late as 29 July, the Chief of Staff of the Army was briefed, and he endorses it fully...

I fully agree with 1LT Miller on the need for the system and share his frustration over its seemingly interminable gestation period. U.S. industry is ready; all we need are dollars.

DOUGLAS R. BURGESS
COL, Armor
TRADOC System Mgr., Tank Systems

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

Loving Soldiers

One of our great soldier leaders, the recently retired General Bill Livsey, used to implore his subordinate commanders to love their soldiers. It was also understood by those subordinates that some soldiers required more loving than others.

Just what did he mean when he asked his commanders to love their soldiers?

To most, it meant providing them with the best training possible, at the same time treating the soldier right; being fair and providing mechanisms and procedures to take care of their families.

At the Armor Center today, we believe that loving soldiers means to provide them with tough, realistic, meaningful training. If we provide you with untrained soldiers, we are giving you a battlefield liability that can result in disaster for the trooper and his comrades. Hopefully, you understand that the trooper we provide you from our OSUT brigade is highly motivated, but not fully trained.

We simply do not have him long enough and are not provided sufficient dollars to train him the way you'd like him. He is capable, and it is up to you to provide the finish that will make him shine as a member of your team.

However, the right training environment is not always provided the soldiers we send you. For example, if you have a soldier who has been trained as a 19K, and you are using him in the supply room, arms room, or wherever (many of our Excellence in Armor soldiers wind up as a jeep or HMMV driver), for good and justifiable reasons, what actions are you taking to insure he retains, sustains, and improves his skills as a tanker? If you misuse the soldier and don't provide him with the proper training, the consequences can be catastrophic.

I ran across a tragic example of this while a patient at the Army hospital at Camp Drake, Japan. The division personnel warrant (25th Infantry Division), a crusty CW4, had been evacuated from Vietnam because of a very painful bout with kidney stones. He was depressed, and upon inquiry, related the following tale.

A few weeks earlier, a young sergeant of infantry had been assigned to a battalion to fill a team leader's slot. This was post-Tet, casualties were high, and it was conceivable that he might end up as a squad leader. The sergeant protested the assignment, stating he owed his promotions to his prowess as a company clerk and knew little about infantry weapons, tactics, or leadership.

He was assigned anyway. The chief had just seen the severely wounded sergeant at Camp Drake. He had expressed his dismay at the sergeant's wounds (he had been stitched across the chest with an AK47). The sergeant replied that his wounds didn't matter. What really hurt was the realization that the other members of his team were killed because he didn't know what he was doing.

The point of this vignette is that our soldiers who are working outside their primary MOS must be trained. They must be given the opportunity to not only sustain their skills, but to improve them as well. If you love them, you'll find a way to provide them the training they need and deserve.

As you have been told on numerous occasions, our most precious asset is our soldiers, and our greatest advantage over all our potential enemies is the ability and motivation of these soldiers. They are entrusted to your care to lead, train, and, to again quote General Livsey, love them. Do it.

Treat 'Em Rough!

The New ANCOC: Are You Prepared?

by MSG Harold R. Allen, Guest Columnist

(MSG Allen is the first sergeant of the ANCOC detachment, NCO Academy/Drill Sergeant School.)

Starting in April 1988, there will be a totally new advanced course for the Armor noncommissioned officer and, in August 1988, for the cavalry NCO. The new course will stress the company/troop structure and small group instruction. Students will fill various positions, including platoon sergeant, platoon leader, 1SG, and commander within the student company, and will perform these roles as they would in a regular TO&E unit. As leaders, they will rate subordinates, and will in turn receive ratings when others rotate (approximatly every 14 days) to leadership positions.

How is this course developed? The right way — through the systems approach to training.

Platoon sergeants from the Armor force worldwide came to Fort Knox and developed the initial task list and job analysis for both the armor and cavalry platoon sergeants. This method provided a wealth of job comparisons, experience, and actual job requirements, whether the individual was assigned to the 11th ACR in Europe; the 1st ID (Mech) at Fort Riley, KS; the 3d ACR at Fort Bliss, TX; or with the 2d ID in Korea.

The task list and interviews with the incumbents produced an ANCOC battle focus: "To train the technically proficient noncommissioned officer in the skill level 4 tasks he needs to function as a platoon sergeant, and provide him the critical tasks needed to assume the role of a platoon leader in the troop or company scenario." We cannot afford to continue teaching lower skill levels in ANCOC.

The tasks, all at skill level 4, will be taught in a combat scenario in totally integrated instruction. **Soldiers must demonstrate proficiency in the lower skill levels prior to attendance in the new course.** This must be emphasized. The NCO who is not proficient at the tank commander level will have an extremely hard time completing the course. Job proficiency is both a unit and individual responsibility. Unit leaders must ensure that their personnel can attain and maintain this proficiency.

But, what about NCOs coming from assignments outside the MOS, such as drill sergeants or recruiting NCOs? These students will have to attend and successfully complete the Tank Commander's Certification Course (TC3) or the Scout Commander Certification Course (SC3) before coming to ANCOC.

The success of the course will depend on the ability of each staff sergeant or sergeant first class to work with his peers in the small group instruction method — 16 students (platoon-size), in the armor course, or eight students (approximate section size) in the cavalry ANCOC. Each NCO will prepare and present instruction to his peers while his small group leader evaluates him. He will have to study hard and do more research than the current course requires. Performance and knowledge will be tested frequently at critical points. The student must demonstrate most tasks hands-on, using sand tables, terrain boards, and innovative training devices such as SIMNET, UCOFT, and other computer-based instruction. The NCO must pass each critical test point or return to his parent unit as an academic failure.

This new course is a giant step forward for the NCO Corps. CMF 19 NCOs are developing and writing the course; they run it for themselves.

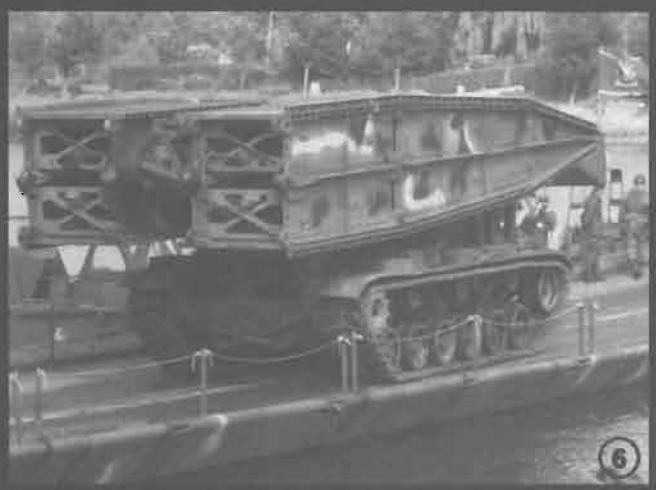
The course will produce a highly trained noncommissioned officer, one capable of assuming, if necessary, leadership positions at the platoon leader, company/troop commander level with a greater confidence and technical proficiency. With this increased flexibility, commanders can train more realistically during peacetime tactical exercises by simulating casualties in the unit leadership, thus forcing unit platoon sergeants to take charge, something which will surely happen during actual conflicts.

NCOs selected for ANCOC must be able to pass the APFT, must meet the weight standards prescribed by AR 600-9, and must be competent in skill levels 1 through 3. The NCO's SQT should reflect his job competence, and he should be prepared to instruct classes. He must have the willingness to put in long, hard hours of research and review, as well as help students who fall behind. Make no mistake about it; this will be a hard charging course, a challenge to the noncommissioned officer, both tactically and technically.

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 48



First Honorary Professors Named

The Commandant of the Armor School recently conferred the title of Honorary Professor on two distinguished officers.

Colonel James Leach, USA, Retired, received a certificate and title of Honorary Professor of Armor at a dinner in his honor July 24. Colonel Sidney S. Haszard, USA, Retired, received a certificate and title of Honorary Professor of Cavalry at a similar occasion on August 21.

COL Leach teaches major portions of the Nancy/Arracourt battle analysis to Armor Advanced Course students. COL Leach commanded B Co., 37th Armor, under LTC Creighton Abrams during the WW-II battle. COL Leach subsequently commanded the 11th ACR in Vietnam and served as Chief of Armor Branch.

COL Leach offers unique and important insights into the evolution of Armor tactics, doctrine, and technology from WWII through Vietnam. A recipient of the Distinguished Service Cross, COL Leach was the first honorary colonel of the 37th Tank Regiment.

COL Haszard provides insight and the benefit of his experience to officers in the Armor Advanced Course during their armored cavalry instruction. COL Haszard first saw combat as an NCO and officer in reconnaissance units in the North African campaigns of WWII. He participated in the Allied landings in North Africa, Sicily, and Europe. COL Hazard, a recipient of the Distinguished Service Cross, later commanded 3d Squadron, 5th Cavalry in Vietnam; 3d Bde, 3d Armored Division in Germany; and served as deputy assistant commandant of the Armor School.

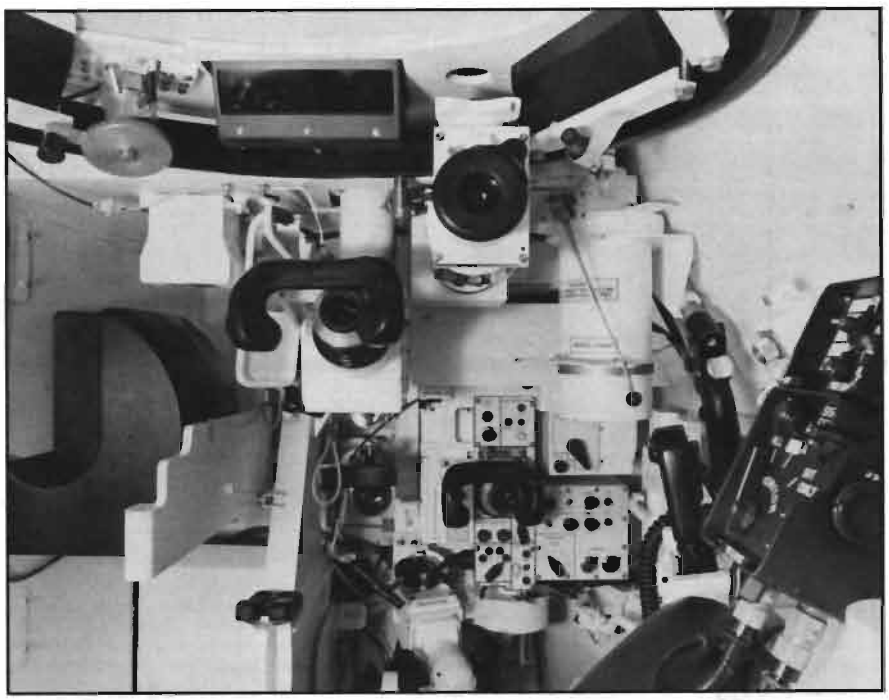
In July 1969, COL James Leach, above, then commander of the 11th Armored Cavalry Regiment, walks down a dusty road in the Republic of Vietnam. COL Leach now resides in Virginia.

COL Sidney S. Haszard, left, seen here when he commanded 3d Bde., 3d AD, was one of two veteran Armor-Cavalry leaders recently appointed honorary professors at the Armor School. He now lives in Hudson, KY., where he operates "Fiddler's Green Farm".

How Is the UCOFT Working Out?

So far, UCOFT Crews Seem to Be Faster Getting First-Round Hits

by Major Mark C. Thomson



The Unit Conduct of Fire Trainer (UCOFT) is reaching the field in increasing numbers and is proving to be a real asset to tank gunnery training. In order to assess the impact and to gain insight into the best strategy for its use, the TRADOC Analysis Command (TRAC) and the Armor Center conducted a UCOFT Post Fielding Training Effectiveness Analysis (PFTEA). The study is complete, the results compiled and analyzed. The study showed the UCOFT to be a significant factor in improving and sustaining tank crews in gunnery performance. Crews trained on UCOFT tended to be faster with no loss in accuracy than those who trained only with the standard devices, and they carried that edge over to the sustainment of those skills.

The year-long study, a cooperative effort between Fort Knox and the Grafenwoehr Field Office of TRAC-White Sands Missile Range, required a detailed examination of the tank gunnery programs of six USAREUR M1 tank battalions. Five of the participating battalions had the UCOFT, and the sixth was a baseline unit without the UCOFT. Unit officers, NCOs, and civilians gathered training data throughout the study, but three major events for each battalion were the key drivers of the effort.

The first major event was one week of UCOFT testing, interviews, and questionnaires administered to each UCOFT-equipped battalion in the study. This took place approximately 30 days before the unit's qualification gunnery density. Two UCOFT instructor/operators from the USAARMS Weapons Department administered a UCOFT test to all tank commanders and gunners. This test consisted of 11 engagements, four of which closely resembled corresponding tasks on Tank Table VIII. The TRAC analysts administered questionnaires to the same group and conducted interviews with key personnel in the battalion. The non-UCOFT battalion received a shorter visit in which questionnaires and interviews were done in the same manner.

The second event was the battalion's scheduled qualification tank gunnery density, in which the crews fired Tank Table VIII (TT VIII), the tank crew qualification exercise. The range operation was the standard TT VIII conducted by the 7th Army Training Command at Grafenwoehr Training Area (Range 117).

The last event was a return by 15

Table 1.

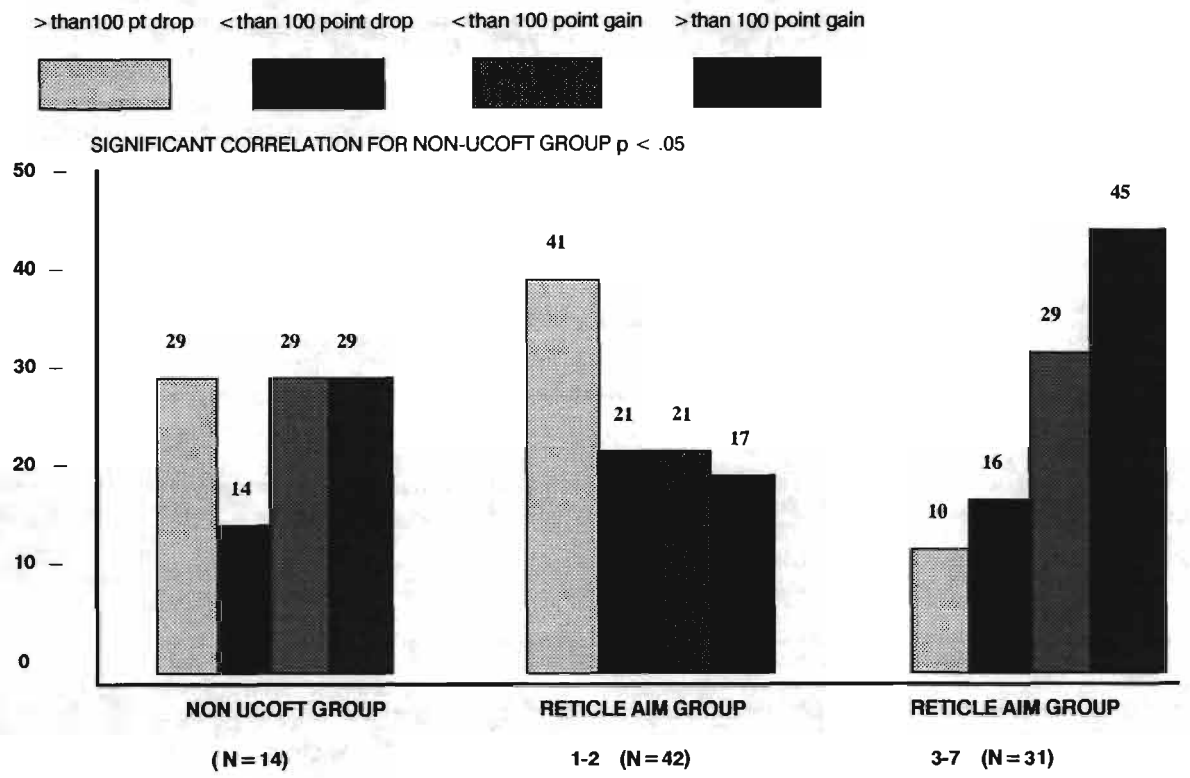
Comparison of Tank Table VIII Results for UCOFT and Non-UCOFT Groups

Test Group	Number of Crews	Total Score	Probability of 1st Round Hit	Opening Times Offensive*	Defensive*	Overall*
Non-UCOFT Bn	56	763	78	7.3	4.1	5.7
UCOFT Bns	291	792	77	5.9	3.4	4.7

* Statistically significant difference, P < .01, T-Test

Relationship Between Change in TT VIII Scores
And UCOFT Matrix Status at Special TT VIII

Table 2



crews from each battalion to Grafenwoehr to fire TT VIII again. This event took place approximately three months after their qualification gunnery, in order to examine the sustainment of the gunnery training. Six M1 tanks came from war reserve stocks and moved to GTA for the firing. Each crew fired the accuracy screening test immediately before the day run; no preliminary tables were allowed. Seventh ATC operated the range following standard procedures and scoring.

TEST DESIGN

	UCOFT	NO UCOFT
Calibration Table VI & VII	2 Bns	1 Bn
Calibration Table VII Only	2 Bns	X

Table 3

The test had six objectives. These were distilled from the original questions posed by the undersecretary of the Army.

The first objective was to determine how effective the UCOFT was in predicting crew performance on TT VIII. We made an engagement-by-engagement comparison of four selected tasks fired on the UCOFT test with four corresponding ones fired on TT VIII. The results indicated that there was no correlation between performance on a task fired on the UCOFT test with its corresponding task fired on TT VIII. However, when a crew's progress on the UCOFT matrix is compared to overall performance on TT VIII, there is a significant relationship. The farther a crew advanced in the matrix, the better its score and opening times on TT VIII tended to be. On the 1,000-point scale of the table, UCOFT-trained crews in the upper part of the matrix fired an average of 50 points higher than the non-UCOFT crews, and did it with an opening time that was nearly 1.2 seconds faster (Table 1).

Another objective was to determine the contribution that the UCOFT made to sustainment training. A comparison between the first and second qualification tables provided the measures of effectiveness for this issue. Again, matrix position achievement was the key factor. While the non-UCOFT group was evenly spread between gaining and losing points on the second TT VIII, the interesting trend was established when the UCOFT crews in the lower part of the matrix and those in the upper part of the matrix were examined. More than 60 percent of the crews in the lower position lost points from one TT VIII to the next. Near-

Comparison of Table VII Performance of Test Groups

UCOFT Matrix Status	Number of Crews	Table VIII Scores	TABLE VIII RESULTS Probability of 1st Rd. Hit	Opening Time* (secs.)
Non-UCOFT Bn. Tables VI & VII	56	762.7	80.4	5.72
UCOFT Bn. Table VII Only	174	784.3	78.6	4.86
UCOFT Bn. Tables VI & VII	117	802.6	79.0	4.37

*Statistically Significant Difference. P.01

Table 4.

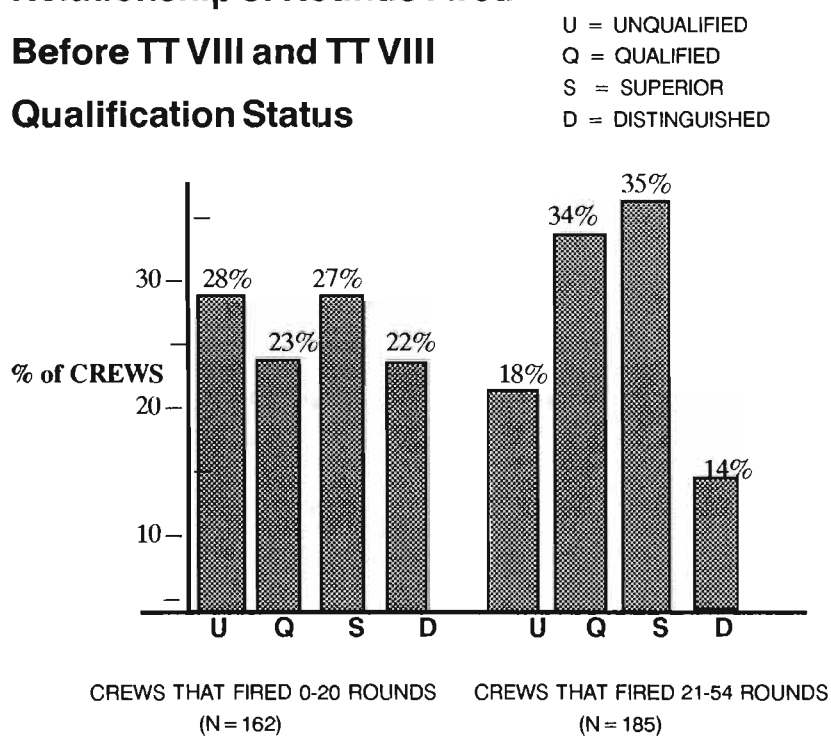
ly 75 percent of the crews in the upper position gained points from one iteration to the next, despite firing no preparatory tables before the second TT VIII (Table 2). This indicated the UCOFT to be an aid to sustaining and improving crew proficiency.

To answer the next objective, three of the UCOFT battalions had restricted the amounts of ammunition allowed in the preparatory tank tables fired before the first TT VIII. This was done by restricting those units from firing TT VI, the main gun stationary table. No restrictions were established for TT VII or for the other units. Again, the major difference between groups occurred in opening times. As Table 4 shows, the more a crew fired in both the UCOFT and on the range, the faster it was, with no loss in accuracy. The differences are particularly startling when comparing offensive tasks, with a nearly two-second average difference between the non-UCOFT battalion and the unit that used the UCOFT and fired the complete preparatory tables.

As an adjunct to this objective, we examined the relationship between the number of main gun rounds fired in the preparatory tables and the qualification rate. The general policy among all the battalions was that more ammunition went to the weaker crews in order to get them qualified. The test data found in Table 5 supports this. The additional rounds put a significant number of crews into the qualified or superior areas, although it appears as though it was not enough to put more crews into the distinguished range.

Table 5.

Relationship of Rounds Fired Before TT VIII and TT VIII Qualification Status



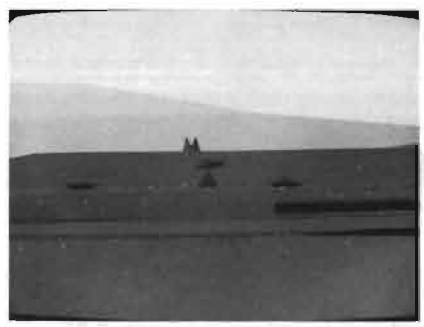
"....The UCOFT Post Fielding Test showed that UCOFT is a valuable training device that will enable our tankers to fire more quickly with no loss in accuracy..."

The next objective was to determine the effects of turbulence. The good news is that the UCOFT alleviated about 50 percent of the effects of turbulence in tank gunnery. The caveat to that is that turbulence accounted for only about 1 to 2 percent of difference in results between crews. This confirms what most tankers have always suspected: we can execute a crash program for tank gunnery with the troops we have available, regardless of crew integrity. Crew and unit cohesion is a combat factor, but is not necessarily a tank range problem.

The study was also intended to determine the perceptions that the crew and their leadership have of the UCOFT. The test found that the guys on the ground were overwhelmingly positive about the device – they use it and have found it to be a valuable training tool. There are modifications the crews want to see, some of which have already led to implemented changes, but the device was accepted as a very effective one.

The last study area was the units' use of the UCOFT. At the time of the questionnaire and interview administration, there were restrictions on the amount of time a UCOFT could be used in a given week. The use rate at that time was about two hours per session, with each crew averaging one session per month. With modification of the maintenance agreement with the manufacturer, which increased the number of hours from 2,600 to 3,500 per year (with greater flexibility), the overall use rate has jumped considerably and continues to climb.

The UCOFT Post-Fielding Test completed its work in October 1986, and the Defense Department and major commands received briefings on the results from February through April 1987. The test determined four major findings:



- The UCOFT substantially improves the quality of tank crew gunnery training.
- More UCOFT training typically results in improved gunnery performance.
- The UCOFT cannot be used as an absolute predictor of TT VIII performance.
- UCOFT users feel that the UCOFT substantially improves their home-station tank crew gunnery training.

The UCOFT Post-Fielding Test showed that the UCOFT is a valuable training device that will enable our tankers to fire more quickly, with no loss in accuracy. Recent Armor School UCOFT training strategy provides an effective guide to commanders that will enable them to get the most out of the device. To be faster on the draw, while maintaining or improving accuracy, is a goal for which all tankers constantly strive and seek better ways to attain. The UCOFT gives the Armor Force a first-rate training device that helps in working toward that objective.

AUTHOR'S NOTE: The primary sources for this article are the results briefing and test report written by Mr. Walt Butler and Mr. Charles Hughes of the Grafenwoehr Field Office of TRAC-WSMR, who were the lead analysts for the test. Dr. Bruce Stirling and Mr. Swede Berglund of the same office were also major contributors to the study and the report.

Major Mark C. Thomson was the Armor Center project officer for the UCOFT PFTEA. He was commissioned into the Field Artillery in 1975. He served in howitzer batteries and, after a branch transfer to Armor, in a tank company of the 3d ACR, with subsequent assignments in USAREUR as BMO, tank company commander, and S3 in 1-35 Armor. He is currently assigned as an ORSA analyst at the U.S. Army Armor and Engineer Board. He received his BBA from Texas Christian University and MSBA from Boston University. He is a graduate of the FAOBC and the AOAC.

Push-Pull Logistics

by Captain William Hedges

The heavy task force crossed the LD/LC at 0600 hours on the movement to contact. By 1300 hours, the unit had attacked over 30 kilometers. The M1s' fuel tanks were down to 1/4 full; on-board ammunition was at 35 percent. The battalion would seize the objective within the hour, and a counterattack was expected by nightfall.

Resupply was on the way. The problem was that the brigade support area (BSA) had not moved and was more than 50 kilometers away. It would take the supply trucks a good 2-1/2 hours to reach the logistics release point (LRP), and a total of 5-1/2 hours until resupply was completed. The S2 said that the enemy counterattack would occur within three hours of consolidation.

Is this an unlikely scenario? Probably not. At the National Training Center (NTC) this is an all-too-realistic situation, particularly during the live-fire portion of the exercise.

The simple fact is that the supply of Class III (fuel), and Class V (ammunition) immediately available to the task force from the combat trains is not sufficient to resupply the unit. It is merely intended to be an emergency resupply available at critical moments.

A wealth of information is available concerning the difficulties of sustaining the heavy task force in the attack, particularly at the National Training Center. This information does not appear to give any easy, workable solutions to the problem of timely resupply in such situations.

This article outlines a technique, developed by the Third Battalion, 66th Armored Regiment, 2nd Armored Division, that successfully sustained operations during its 1986 rotation.

Background

3-66 Armor is a fully-modernized, J-series, M1 tank battalion. Prior to rotation, the unit had received and fully integrated the Heavy Expanded Mobility Tactical Truck (HEMTT) fleet into the support platoon. The support platoon (after task organization with an infantry battalion) had ten M998 fuel HEMTTs (2,500-gallon capacity each) and ten M997 cargo HEMTTs (12-ton load each). The support platoon command and control vehicle was a 1/4-ton M151A2 with AN-VRC 47 radio set.

3-66 Armor would cross-attach with an infantry battalion for the rotation and would primarily consist of two tank and two mechanized teams for the duration of the exercise.

Prior to rotation, all the unit's leaders recognized that logistics would play a key role in task force operations even with the modern HEMTT fleet. The two major obstacles to overcome in successful resupply operations would be:

- Extended supply lines from the BSA to the Forward Line of Troops (FLOT) (in some cases 50 + km.).
- The impact that continuous operations would have on resupply.

Both of these factors would impact heavily on timely resupply of

Newly issued HEMMT trucks played a role in unit's "push-pull logistics."

the task force. To solve these problems, and to insure adequate and timely resupply, a concept called "push-pull" logistics was developed.

Push-pull logistics is a relatively simple concept. The battalion S4 pushes supplies forward from the TF trains prior to receiving consolidation reports from the units. These same consolidation reports, when received, serve to pull additional supplies forward and to reconcile quantities of supplies already received. The main idea behind this concept is to resupply as much as possible, as quickly as possible, without having to wait for reports or requests from the units.

3-66 Armor's primary concern was with the time factor involved in logistics requests. That is, the time consumed (lost) as units formulated requests, as the Admin-Log Center (ALC) collated them, and the time involved as the support platoon leader or sergeant configured the request and brought it forward from the BSA.

The push-pull logistics system designed by 3-66 Armor went a long way towards solving that problem. The standard Logistics Package (LOGPAC) system, as outlined in chapter 8 of FM 71-2J, calls for the support platoon leader to build LOGPAC in the field trains, after the ALC has consolidated company/team requests. FM 71-2J emphasizes that LOGPAC are for routine resupply, and that "special LOGPAC" would serve to meet other needs.

A key point here is that, given the nature of fluid actions on the Airland Battlefield, the need for routine resupply diminishes as the task force participates in continuous operations. The supply system then shifts emphasis from routine operations to the sustainment of the task force and to the preparation for the next battle.

A push package is normally located in both the combat and field trains. It is configured according to the specific mission that the battalion is conducting. In general terms, the push package consists of a generic load of Class V, configured to a mech- or tank-heavy team or a scout/mortar platoon mix.

"...The major advantage of this system is that no time is lost downloading and reconfiguring the load to correspond to an exact request for ammunition..."

In the case of 3-66 Armor, during the conduct of the attack, three cargo HEMTTs were positioned in the combat trains for immediate resupply. One was configured for each of the elements outlined above. Specific loads are not discussed here, but a typical push package for a tank-heavy team on one HEMTT might consist of roughly five pallets of 105-mm ammunition, two pallets of TOW ammunition, and the rest a small arms and 25-mm mix. The battalion S4, under the guidance of the battalion

CO/XO, would deliver this push package to a forward LRP and to the element with the most critical need.

It is evident, under this system and with this mix, that the possibility exists that class V delivery to a company team may be short on one item and over on another. This problem would fix itself with the delivery of the next push package and an ALC reconciliation. But remember, the central idea is that resupply must reach the teams as quickly as possible.

The reconciliation between a company team's request for Class V and actual delivery in a push package is done at the ALC and transmitted to the support platoon leader/HHC commander.

This is done primarily for accounting purposes, as, ideally, all HEMTT loads of Class V are configured exactly the same for all mechanized teams and armor teams. The major advantage of this system is that no time is lost downloading and reconfiguring the load to correspond to an exact request for ammunition. It requires that the unit and the support platoon leader ensure that only the quantity of ammunition requested is unloaded. This system also demands that the ALC, the unit, and the support platoon leader reconcile the request with the delivered amount.

The push system also requires a change in thinking as to the location of the support platoon leader and his vehicles.

Recognizing that the BSA may locate some 50 or more kilometers

"...Positioning the support platoon leader and his assets midway between the combat trains and the BSA makes resupply much more responsive to the units...."

from the front, 3-66 Armor moved the support platoon leader to a location between the combat trains and the BSA.

Given that the 50+km. distance may exist, the support platoon leader and his available assets might locate 15 to 30 kilometers from the FLOT, just outside artillery range.

Immediately after the Class III and V in the combat trains is released or delivered to company teams, the ALC notifies the support platoon leader. The support platoon leader then begins his march from the intermediate location to the LRP. Being much closer to the FLOT than to the BSA proper, the timing of this resupply is much better.

Stopping by the combat trains briefly, the support platoon leader drops off fully-loaded vehicles to replace the ones that recently moved forward, and then proceeds to the LRP himself. After resupply at the LRP is completed, the support platoon leader goes back to the BSA to reconfigure the remainder of his loads to "generic" packages.

This system, when tactically employed, will solve the major resupply problems associated with units in the attack.

To position the support platoon leader and his assets midway between the combat trains and the BSA makes resupply much more responsive to units. The vast majority of Class V packages need to be standard load packages, even though the HEMTT allows for more rapid loading and unloading than the older 5-ton series of trucks. The standard load (for mech-heavy, tank-heavy or scout/mortar) allows the support platoon to configure the loads rapidly and to reach that "midway" location to be responsive. If the units allow the support platoon leader to remain in the BSA and to configure loads to suit actual requests, then resupply will occur at the mercy of the location of the BSA, so to speak. If the BSA is out of position, then timely resupply may be out of position also.

There are two additional areas of concern with the implementation of this system. The first is that the support platoon leader and his vehicles represent a lucrative target. As a minimum, it will require some type of air defense to protect it. The second area is that this system requires that either a second command and control vehicle with radio be allocated to the support platoon, or a HEMTT be outfitted with a radio set.

This permits communication with the support platoon sergeant in the event that he must "run" the routine (Class I) LOGPAC.

Consideration must be given to the fact that once the support platoon leader departs for his "midway" location he is a "shot fired" and not easily recalled to the BSA. Commo with the support platoon sergeant fixes that problem.

Units can easily train to this concept during normal field training exercises. It requires key leaders to do some additional planning and a realization by all that timely resupply is paramount to the success of continuous operations.

Captain William Hedges is a 1982 graduate of the USMA currently assigned as the 3-66 Armor's battalion motor officer. He has also served as a tank platoon leader, battalion S1, tank company XO, and battalion S4. He is a graduate of the Armor Officer Basic Course, the Infantry Officer Advanced Course, the Junior Officer Maintenance Course, the M3 Scout Commander's Qualification Course, the Airborne School, and Jungle Warfare Training Center.

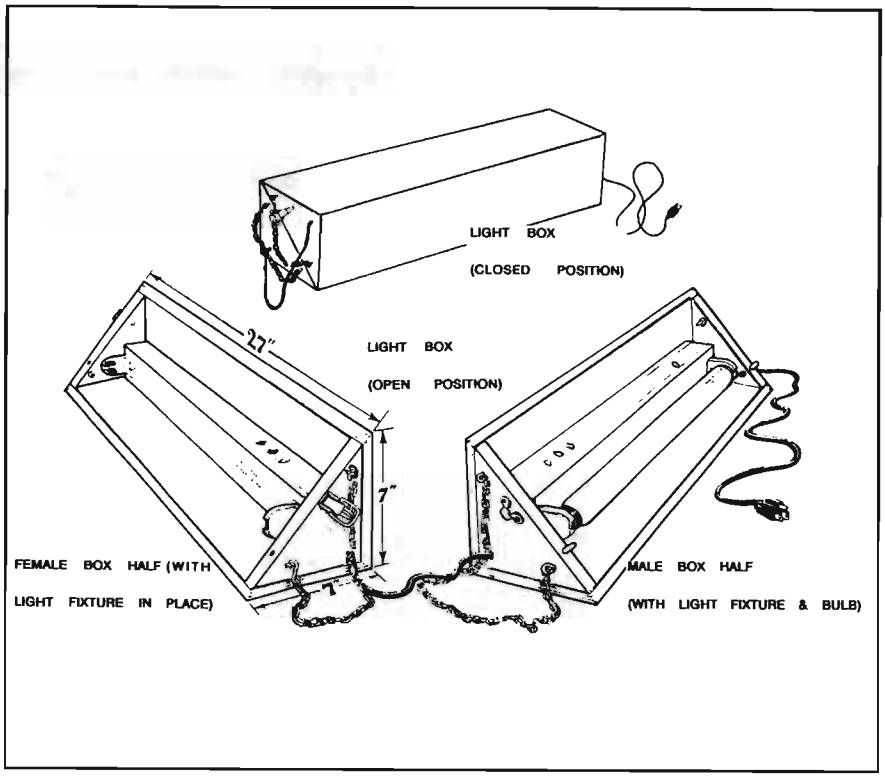
How to Build It:

A Light Set for the M577 CP Vehicle

(Submitted by the C&S Dept., USAARMS, with drawings by the Fort Knox TASC.)

During the Armor School's efforts to develop the Heavy Brigade Standardized Tactical Operational Center (TOC), former 3d Armored Cavalry Regiment troopers demonstrated how they solved the problem of poor lighting within the TOC with fluorescent light fixtures.

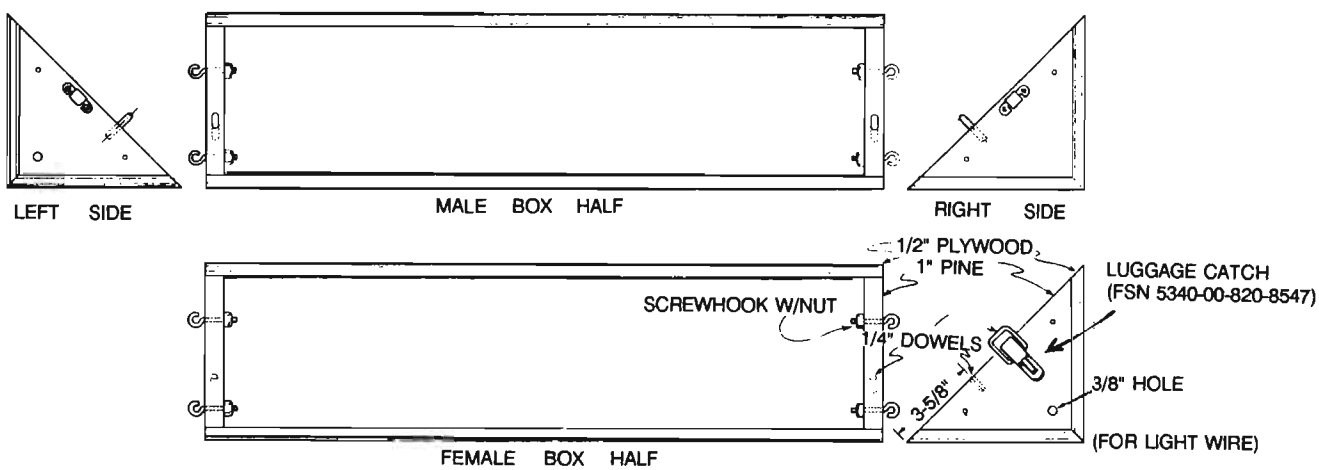
Their ideas are used in the standardized TOC set up in the SIMNET Warfighting Complex at Fort Knox and are a vast improvement over past light sets for the M577.



These light sets are durable because they combine to form their own protective box during movement. The light sets hang from the attached chains above the map boards of the TOC.

List of Materials

2 24-in fluorescent light fixtures
4 plywood pieces, 1/2"x27"x7"
2 pine boards, 3/4"x6"x6"
2 luggage catches (2-1/2")
8 5/32" screwhooks
1 1/4" dowel rod
4 chains; 1" links, 26" long
S-hooks, washers and nuts, wire



On the Track of the CAT...

Team Concept and a Return to the Basics Wins Canadian Army Trophy

by the 3d AD and V Corps CAT Team

On June 19th, 1987, 1st platoon, Delta Company, 4th Battalion, 8th Cavalry (formerly 3-33 Armor, "The Pickles"), did what no other U.S. Army unit has been able to do in 24 years of international tank gunnery competition: we won the Canadian Army Trophy (CAT)!

Out of a possible 21,800 points, 1st platoon posted a final score of 20,490, which was 800 points higher than its closest competitors, 2nd platoon, 4th Company, 124th Panzer Battalion (19,690 points).

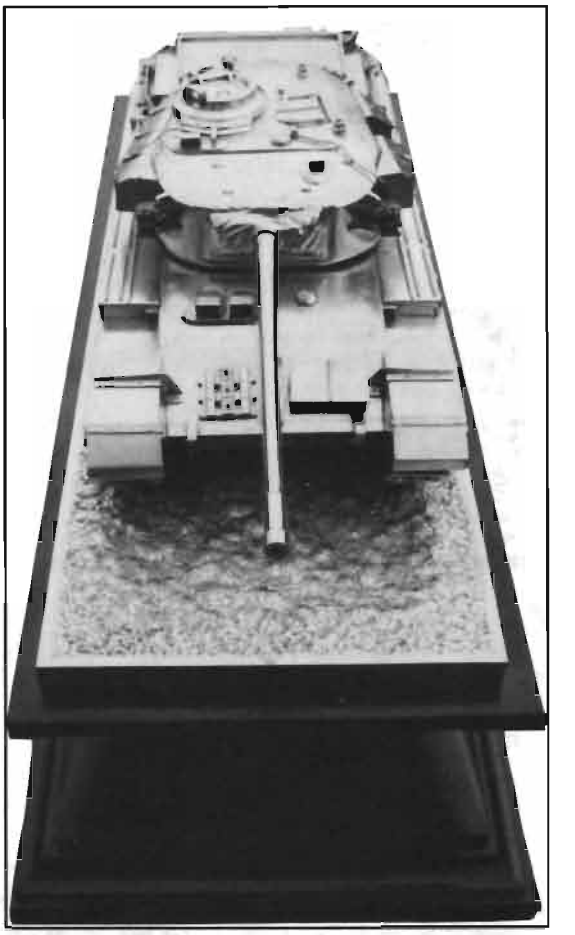
The winning platoon's battle run was the last of the five-day competition, making this first-time U.S. victory as dramatic as a World Series Game Seven grand slam homerun with two outs in the bottom of the ninth inning. The achievement capped months of intense training by Delta Company and verified a superb training program.

Every two years, the CAT tank gunnery competition brings together 10 teams, consisting of 24 platoons, from NATO's Central Army Group (CENTAG) and Northern Army Group (NORTHAG). Nations represented at this year's CAT were Canada, Belgium, Great Britain, the Netherlands, West Germany (3 teams), and the United States (3 teams). In recent years, the official top prize has been awarded to the army group with the highest total points at the end of the competition; however every team hopes that one of its platoons will have the highest battle run score of the competition. That platoon and its team, battalion, division, corps, army — and the tank it used — become the real winners of CAT.

Unfortunately, the past failures of the United States to win CAT have had the effect of transforming the competition into a test. This is not a phenomenon peculiar to the United States. The showing of the Royal Hussars at this year's competition was the subject of a front page story in London's *Sunday Telegraph*, June 21, 1987, titled "NATO Allies Outgun Britain's New Battle Tanks". Critics have used the results of past CATs to slam the way the Army trains, the quality of its all-volunteer force, and its procurement policies. These criticisms are as baseless as those who would claim that our use of the Unit Conduct of Fire Trainer (UCOFT) and Simulation Network (SIMNET) proves that simulators can be used to further reduce yearly training ammunition allocations. Our victory does not prove that the M1 is a better tank than the Leopard II, nor that U.S. volunteers are superior to West German conscripts. Our victory did prove that, given a capable piece of equipment and a solid training program, U.S. soldiers, not "gladiator troops" (a label pinned on us by a member of one of the other competing teams) are among the finest tankers in the world.

The most often cited reason why U.S. teams had been unsuccessful in their attempts to win CAT was that Army personnel policies made it impossible to bring together the necessary number of troops with CAT experience. Many experts were convinced that stabilized crews were the answer to German dominance at past competitions. The 1987 CAT Committee of Control requirement, for each sponsor (in our case, V Corps) to train two companies prior to an April 1 blind-draw selection, made the pool of experienced CAT tankers even smaller. The other company was made up of members of 3d Battalion, 8th Cavalry. (There is no doubt in our minds that they would have enjoyed the same success we did, had they been chosen to represent 3AD and V Corps.)

Veterans of CAT scoffed at a 3rd Armored Division team that said it was going to win without a single



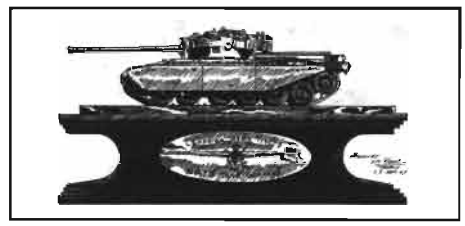
The Canadian Army Trophy, a silver Centurion tank, won by a U.S. unit for the first time in 24 years.

"Cat Fever"

Above, 1/D/4-8 Cav begins its winning battle run at bound 1, range 301, at Grafenwoehr.

At left, 1LT Pierre E. Massar, platoon leader of 1st Platoon, returns to Gelnhausen for the victory celebration following this year's "World Series of Tank Gunnery."

At left, the members of 1st Platoon, D Co., 4-8 Cav, stand at ease at Gelnhausen upon return from the CAT competition. The platoon was the first U.S. unit to win the competition in 24 years, and did it with the pressure on. The final battle run decided the competition between 10 teams from six NATO nations.



tank commander, gunner, loader, or driver that had ever competed in CAT. The team that we fielded was not a group of super tankers; rather, it was representative of today's armor force. The company was made up of the most qualified volunteers that one battalion had to offer. Even so, given the talent that was available, it was clearly representative of the battalion as a whole.

Training is the key to winning CAT; however, logistics is a most significant element of any training plan. In today's Army we tend to view training and logistics as two separate activities, primarily because of our desire to assign functional areas of responsibility. While this distinction makes it easier for the commander and his executive officer to write OER support forms, it also tends to cause leaders to view training and logistics as related, but not dependent on each other. Our experience during CAT vindicated a strong belief we took into CAT: logistics and training are mutually supportive. Many pay lip service to that simple statement; our challenge was to implement a system that would make it a reality in our CAT company. To win we knew that we would have to train and maintain significantly better than U.S. units had done in previous CATs.

It is noteworthy that we broke with the Army of Excellence MTO&E when we moved support personnel from HHC to the CAT company. We viewed that restructuring as a critical step in building a CAT team rather than a gunnery company. Our team, not any one platoon or 16 tankers, won CAT. The team concept ensured that training and logistics were not viewed as separate entities.

The M1 system exacerbates the need to treat training and logistics as a team. High-tech and relatively new systems like the M1 tend to blur the distinction between maintenance problems, systems problems, and training problems. The following situation illustrates this lack of distinction: You have a maintenance problem when a shortline round is due to a laser that is overheated or improperly installed. You have a systems problem when a crew shoots shortline because the number five circuit card comes loose in the computer-electronics unit (which happened frequently). You have a training problem when a shortline is caused by improper lasing techniques. In all these examples, the result is a shortline, and leaders know that shortlines must be eliminated to win CAT.

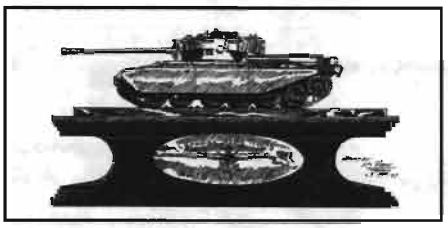
If the leader does not understand the intricacies of the M1, and the bond between logistician and trainer is not strong, the trainer blames maintenance, and logisticians blame training. (We had very few maintenance problems; the M1 had some systems problems.) At a minimum, valuable preparation time is either lost or wasted before the real cause is determined. In worst-case situations, the real cause is not identified, and the problem persists. We were successful because we were able to determine the cause quickly and apply the needed remedy. A strong team gave us that ability.

If the M1 is one of the finest tanks in NATO, and the quality of U.S. soldiers was as good as those in our allies' armies, then the key to winning CAT for the first time had to be training. Our analysis of past U.S. efforts to win CAT indicated that the lack of a stable, coherent, and a well-thought-out training plan had hindered units. A careful reading of their after-action reports indicated that they had concentrated almost exclusively on major densities and seemed to view the time they were not on the range as disfunctional, maybe even wasted. CAT teams are allocated so much range time during their preparation phase that there seemed to be a tendency to view time at home station as but a respite between densities.

Our training strategy did not revolve around any single training event or device. Instead, we designed a total program that stressed innovative training at home station as well as making maximum use of scarce range time and main gun ammunition. The keystones of that training strategy were:

- We constructed a Tank Crew Proficiency Course (TCPC) at a local training area that was a 1/4-scale duplicate of the competition range. Platoons maneuvered their own tanks, equipped with the Multiple Integrated Laser Engagement System (MILES), along the scaled-down course roads and engaged remote-controlled targets outfitted with the Target Interface Device System (TIDS). MILES and TIDS created target effect (the target fell when hit) and we were able to score CAT battle runs. All the tasks, conditions, and standards of CAT training were integrated into this course. It was so realistic that crews were able to practice target acquisition and range memorization.

- Not all of our training was this glamorous. We stressed platoon basics by spending countless hours in the classroom gathered around a terrain board. We developed range



attack procedures, drilled C^2, and reviewed lessons learned during CAT training at Grafenwoehr and Baumholder.

• Normal division densities at Grafenwoehr and Baumholder were used for CAT training. Before we fired a single main gun round, we ensured that the target scenarios and the range configuration duplicated what we knew about CAT battle runs. We developed an accurate scoring method that provided detailed firing data which we used to attack known weaknesses.

• Mr. Doug Watters, AMCCOM, developed a new procedure for zeroing the M1. Watters used a grid target panel, in conjunction with a correction matrix, to produce a zero that allowed us to consistently put rounds through an 8-inch bullseye at 2,000 meters. We feel strong about replacing calibration with zeroing. Whatever extra rounds are used to zero will be saved with more first-round hits during the subsequent training tables.

• During two of our densities at Grafenwoehr, we invited teams from both NORTHAG and CENTAG to attended a pre-competition training camp. The so-called "Kitty CAT" training camps were the brainstorm of our Commanding General, MG Thomas Griffin. As a lieutenant, he had competed in a contest similar to CAT and remembered the pressure of international competition. The CG wanted everything possible done to duplicate the pressurized atmosphere which, if not handled properly, can humble the best trained platoon. He insisted that our soldiers would have a better chance of winning CAT if the first time they saw a German cross painted on the side of a Leo II was not at the actual competition. MG Griffin was right. We feared no one.

• As part of our program to ensure that our soldiers could handle the stress of the actual competition, we asked the United States Military Academy for the services of Dr. Dennis Forbes, a member of the faculty. Dr. Forbes was no stranger to CAT. He had been part of the 3AD team in 1981. Dr. Forbes came to Grafenwoehr in the third week of May and remained with the team through the last run of the competition. His method of controlling stress was accepted by the troops and paid immediate dividends. Dr. Forbes gave us a team of competitors rather than participants.

Everything we did for many months preceding CAT was directed towards winning. Critics of the competition have argued the the CAT mission is detrimental to a unit because it focuses all its assets and training to the attainment of a single goal for up to a year. Many would carry the argument even further and add that CAT gunnery training does not support the Army's gunnery program, e.g., the competition does not require crew commands, night firing, or degraded gunnery. Our experience is that these critics are wrong. CAT training supports the mission of a forward-deployed armor battalion in Central Europe.

Delta Company deployed to Hohenfels one month after CAT for participation in the battalion's task force ARTEP. The company had no field time between CAT and Hohenfels to brush up on rusty field skills and conduct the tactical training that had been ignored for up to ten months. Even though the battalion's other companies had conducted ARTEP training, Delta Company's across-the-board performance at Hohenfels was superior to every other company in the battalion. It is noteworthy that the battalion as a whole had an excellent ARTEP, with some observers rating it as one of the top two performances in the division. The key to understanding Delta Company's performance is clear when we look at the *process* rather than the *product* of CAT training.

The *product* of our CAT training program was the first victory for a U.S. Army platoon in the history of the competition. Team-building and development of the company chain of command were the critical elements of the *process* that allowed us to successfully implement our training plan. The individual skills that were honed during CAT went far beyond those required for gunnery. They were the kind of skills that support the accomplishment of any mission and make a good unit a great combat team.

It may seem trite to point out that CAT training must stress quality and not quantity; however, it's true. A successful day on the range is not a function of how many battle runs are made, or even the platoon's performance. A good day on a CAT range is when the trainers know what targets they missed and why they missed. A great day on a CAT range is when the crews have full confidence in their equipment and the scoring system and *believe* they missed those targets. When both of these things occur, platoons (helped by trainers) can go through the process of determining whether misses were due to individual or platoon weaknesses. They identify problems, and trainers must design

WINNERS!

U.S. Cavalry Squadrons Win and Place in Grueling NATO Reconnaissance Competition

by Captain Lionel Ortiz and Captain Brian Butcher

Every year since 1978, teams from NATO's premier reconnaissance units have gathered to compete for the Bundeswehr's Boeselager Challenge Cup. For five days, these teams compete fiercely in a wide range of grueling events to prove themselves to be the best reconnaissance team in NATO. This little-known event has become the most challenging military skills competition in NATO.

In the past, some have used the U.S. teams' performances as a measure of our readiness in Europe. Interest in the results peaked with this year's competition in Hessisch-Lichtenau, FRG, from 11-15 May. The team from 1st Squadron, 11th Armored Cavalry Regiment, won first place overall in a field of 23 teams from 10 different nations. First Squadron, 1st Cavalry took second place in the allied category, completing the first 1-2 sweep by the U.S. Army in its eight years of participation. This article is intended to familiarize the reader with the competition's history and eight events, the training for the events, and the benefits derived from the competition.

The competition is named in honor of Colonel Baron Georg von Boeselager, considered to be the last and greatest horse cavalry commander in the Wehrmacht. A captain of cavalry at the outset of WWII, he was an innovator in the deployment of large cavalry formations. A brave, audacious, and resourceful officer, he was decorated with the Knight's Cross with swords and diamonds, and became a brigade commander of cavalry at age 29. Colonel von Boeselager was directly involved in the plot to kill Adolf Hitler. He was killed in action in September 1944, while leading his cavalry brigade in an attack against Soviet forces.

What exactly is Boeselager? The competition includes eight events, each having its own point value. The events are armored reconnaissance (550), night orienteering (400), enemy identification (250), shooting (200), obstacle course (200), tactical swimming (150), skilled driving (150), and aerial reconnaissance (150). German tactics and methods affect every event, especially the armored and aerial reconnaissance and the night orienteering courses. Scoring is done by multiplying the team's placing from the bottom by the event multiplier. For example, in a field of 20 teams, the third-place team in the shooting event would receive 18 X 200, or 3,600 points. Additionally, bonus points are awarded to the top six teams in armored reconnaissance, emphasizing the importance of this event in

CAT Competition (cont'd)

new scenarios to test the corrections.

If the problem persists, both must look at the attack SOP to see whether there is a better way of doing things.

The UCOFT and SIMNET facilities were an integral part of our training program, however, they alone are not responsible for our victory. Our training strategy can best be described as a blend of basic training methods, attention to detail, state of the art training devices, and the kind of quality soldiers that are found everywhere in today's Army. Yet, if we were asked to cite the single most important element in our overall strategy it would have to be that we fielded a team, in every sense of the word.

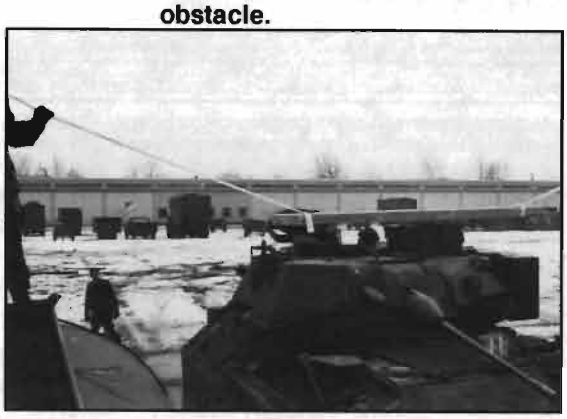
On June 19, if anyone in Delta Company was asked who won CAT, he would not reply "1st Platoon". He would proudly reply, "We Did!"

Going For The Gold...

One team member gives another a hand negotiating "The Wall", one of the obstacles along the 3,500-meter course.

Team members sprint to firing positions after the "alarm post" engages the first targets. Below, training for small arms.

Below, a Bradley crew practices for the height clearance obstacle.



the competition. Teams are composed of one lieutenant (patrol leader), one sergeant (assistant patrol leader), and six troopers. Two full crews by TO&E (in our case, a total of 10 men) may compete in the armored reconnaissance event.

The heavily-weighted armored reconnaissance course is the premier event of the Boeselager competition. A two-vehicle recon patrol must conduct a 30-kilometer route reconnaissance to establish an observation post within 3-1/2 hours. Along the course, the patrol encounters numerous enemy forces of varying strength and disposition. Evaluation results are a combination of tactical conduct (in accordance with Bundeswehr standards) and reporting points. The courses are well choreographed and rehearsed, with OPFOR locations and actions matching the reporting solutions for the course.

Training for this event begins with classroom instruction on German reconnaissance tactics, which are vastly different from our own. Next, the crews progress to sand table drills, and finally, mounted reconnaissance exercises. Perhaps the greatest challenge here was to ingrain stealth (vehicle camouflage, covering tracks in assembly areas, and not breaking cover with vehicles), and teach our soldiers not to engage the enemy every time they see him. German-style armored reconnaissance requires intensive preparation and practice in entirely different tactics.

The night orienteering course is a 10-station, 15-20-kilometer dismounted navigational exercise. Competitors use many unique and imaginative navigation methods, ranging from aerial photography to map sections to route memorization. The patrol leader has the use of a map about 10 percent of the time. Units receive special tasks at the stations, to include Warsaw Pact weapons, equipment, and uniform identification, first aid, engineer tasks, and assembly/disassembly of Soviet weapons. Mistakes in these tasks, and failure to reach stations, result in penalty times. Overall placing is determinined by time, with shortest times for the most stations winning. For this event, the 1-11th ACR conducted twenty-seven night orienteering exercises to Boeselager standards, the majority of these in severe winter conditions.

During the enemy identification

event, the patrol tests at three stations. First, the entire patrol tests in vehicle recognition from bunker positions in total darkness. A lighting system that simulated muzzle flashes, fires, and illumination rounds briefly illuminates Warsaw Pact vehicle models (scale 1/20), approximately 30 meters distant. The team members have the aid of Bundeswehr-issue binoculars to identify the vehicles. Next, the patrol reviews mannequins of Warsaw Pact soldiers. Patrol members must identify country of origin, rank, branch and weapons. At the final station, the patrol leader and assistant patrol leader must interpret Soviet operational graphics in order to analyze the tactical situation depicted on a captured Soviet map. We conducted an immense amount of classroom training and practical exercise in preparation for this event. In 1987, 1-11th ACR was the winner in enemy identification.

The most grueling physical event of the competition is the obstacle course. The entire patrol runs the 3,500-meter, cross-country course. All enlisted soldiers carry UZI submachineguns, while the patrol leader and assistant patrol leader carry pistols. They must negotiate five man-made obstacles and two hand grenade target positions. Failure to hit all hand grenade targets at each station forces the patrol to run a detour around the position. Training for this event required rigorous workouts and a nutrition program that supplemented regular Army chow. We ran practice courses weekly and practiced throwing hand grenades daily.

The shooting event is on a standard 300-meter German shooting range. The patrol breaks into four-man teams and each man receives two six-round magazines. For each group, there are 20 targets exposed in seven groupings. One soldier, acting as an "alarm post," fires at the first grouping, and then the remaining three soldiers must run 50 meters to assume their firing positions. Targets are heavily camouflaged, with some visible to only one member of the patrol. Scores are based on target hits, plus bonus points for groupings hit, and rounds turned in (if all 20 targets are hit). Training involved personalized instruction for team members by the U.S. Army Marksmanship Team from Ft. Benning, and weekly shooting on ranges set up to competition standards.

The tactical swim entails a 200-meter swim in neoprene suits with 30-lb packs and UZI submachineguns. Patrols are required to make these packs (similar to poncho rafts), maintain three-man security and swim the course within 45 minutes. Penalties are awarded for exceeding the allotted time, wet or lost equipment, and inadequate security. Training for this event also required personalized instruction and complemented overall physical conditioning.

Only the assistant patrol leader and his driver participate in the skilled driving event. Their vehicle must travel through, around, and over obstacles on a cross-country course. At these obstacles, the goal is to minimize clearances, which are measured and converted into penalty points. Although the size of the Bradley put the 1-11th ACR team at a disadvantage against the German Luchs, British Scorpions, and M113s of the other teams, the team managed to place sixth overall in this event.

The only individual event is aerial reconnaissance, which is done by the patrol leader. Within 90 minutes, he must plan and execute a

route reconnaissance for a reinforced German reconnaissance company. OPFOR and obstacles along the route test his ability to navigate and observe simultaneously, as well as select suitable detours along the planned route. Scoring is based solely on the graphics portrayed on his map, with emphasis on bridge MLCs, detour suitability, enemy locations, and positions for the company at the final assembly area. U.S. patrol leaders flew in excess of 100 hours in preparation for this event with both U.S. and Bundeswehr pilots and aircraft.

Training for the Boeselager Cup is both challenging and different from U.S. methods. Intense physical conditioning is the foundation of the program, with the goal to have a 10-man team of NCAA-caliber athletes that can run, shoot, and swim to intercollegiate standards. But raw physical talent is not enough to form a winning team. To become knowledgeable in German tactics, identification of all Warsaw Pact weapons, equipment, and personnel requires intelligent soldiers willing to spend long hours studying.

Perhaps the most rewarding aspect of Boeselager, from a training viewpoint, is the close interaction with our Allies. Through partnership training, we exchanged many ideas about reconnaissance and other training. The end result is a better understanding of each other's men, equipment and tactics.

The Boeselager competition itself provides an accurate measure of

U.S. soldiers' recon skills. Even though German tactics are used in most events, basic individual skills are tested, and results have proved the values of cavalry scout individual training. More important, the competition serves as a forum for the exchange of ideas among some of the finest reconnaissance troops in NATO. The U.S. team's observers benefit, too, not only from this exchange, but also in the corresponding increase in the confidence in our own and Allied readiness. American soldiers can point to the superb performance of both U.S. teams in 1987 as ample evidence of our outstanding soldiers and the readiness of the cavalry force in Europe.

CPT Lionel Ortiz is a 1983 USMA graduate. After attending AOBC, he was assigned to 2nd Squadron, 11th Armored Cavalry Regiment. He served as scout platoon leader, liasion officer, and the 1986 Boeselager patrol leader for V Corps. In 1987, he was transferred to 1st Squadron to serve as armored and aerial reconnaissance trainer for the Ironhorse Boeselager team.

CPT Brian Butcher is a 1983 USMA graduate. After attending AOBC, he was assigned to 1st Squadron, 11th Armored Cavalry Regiment. He served as tank platoon leader, troop executive officer,support platoon leader and Boeselager Patrol Leader. In 1987, he was assigned as Boeselager team trainer for night orienteering and tactical swimming. He is currently attending the Amphibious Warfare College in Quantico, Virginia.

Super Scouts

The best scouts in all of NATO's armies in Europe, and the Boeselager Cup winners for 1987, is the team from 1st Squadron, 11th Armored Cavalry Regiment. The team is seen on one of the M3s it used in the strenuous and exacting five-day competition.

Standing tall and proud are:

Front row (left to right) - SP4 Steven L. Meints, PFC Thomas D. Blake, SGT Charles L. Ross, 1LT William V. Hill, 1LT Scott D. Zegler, SP4 Shannon R. Thomas, PFC Bradley R. Scott, and SP4 Christopher P. Downey.

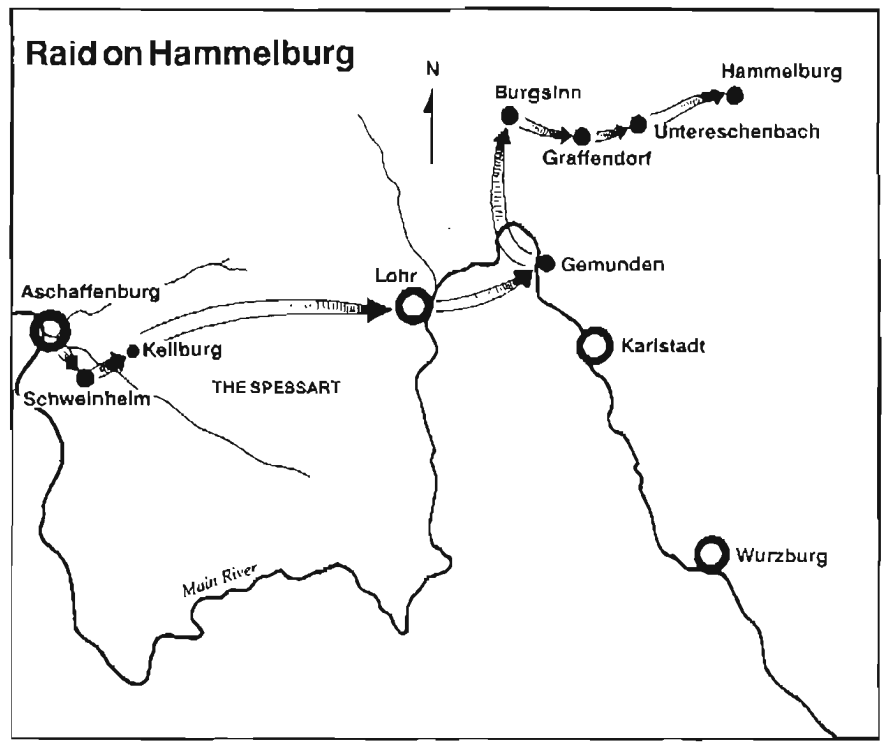
Second row - SP4 John E. Mullen, PFC John Hynd, PFC James T. Black, and PFC Jimmy Davis.

Third row - PFC William L. Lyons, SP4 Robert Turner, SP4 Donald E. Manley, and SP4 Leonard B. Adams.

The Destruction Of Task Force Baum

This WWII "Deep Strike" To Liberate a POW Camp Offers Lessons for AirLand Battle

by Captain James B. Hickey



Approximately three kilometers southwest of the lower Bavarian city of Aschaffenburg, along the River Main, stands a single-tracked railway bridge. This trestled span connects the east and west banks of the northward-flowing river. It now peacefully serves with other modern bridges to link the Odenwald on the west to the mountainous region of the Spessart to the east.

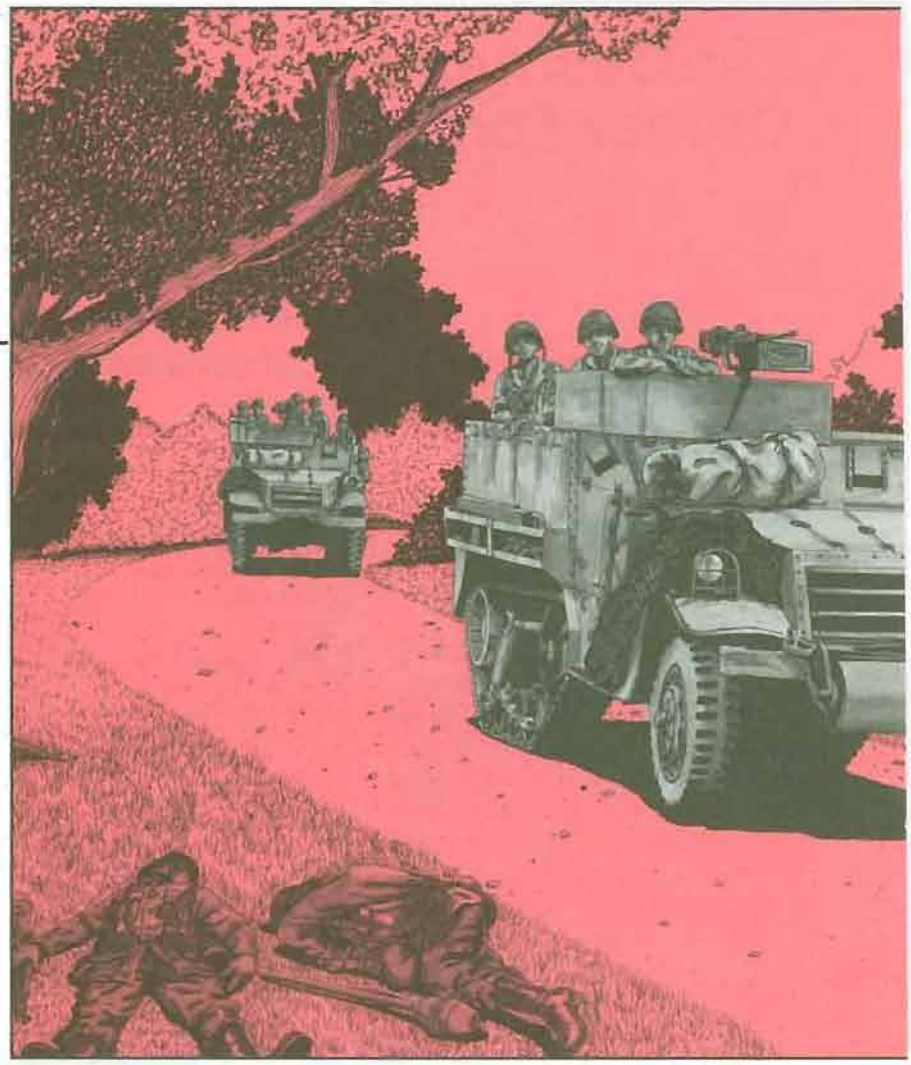
But more than 40 years ago, in a less than peaceful environment, this same bridge served as a backdrop for the assembly area of a hand-picked force of almost 300 American soldiers. They were select members of the 10th Armored Infantry and the 37th Tank Battalion of Combat Command B, 4th Armored Division.

Positioned along a sunken road that ran due south from Aschaffenburg, along the east bank of the Main, "The little force prepared for the tremendous adventure that lay ahead of them."[1] Extra cans of gasoline filled the halftracks. Tankers and armored artillerymen filled the storage racks of their Shermans and self-propelled M7 howitzers with 75-mm and 105-mm ammunition. The armored infantrymen checked their M1 Garands and ensured they had washed and changed into clean underwear to prevent infection in the unfortunate event of being wounded. "The young replacements...talked and joked a lot...(one) would have noticed that they went over the edge of the road to urinate pretty frequently."[2]

Regardless of the volume of purposeful activity that characterized this forward assembly area on the evening of 26 March 1945, most of the men did not know where they were going.[3] One of the few who did was Technician 5 Dave Zeno. What particularly bothered this 30-year-old medic was that he and his assistant, Andy Demchak, were to be the only medics assigned to the force: "Responsible for the health and welfare of 300 fighting men... Just the two of them. No special supplies. No doc. What if they took heavy casualties?"[4]

Over the years, the exploits of this task force have enjoyed unofficial inquiry and historical analysis from both soldiers and historians. The controversy that has distinctly marked these studies has been the question of the professional and moral justification of the command decision that sent these men into action. The destruction of Task Force

"...The supporting tanks and armored infantry of the two 'B' companies suffered heavy losses securing a partial passage through the village..."



Baum was indirectly the result of the directing command's failure to ensure that it received the minimum necessary combat, combat support, and logistical means to sustain itself in the execution of its assigned mission.

The relevancy of the lessons that are presented here is especially important in context of the stated intent of the U.S. Army's present operational doctrine:

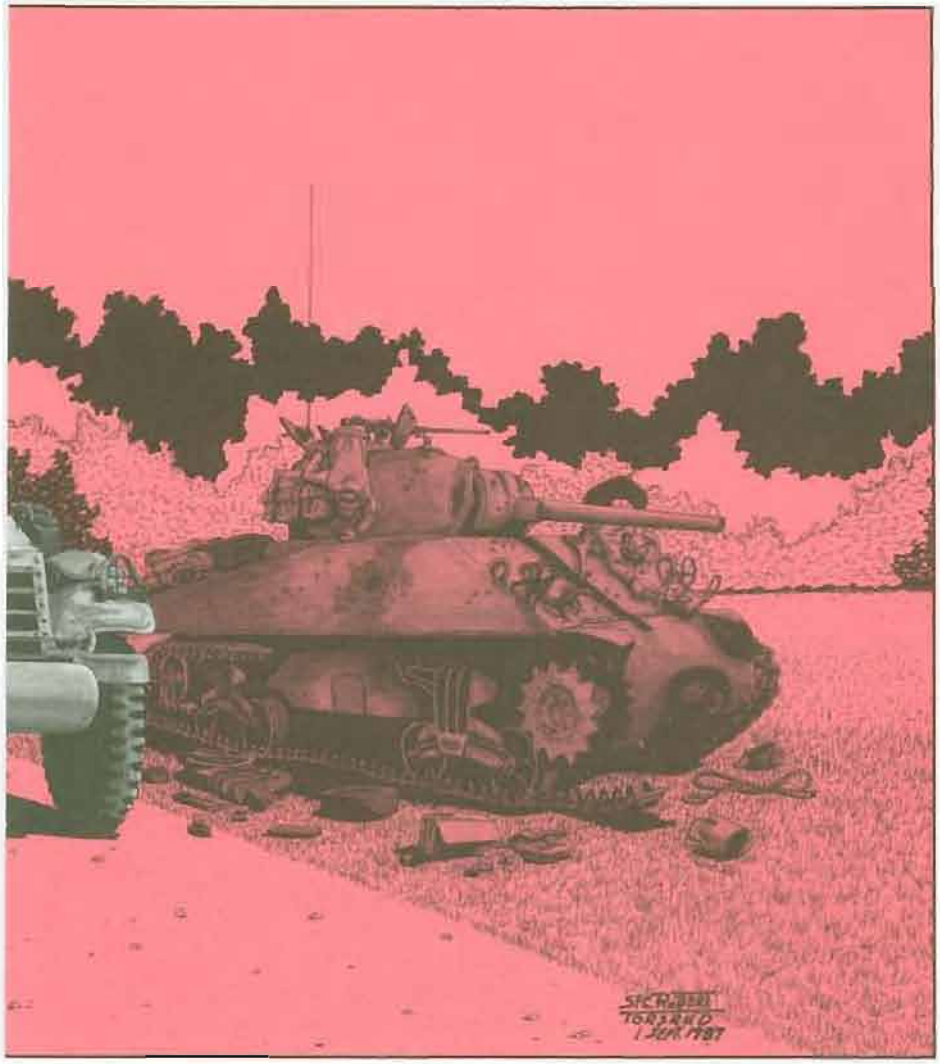
"The Airland Battle... is based on securing or retaining the initiative and exercising it aggressively to defeat the enemy... Army units will... attack the enemy in depth with fire and maneuver and synchronize all efforts to attain the objective... Our operations must be rapid, unpredictable, violent and disorienting to the enemy."[5]

In practice, the success or validity of this doctrine will indirectly relate to the ability of units to sustain their combat power while physically separated from their established support bases over extended periods of time. Between 25-26 March 1945, full planning considerations, such as close air support, effective forward resupply, and communications, were abbreviated in an effort to save time. These shortcuts were further rationalized with an underestimation of the enemy's capabilities. The results of this planning climaxed on a hilltop seven kilometers southwest of the Franconian city of Hammelburg in the early morning hours of 28 March 1945.

On the night of 25 March 1945, LTG George S. Patton, commander of the U.S. Third Army, ordered the commander of XII Corps, MG Manton Eddy, to form a task force to go to Hammelburg and liberate a POW camp containing an estimated 300 American officers. Eddy, in turn, ordered BG William M. Hoge, commander of the 4th Armored Division, to execute the order. He organized a task force of approximately 300 men from elements of the 10th Armored Infantry (10 AI Bn) and the 37th Tank Battalion (37 Tk Bn) of LTC Creighton Abrams' Combat Command B (CCB). The force had M4A3 Sherman tanks (Co C, 37 Tk Bn); five M5A1 Stuart light tanks (Lt Plt, Co D, 37 Tk Bn); 27 M3A1 halftracks (Co A, 10 AI Bn); three self-propelled 105-mm howitzers; three jeeps of a reconnaissance platoon; and a headquarters section consisting of command, maintenance, and medical elements.

Its commander was 24-year-old Capt. Abe Baum, the S3 of the 10 AI Bn. His mission was to raid the POW camp of Hammelburg and liberate the estimated 300 American officers.[6]

The intelligence estimate stated that the force would initially meet



little opposition, but also mentioned that the elements of two German divisions were located between Aschaffenburg and Hammelburg along the River Main.[7] Task Force Baum was to take the most direct route to the camp, charging forward at top speed; it was to bypass resistance.[8] Speed was to maximize the security of the force.

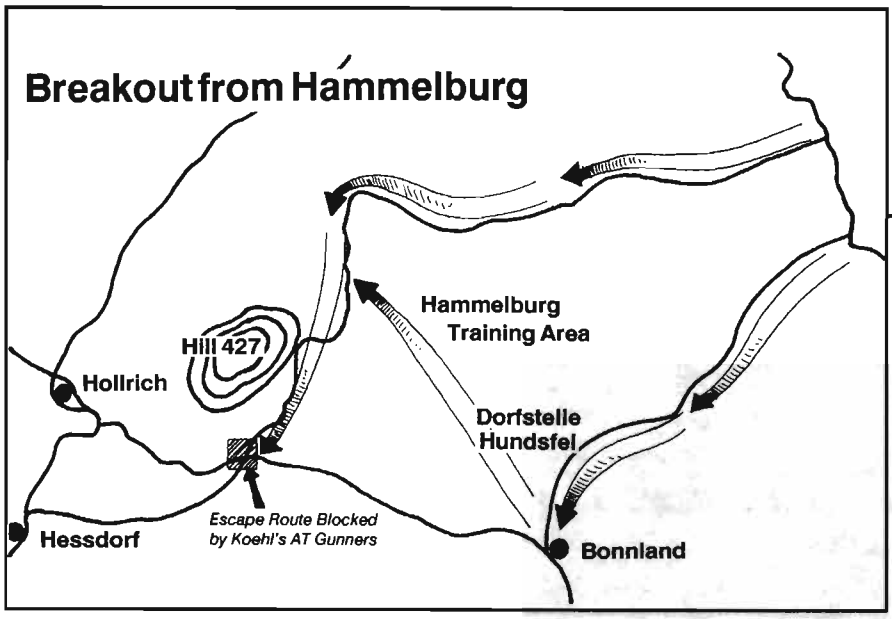
Unfortunately, the terrain that characterized the area between Aschaffenburg and Hammelburg did not lend itself to providing speed nor maneuver space for the armored task force. Winding through the heavily-forested regions of the Spessart and the numerous towns and villages along the River Main, the planned route passed through the village of Schweinheim south of Aschaffenburg, north to Highway 26, along this road on an easterly azimuth through Lohr am Main and Gemunden toward Karlstadt. At that point, the force would then turn north on Highway 27 to Hammelburg. To assist Task Force Baum's forward passage through the enemy front in Schweinheim, Company B, 37 Tk Bn, and Co B, 10 AI Bn, under the direct support fires of the 4th AD's three artillery battalions, would breach a line through the village with a supporting attack at 2100 hours, 26 March.[9]

From the start, German resistance at Schweinheim was heavier than anticipated in the intelligence estimates. The supporting tanks and armored infantry of the two "B" companies suffered heavy losses in securing a partial passage through the village that possessed a "main street (that) measured appreciably more than half a mile."[10] Concerned about time, Captain Baum ordered his task force through the supporting elements in Schweinheim just after midnight. "It was a dangerous tactic made worse by the hazards inherent in traveling over unknown territory in the dark."[11] Baum's force exited the village without a loss and made its way north along a series of secondary roads to Highway 26. Regardless, "Abe Baum suddenly felt...that the German line had cut him off already."[12]

"Passing through Haibach-Grumorsbach, Strassbessenbach, Keilburg, Frohenhofen, Laufach, and Hain, the force met light resistance. When fire was received, all weapons were fired...No high explosive shells were fired from the tanks at night while passing through the town because the column would have to stop."[13]

However light the initial resistance, the task force began to sustain casualties. Medics took care of the wounded while enroute. They left the most serious cases on the side of the road with the hope that the Germans would care for them.[14]

Reaching Highway 26 at 0230, Task Force Baum continued due east through the heavily-forested hills of the Spessart toward Lohr am Main. Moving at a speed of 15 mph, the lead light tanks knocked down telephone poles along the highway to disrupt the enemy's communications in the area. But white sheets hanging in the windows of homes in some of the towns they passed through informed the experienced tankers that the enemy



did indeed expect them.[15] At first light of 27 March, Baum's column came upon a group of German soldiers doing morning calisthenics in a clearing at Bishornerhof in the Spessart.[16] The task force, without halting, engaged with machine guns. Donald Yoerk, a commander of one of the M5A1s, thought, "This sure isn't a secret mission anymore."[17]

Baum ran into the enemy's first organized resistance on the western approaches to Lohr am Main, the command post of Gen. Hans von Obstfelder, commander of all ground forces in southern Germany. The armored force lost its first M4A3 to *panzerfaust* fire at a roadblock. The task force quickly suppressed and bypassed the light resistance.[18] By 0900, the task force cleared Lohr am Main, engaged its lightly-armed defenders with overwhelming firepower, and continued its advance eastward to the critical town of Gemunden.[19] Located at the confluence of the Sinn, Main, and Frankische Saale Rivers, Gemunden's bridge had to be captured intact to facilitate Baum's movement east along Highway 26 to Karlstadt and its intersection with Highway 27. Unfortunately, Baum's men energetically engaged several troop trains moving westward along the railway line that paralleled the highway from the Gemunden railroad yards. These actions served to alarm the two platoons of naval recruits that were charged with the responsibility of defending the bridge over the Sinn and Frankische Saale Rivers in the center of the city.

Under the skilled direction of Eugen Zoller, an experienced 25-year-old NCO of the German Army Pioneers, the teen-age defenders, armed with more than 200 *panzerfausten*, aggressively counterattacked the American armored column's drive for the bridge. Before Baum's first Sherman reached the western edge of the bridge, Germans destroyed the bridge with a prepositioned demolition charge.[20]

The Germans' fierce resistance, the loss of three medium tanks, and, the loss of the bridge forced Baum to withdraw westward and move northward toward the town of Burgsinn and its bridge, which spanned the Sinn River.

Without rest, and suffering from multiple shrapnel wounds, Capt. Baum lead his force north through Burgsinn and eastward toward Graffendorf on the Frankische Salle River. Liberating 700 Russian prisoners who were working in the fields outside Graffendorf, Task Force Baum continued along the northern bank of the Frankische Saale amd crossed it at the town of Michelau. At this point, an enemy reconnaissance plane spotted the armored column. The plane was one of the efforts of von Obstfelder to determine the disposition and destination of the American force. Baum realized the enemy certainly knew of his force's exact size and location.[21] Even so, he lead his formation eastward through Weickersgruben to the intersection of a narrow country road and Highway 27. The task force continued north on Highway 27 toward Hammelburg in the early afternoon of 27 March. In the vicinity of the small town of Untereschenbach on the west side of the highway, Baum's vehicles came under the direct fire of German forces in the railroad yards of Hammelburg to the north. This force, under the command of Hauptmann Richard Koehl, consisted of eight *panzerjager* armed with 75-mm cannon.[22]

These fires inflicted additional losses on Baum's force and forced it to move southwest to the high ground overlooking Hammelburg. It was at this point that Baum sighted the POW camp. Baum "kept pushing the task force over the ridge onto the high ground where two companies of Kraut infantry (the camp's guards) were dug in. It took us two and a half hours to clean it up so that the infantry and tanks could move in."[23]

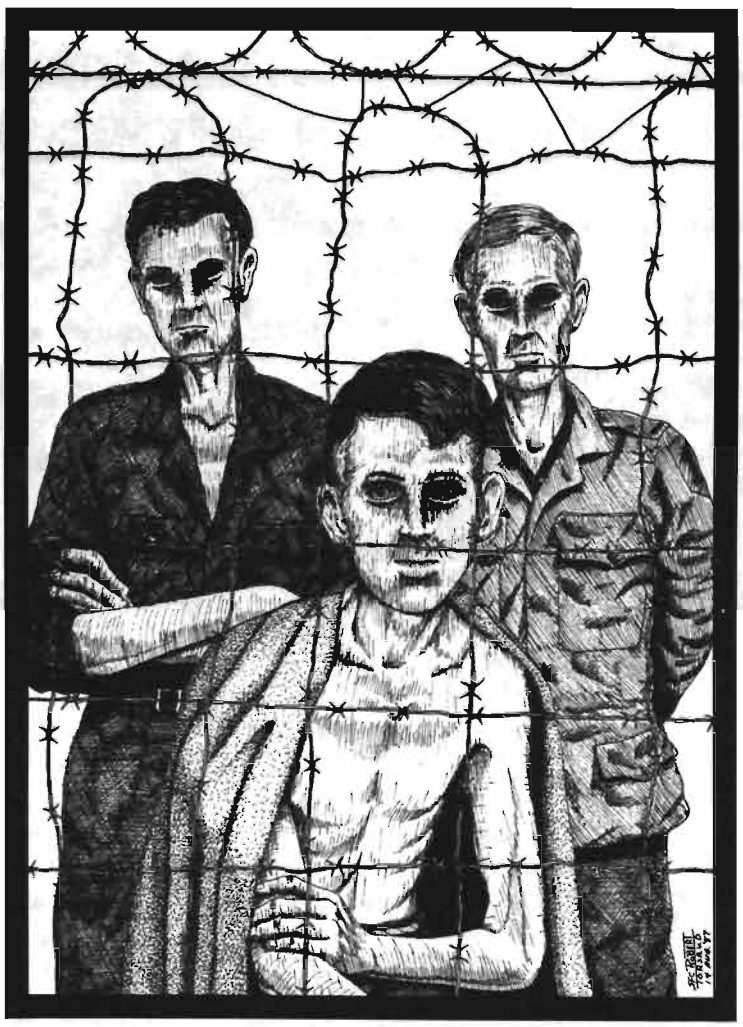
By 1700 hours, 27 March, Task Force Baum had seized and

"...In hindsight, it is difficult to fault the planned intent of the command decision that put Task Force Baum into action..."

liberated the camp. Baum "had come to carry home 300 or 400 men and found instead 1,500 eager for freedom. The sheer numbers staggered him."[24]

By 2000 hours, the Americans were on the move again, carrying "approximately 200" POWs on the sides and tops of their tanks in an attempt to find a passage back to friendly lines.[25] Unfortunately, the force met stiff and well-organized resistance under the leadership of Oberst Hoepple, the commanding officer of the Hammelburg area. Throughout the night, Baum's men were thwarted in the south at Bonnland and stopped in Hessdorf and Hollrich to the west. At about 0300 hours, 28 March, Baum ordered his forces to consolidate on Hill 427 on the western boundary of the Hammelburg training area, ten kilometers west of the POW camp. At 0400, the task force commander ordered his subordinates to prepare to move out at 0830 for a second breakout attempt. In the meantime, the men cross-loaded fuel, ammunition, and food onto the vehicles that were to be used for the trip home, and the balance was prepared for destruction.

Throughout the evening, however, Oberst Hoepple skillfully maintained contact with Baum's force and expeditiously positioned Hauptmann Koehl's *panzerjager* company into firing positions south of Hill 427, after the Americans consolidated on its slopes. At 0810 hours, after first light, Baum's force came under direct antitank fires from the southeast at a range of 1,500 meters. Within three minutes, the American position "seemed to be one single sheet of flame... it occurred to Baum that he had lost control of the situation, that he had lost the task force."[26] German infantry quickly overran the American position in the ensuing minutes after Koehl's attack by fire. Within hours, the Germans swept the area clean of residual American resistance and, ironically, interned the vast majority of Baum's men in the POW camp that they had come to liberate.



In hindsight, it is difficult to fault the planned intent of the command decision that put Task Force Baum into action. On 25 March, General Patton wrote, "I do not believe that fear of criticism should prevent my getting back American prisoners, particularly as in the last death struggles of the Germans, our POWs might be murdered."[27]

What can be legitimately questioned today, as it had indeed been questioned by a number of soldiers prior to the movement of Baum's force, is the size and composition of the forces allocated to carry out the mission.

Although originally prepared to send the equivalent of a brigade-size force, the Third Army commander allowed MG Eddy, XII Corps commander, to persuade him to reduce the size of the organization to 300 men.[28] The 4th AD commander did not receive this crucial decision well. BG William M. Hoge feared his division, which consisted of "exhausted troops who had just finished 36 hours of intense com-

bat," would not be capable of providing a task force capable of accomplishing a raid 60 kilometers behind German lines.[29] This concern was certainly justified because the 4th AD commander had simultaneously received orders for his division to continue its attack north of Aschaffenburg. The greatest challenge to the order was finally provided by LTC Creighton Abrams of CCB, 4th AD, when he stated to Hoge, "Fifty miles is a long way to go, sir, for that small force. If we have to go that far, I want my whole command to go. Hell, a combat command can go anywhere."[30]

Gen. Patton made his final intentions clear at 1000 hours, 26 March, at Abrams' command post, when he told him that he would not take his entire command to Hammelburg, but would send only a "small force."[31] The authority of this final decision was not, nor can it be today, questioned on the grounds of legitimacy. It was well within Patton's authority to place a ceiling on the size of the force. But with that authority came, however, the command responsibility to ensure that the task force was of sufficient size to accomplish its mission. In this particular instance, Gen. Patton was later proved to be in violation of the first principle of war. In its strictest definition, today's modern principle of objective states, "Every military operation should be directed toward a clearly defined, decisive, and attainable objective... The selection of objectives is based on considerations of the mission, the means and time available, the enemy, and the operational area.[32]

In acknowledgement of this error, Gen. Patton later admitted: "I can say this, that throughout the campaign in Europe I know of no error I made except that of failing to send a combat command to Hammelburg.[33]

Additionally, the allocation of combat support assets to Task Force Baum was insufficient. Beyond the supporting fires that were initially provided to assist Baum's forward passage at the enemy line of contact in Schweinheim, there were no additional planned combat support efforts. In effect, the raiding force's combat power within enemy-controlled terrain was limited to the effects that could be provided by its organic and attached elements.

Surprisingly, the only close air support that Baum received during his mission was in the form of a single L-5 reconnaissance plane that served solely as a communications relay station.[34] There were no specific provisions to provide the task force with timely close air support or forward aerial reconnaissance.[35] These peculiar combat support deficiencies accentuated by Task Force Baum's deficiencies in proper signal equipment to support its extended movements deep into the enemy's rear. When not in FM radio contact with his aerial relay station, Baum's only contact with his parent organization was via his single Morse key-powered AM radio carried in a M3A1 halftrack.[36] This signal arrangement was totally inadequate to responsively support the maneuver of an isolated armor column.

The lack of careful logistical planning and its effects on the success of the mission are also major points of concern. Specifically, the lack of realistic planning centered on forward fuel supply, adequate transportation assets, medical supplies, and maps. For a force of more than 50 combat vehicles that did not have the range to travel to Hammelburg and back, the only provision for POL replenishment was to load as much extra fuel as possible on board before departure and hope to

capture enemy fuel supplies near the objective.[37] This type of plan is less than adequate, except under the best of circumstances.

The task force's lack of transport vehicles and additional medical supplies was particularly surprising. It is hard to imagine that Baum received this rescue and evacuation mission without any uncommitted transportation and medical assets above and beyond that provided to support his normal combat elements. To assist him in moving and caring for the expected 300 POWs at Hammelburg, Baum was to secure enemy vehicles enroute to the camp or load as many of the prisoners as possible onto the sides of his combat vehicles![38]

"...Within hours, the Germans swept the area clean of residual American resistance and, ironically, interned the vast majority of Baum's men in the POW camp that they had come to liberate..."

(The weapon at lower right of the illustration is a panzerfaust hand-held antitank weapon.)

To further complicate the task force commander's problems, his force received only 15 maps of the area between Aschaffenburg and Hammelburg.[39] Limited in coverage and detail, these maps were only effective if the force did not have to deviate from its planned direction of attack or execute any off-road maneuver.[40] This situation specifically aggravated Baum's problems when he was not able to pass through Gemunden to Highway 27. He was forced, however, to move north on secondary roads and navigate through uncharted terrain relying entirely on information from captured German soldiers and civilians. This process did not facilitate flexibility and speed, characteristics that were essential to the survivability of the force.

The failure of the directing command to provide proper levels of combat, combat support, and logistical means to Task Force Baum directly affected its ability to sustain its initial speed, surprise, and flexibility. This loss of initiative and momentum was critical, but in itself was not decisive.

Maximizing upon the naturally constrictive characteristics of the road network between Aschaffenburg and Hammelburg, the Germans were quickly able to use their limited resources to overcome their initial surprise and regain contact with Baum's penetration. These skillful actions proved to be decisive. By successfully determining the disposition, location, and destination of Task Force Baum, the Germans were able to begin shaping the battlefield to meet their own ends.

These defensive actions, predicated on the enemy's inherent ability to trade space for time in order to intelligently mass available strengths at a place and time of their own choosing, were complemented by the reality that Baum's force intrinsically weakened as time passed. This progressive deterioration of Baum's combat power as he moved away from his support base was the product of incomplete tactical planning.

The failure of Task Force Baum serves as a valuable and sobering lesson as our Army develops an operational and tactical doctrine that emphasizes agility, initiative, depth, and synchronization. These tenets will be practically realized on the future battlefield with fast-moving, hard-hitting task forces and teams operating, at times, well within the enemy's rear area. These anticipated conditions are not unlike the conditions that a courageous and experienced 24-year-old captain and his force of 300 faced in the closing days of WWII.

However, what will be decidedly dissimilar in future operations, compared to our Army's experiences in WWII, will be our numerical inferiority in equipment and men. We will not have the luxury to learn from mistakes that will result in the complete destruction of critical combat assets. We must avoid incomplete staff planning and hasty command estimates in the AirLand Battle.

Notes

1. Charles Whiting, 48 Hours to Hammelburg (New York: Ballantine Books, 1970) p. 76
2. Ibid., pp.76-77.
3. Ibid., p.76.
4. Ibid., pp.77-78.
5. FM 100-5, Operations, 1982, p.2-1.
6. Richard Baron, Major Abe Baum, and Richard Goldhurst, Raid: The Untold Story of Patton's Secret Mission (New York: G.P. Putnam's Sons, 1981), p.21.
7. Whiting, p.75.
8. Ibid., p.74.
9. Ibid., pp.78-79.
10. Baron, Baum, and Goldhurst, p.46.

11. Ibid., p.55.
12. Whiting, p. 86.
13. Ibid., p.88.
14. Ibid.

15. Baron, Baum, and Goldhurst, pp. 114-116.

16. Dr. Alois Stadtmuller, "Die waghalsige Operation der Task Force Baum", Spessart, 1985, March 1985, p.6.

17. Baron, Baum, and Goldhurst, p.117.

18. The panzerfaust was a highly effective, hand-held, single-shot, antiarmor weapon that was roughly equivalent to the U.S. bazooka.

19. Stadtmuller states that Baum's men encountered elements of a lightly-armed column of state laborers on the east side of Lohr am Main in "Die waghalsige Operation der Task Force Baum," Spessart, 1985, March 1985, p.6. This is contrary to popular assumptions that Baum ran into a heavily-armed tank column.

20. Herr Eugen Zoller, interview held in Gemunden, West Germany, November 1985.

21. Baron, Baum, and Goldhurst, p.142. What Baum did not know was that the German defenders of Gemunden captured one of his maps from his point M4A3, which was immobilized at the foot of the destroyed bridge. That map illustrated his planned route and destination.

22. Dr. Alois Stadtmuller and unidentified citizens of Hammelburg who witnessed the action of 27 March 1945. Interview held in Gemunden, West Germany, November 1985. Contrary to many popular accounts of the battle around Lager Hammelburg, where the German forces were credited to have been equipped with heavily-armed Tiger tanks and Panzerjager Elephant (heavy tank destroyers armed with 88-mm cannons), the only enemy armor that was used was limited to Koehl's Czech-made Hetzers.

23. Whiting, p.130.
24. Baron, Baum, and Goldhurst, p.177.
25. Ibid., p.183.
26. Ibid., p.219.
27. Ibid., p.10.
28. Whiting, p.70.
29. Baron, Baum, and Goldhurst, p.14.
30. Ibid., p.16.
31. Ibid., p. 19.

32. John I. Alger, The Quest for Victory: The History of the Principles of War (Westport, Connecticut: Greenwood Press, 1982), p.268.

33. Whiting, p. xvii.
34. Baron, Baum, and Goldhurst, p.126.
35. Ibid., p.95.
36. Ibid., p. 30.
37. Ibid., p.22.
38. Ibid.

39. Maj. Martin Blumenson, "The Hammelburg Affair," Army, October, 1965, p.20.

40. The quality of these maps were roughly equivalent to our present-day 1:250,000-scale map sheet series.

Captain James B. Hickey was commissioned in Armor from the Virginia Military Institute in 1982 and has served with the 3d Sqn., 7th Cavalry, 3d ID as a platoon leader, troop XO, and adjutant. This article originated as a military arts essay when the author attended the Infantry Officers Advanced Course at Fort Benning, GA.

One of Camp's Captives Was LTC John K. Waters, Patton's Son-in-Law

On 27 June 1934, Lieutenant John K. Waters married Beatrice Patton, daughter of Lieutenant Colonel and Mrs. George S. Patton, Jr. The lieutenant had graduated from West Point in 1931. In February, 1943, as a lieutenant colonel and XO of the 1st Armored Regiment, 1st Armored Division, Waters was captured at Sidi-Bou-Zid, Tunisia, North Africa, and held as a prisoner of war in Germany. Word of his imprisonment reached the Patton and Waters families soon after.

On 25 March 1945, General Patton wrote to his wife, Beatrice, "Hope to send expedition tomorrow to get John." Patton was almost certain that his son-in-law was among the American officer prisoners held at Hammelburg.

During the fighting at Hammelburg, Waters was severely wounded and later (when the POW camp was finally liberated) sent to hospital in Paris and then to Walter Reed Hospital, Washington, D.C. He recovered from his wounds and continued his military service that included, in September 1953, his assignment as deputy commanding general of the Armored Center at Ft. Knox, KY. Following other distinguished assignments, General Waters was named Commander, U.S. Continental Army Command at Ft. Monroe, VA in 1963 and was promoted to the rank of general that year. He retired from active duty in August 1966.

Le 1° Regiment de Hussards Parachutistes

A Real Tool of Counter-surprise.

by Captain Emmanuel Legendre

Introduction

Most soldiers assigned to USAREUR have some knowledge of their French comrades. They meet them during field exercises and social functions in various parts of Germany. They know the French units represent France's commitment to a common defense in Europe, particularly the armored divisions of the lst French Army.

Less known to American personnel is another part of the French Army forces called: *La Force d'Action Rapide* (rapid action force or FAR). This force includes 5 cavalry regiments (larger than a U.S. squadron, but much smaller than an ACR). One of these regiments is a very particular and unique one: An airborne cavalry airborne regiment, *le 1^0 Regiment de Hussards Parachutistes.* This article deals with the missions, capabilities, equipment, organization, and training of this famous cavalry unit.

An ERC 90 armored car in front of the unit HQ at Tarbes, France

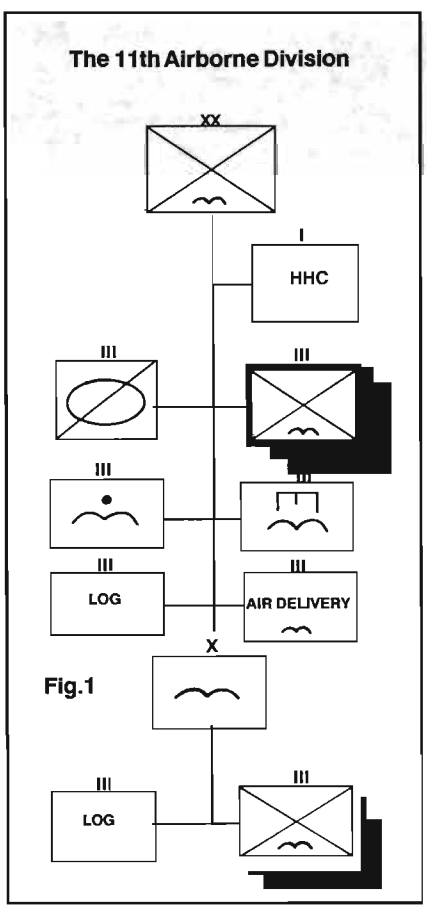


Fig.1

Le Premier Regiment de Hussards Parachutistes is an old cavalry regiment, established in 1720 by a Hungarian patriot, Count Ladislas de Bercheny. Involved in all of France's main battles of the last two centuries, the regiment was reorganized as airborne in 1946. Located in Tarbes on the Pyrenees border, (between France and Spain) it is the cavalry unit of the 11th Airborne Division. (see figure 1).

This light armored regiment conducts most of the classic cavalry missions as well as the ones peculiar to the 11th Airborne Division. By TO&E, it is capable of swift deployment to support an airborne assault and can deploy to action quickly.

About the FAR

The *Force d'Action Rapide* is a strategic asset and, thus, an instrument of national policy. The FAR's main roles are: to participate in operations in the European theater in coordination with the 1st Army; to deploy forces overseas; and to participate in the territorial defense of France. FAR is made up of 5 divisions: airborne, marine, light armor, alpine, and airmobile.

Totaling 47,000 soldiers, mainly volunteers and not draftees, it is capable of conducting amphibious, airborne, or airmobile operations. It may be task-organized for specific missions. It may be employed inde-

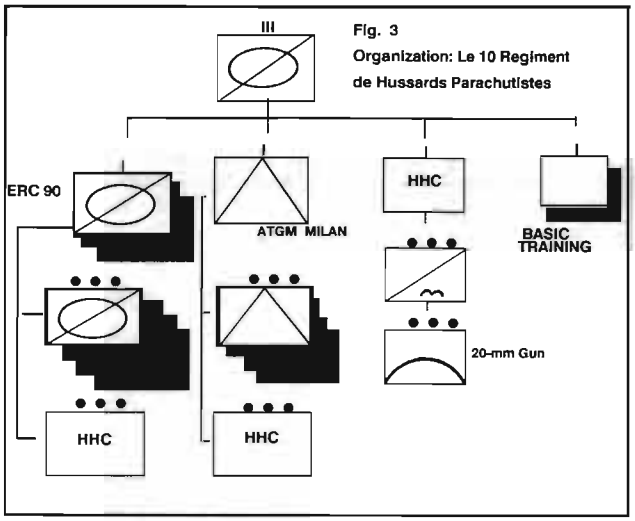


Fig. 3
Organization: Le 10 Regiment de Hussards Parachutistes

pendently or in support of French or allied forces.

Missions and Capabilities Of the 1^{0} Regiment de Hussards Parachutistes

Le 1^{0} Regiment de Hussards Parachutistes is the airborne division's tool of counter-surprise, providing freedom of maneuver to the division commander. It is used as the combined instantaneous antitank reserve, with 36 ERC 90-mm guns and 24 ATGM Milan (4 rounds/minute, 1,800-m range). Employed in a large area of operations, the regiment must be able to quickly engage an enemy up to a tank battalion in strength. The regiment also provides reconnaissance in depth and security for the commander, operating in a completely new area of operations, by giving early warning of enemy forces ahead, by screening, covering, and helping to support offensive and defensive operations.

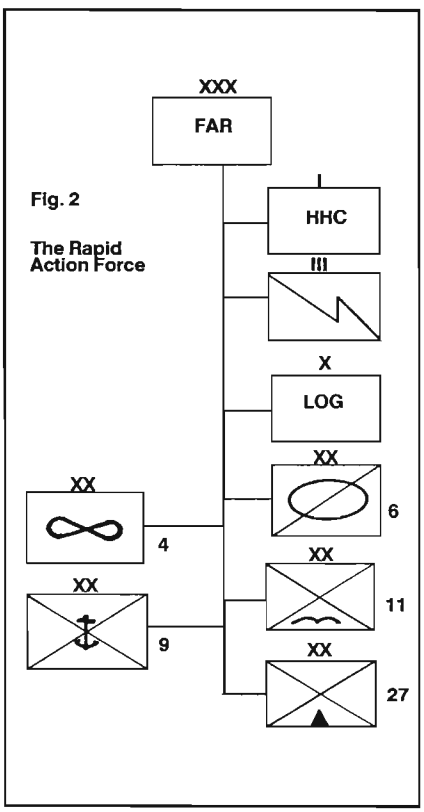


Fig. 2

The Rapid Action Force

Le 1^{0} Regiment de Hussards Parachutistes can carry out these missions in Europe as well as overseas; for example:

- Reinforcement of the lst French Army if needed.
- Protection of vital interests of any country with which France is linked by defense agreements.
- Participation in an international peacekeeping force.

Recent Missions

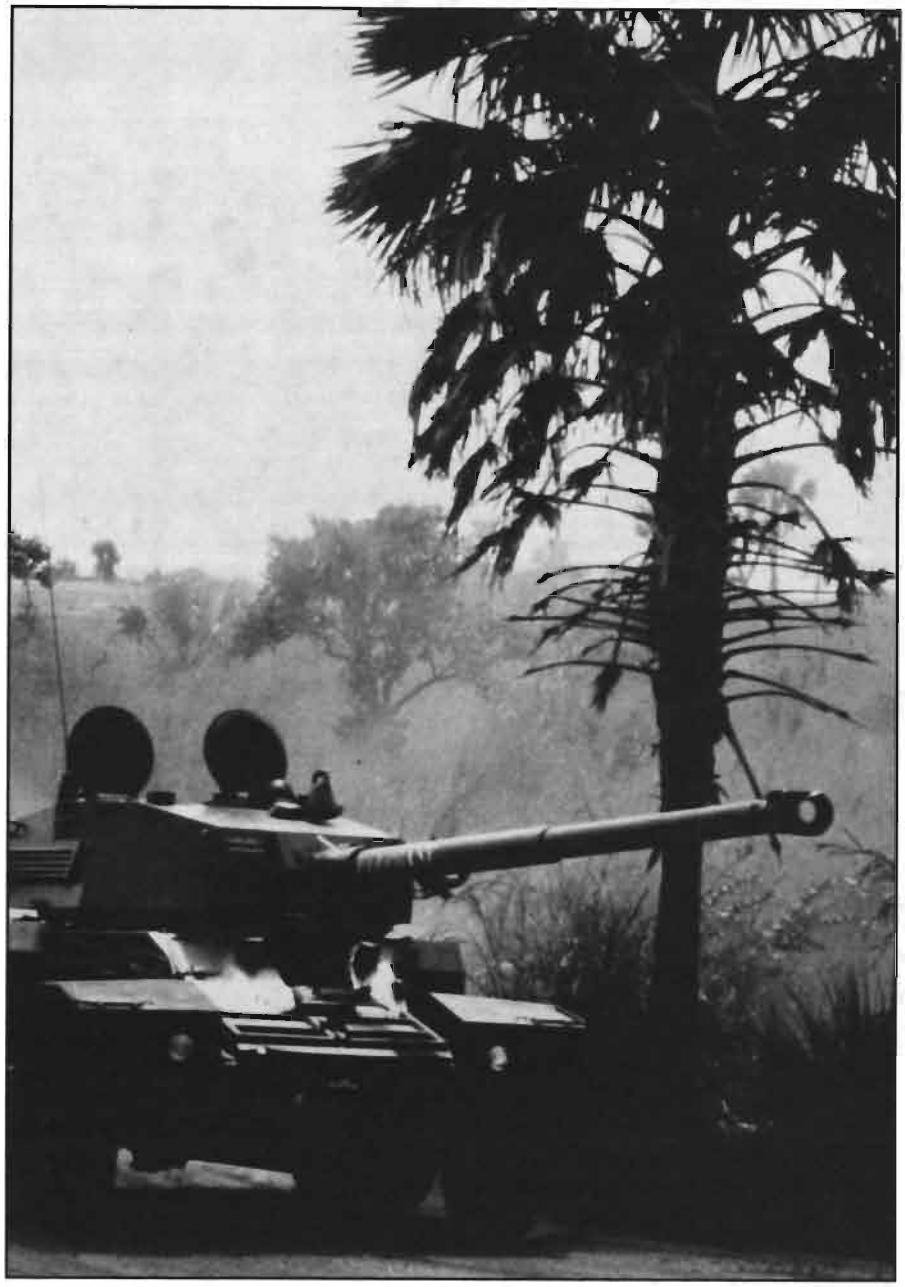
Here are some examples of the unit's overseas missions in 1986-1987:

- 2 armored troops (ERC 90) spent 4 months in Central Africa.
- 1 armored troop (ERC 90) served 4 months in Chad (*Epervier* Operation).
- 1 armored troop went to Central Africa in July 1987.
- 1 tactical HQ spent five months as TF, HQ in Chad (*Epervier* Operation).

Organization and Equipment (see Fig 3).

With its 800 men, 270 vehicles, 36 ERC, 24 ATGM, 20 pathfinders, 20

The unit is also equipped with Jeep-mounted Milan ATGMs.



An ERC armored car patrols in Central Africa.

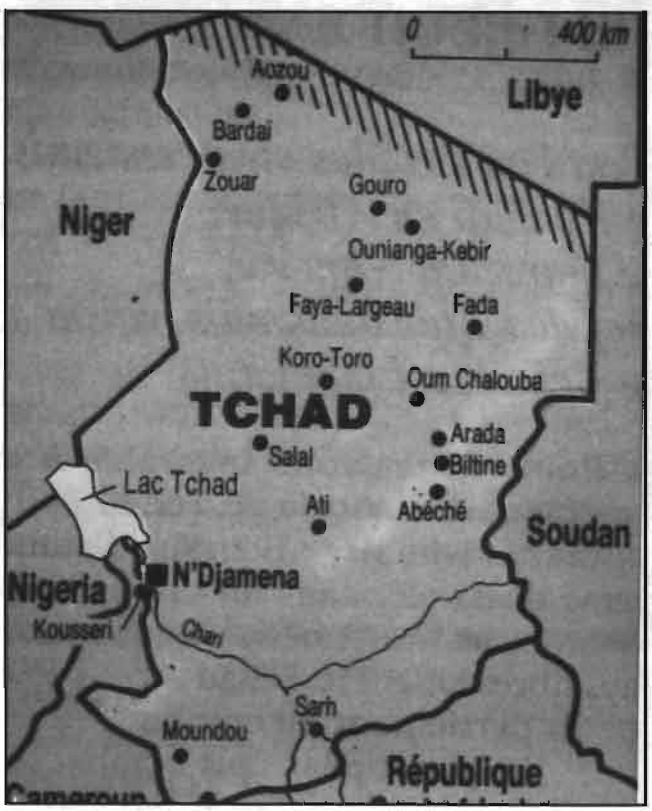
airborne instructors, and 6 forward air controllers, *Le 1^0 Regiment de Hussards Parachutistes* is a true combined-arms unit made up of seven troops able to conduct operations with optimum efficiency. The regiment consists of: three light armored cavalry troops, ERC 90-mm equipped; one antitank troop ATGM Milan vehicles; two basic training troops (instruction of new enlisted soldiers), and one HQ & Services troop. Each ERC troop has four platoons with three ERC and three jeeps. The antitank troop consists of four platoons with six ATGM mounted on jeeps; the HQ/Svc troop supports one ADA platoon (20-mm guns); and one long-range pathfinder and reconnaissance airborne platoon.

All the troops are designed to deploy easily, therefore they use light, wheeled vehicles which require minimum logistic support, and are capable of air, land, or air-drop delivery. This is one of the reasons why France is the only major Western nation that has made a substantial commitment to wheeled combat vehicles. The main combat asset is the ERC 90 *Sagaie* vehicles (*Engin Roues Canon*), fitted with a 90-mm gun and a 7.62-mm machinegun. Crewed by three men, this 8-ton vehicle mounts a laser rangefinder and can fire an APFS-DS or HEAT round with a high probability of first-round hit up to 1,800 meters. It is amphibious, and its low fuel consumption allows it to run 450 km without refueling. The main antitank weapon is the well-known Milan; the use of the MIRA night sight enables the missile to be fired by night at a range of 1,800 meters. An older type vehicle, the AML 90 (*Automitrailleuse legere*), is sometimes pre-positioned overseas and tactically employed like the ERC 90 when our soldiers are deployed overseas without their TO&E vehicles.

Training

Our missions demand top-quality soldiers and training. All the *Hussards Parachutistes* are volunteers. The training requires the continuous pursuit of excellence, excellence as paratroopers, excellence as gunners, loaders, and drivers. All the soldiers of this airborne cavalry unit must reach optimum readiness to be involved in the shortest time either in Central Europe or overseas. For instance, when a troop is under the systems of alert called *Guepard*, it must be able to move 5,000 kms from its garrison in less than 72 hours, fully equipped.

The regiment conducts specific training focused on airborne and armor skills. As paratroopers, soldiers and leaders train for air-drop and air-land operations, with or without vehicles. They train to use sling techniques, prepare drop



Two AML 90 armored cars patrol a desert area in Chad (see map at left), where French troops have been supporting the local government in its continuing fight against Libyan troops in the Aozou Strip (shaded area along Chadian-Libyan border).

zones, and serve as forward controllers (FAC). The French FAC serves the same function as the U.S. FAC in the combined arms team. The French FAC, however, is not composed of air force officers, but usually the troop executive officers.

Every man jumps 10 times a year (minimum) by day or night. The men train in commando techniques and mountain techniques, both in winter and summer. As ERC crewmen or ATGM team members, they are evaluated during National Live Gunnery exercises five times a year.

The ERC crewmen also train in river-crossing operations and are proficient in amphibious techniques. *Le 1^{0} Regiment de Hussares Parachutistes*, in 1986, performed 8,000 parachute jumps, drove 100,000 km, and fired 1,900 90-mm rounds. 415 men were deployed overseas.

This continuous training is the guaranty of our capacity to be committed anytime, anywhere. With its three gun troops, its antitank troop, and its 18 professional platoons, *le 1^{0} Regiment de Hussards Parachutistes* provides the needed reconnaissance, security, and antitank power for the airborne division, which can be effectively employed from the first minute of an airborne operation. Because of its strategic and tactical mobility and firepower, the regiment increases the division's ability to deploy rapidly with the optimum force structure to accomplish the mission.

Le 1^{0} Regiment de Hussards Parachutistes is the best among cavalry because it is a parachute unit and is the best among parachute units because it is cavalry.

CPT Emmanuel Legendre graduated from France's St. Cyr military academy in 1980. He was assigned to the 1 Regiment de Hussards Parachutistes in 1985 and served as XO of an EBR-equipped troop, serving 4 months in Central Africa with this troop in 1986. He is a 1987 graduate of the AOAC at Fort Knox and has been chosen to assume a command next spring.

Interoperability: The Buzzword and the Reality

When one hears of German-American interoperability training, the images which often to come mind are REFORGER, high level staff exercises, or individual skills training. Rarely do battalion and company-sized units get the opportunity to train together in realistic, tactical operations.

In the event of a war in Europe, many German and American units will fight alongside one another. It will be imperative that the platoon leaders and company commanders who will do the close-in fighting have some experience working with each other.

Last spring, the 4th Bn., 67th Armor conducted a week-long, tactical maneuver exercise in the German states of Hesse and Rhineland-Pfaltz. Attached to 4-67 Armor was the 3rd Kompanie, 141st Panzer Battalion, a Leopard II unit, and the 1st platoon, 2nd Kompanie, 142st Panzer Grenadier Battalion, equipped with the Marder IFV.

One of the goals of the exercise was interoperability training. Specifically, the battalion wanted to see if the Bundeswehr units could operate effectively as part of the American task force. 3/141 and 1/2/142 deployed to the maneuver rights area with only their organic assets; they would be totally dependent on 4-67 for all their logistical needs. From the start, interoperability had to be a reality, not a buzzword.

To sustain the force was the first area addressed by the 4-67 commander and staff. D/4-67 and 3/141 had worked with each other before on various partnership events, and were test the battalion's goals. The two companies, and the reconnaissance platoon, located in assembly areas close to each other to facilitate face-to-face coordination. The company first sergeants ensured that Class I supply was coordinated by cross-attaching several mess personnel. The aim was to share ideas and to help the 3/141 cooks prepare U.S. MRE and B-rations. The D/4-67 mess team benefited as well, learning to supplement their rations with food from the local economy. The Bundeswehr has a truck configured much like the American mobile kitchen trailer, and had no difficulty using U.S-issued food and supplies. As the week progressed, the first sergeants coordinated their water runs, Class I issue, and trash removal, and exchanged mess equipment on occasion.

The 4-67 commander and staff addressed the flow of Class III and V supplies. The Leopards and Marders did not need as much fuel, or need it as often as the thirsty M1s of D/4-67.

The Leopard and Marder mount a flash simulator that uses Hoffmann charges like the M1 MILES system, making Class V resupply more realistic. When fuel or ammunition was needed, the 3/141 contacted the D/4-67 first sergeant, or the battalion S4, and the D Company logistics package was increased to supply both units. The LOGPAC concept was new to the panzer crewmen of 3/141 and 1/2/142, but they readily adapted to it. They were particularly impressed by the M978 Fuel HEMTT; the 5-gallon can is still the norm in the Bundeswehr. Of course, in a wartime scenario, Class V resupply would present a bigger interoperability problem. The difficulty of supplying both 105-mm and 120-mm main gun rounds will be greatly eased when the M1A1 is fully deployed in Europe.

Command, control, and communications needed more effort to coordinate and master. The language barrier was only one aspect of the problem; radio compatability was another. In order to communicate with the Bundeswehr radios, U.S. radios had to be on the "Old Squelch On" position, and the KY-57 secure devices turned off. The Bundeswehr radios, which employ frequency hopping, had to be "locked on" to the single frequency of the American radios.

"...The Leopards and Marders did not need as much fuel, or need it as often as the thirsty M1s of D/4-67...."

This solution worked well for communications between U.S. AN/VRC-12/46/47 radios and the Bundeswehr radios. It did not work well, however, with other U.S. radios, like the AN/VRC-64/160 or PRC-77. The problem was not significant on the company and battalion command nets where few -64/77/160 radios were in use. The problem was more severe on the battalion logistics net and on the tank/infantry platoon nets. The single squelch setting of the -64/77/160

"...The radio systems of the Leopard and Marder have several advantages over American radio systems...."

radios proved incompatible with the "Old Squelch On" setting of the 12/46/47 U.S. radios, and incompatible with the Bundeswehr radios. Prior planning in the makeup of joint U.S.-German radio nets will be vital to the success of any joint operations.

The radio systems of the Leopard and Marder have several advantages over American radio systems. These advantages were clearly evident in the electronic warfare aspect of the exercise. All the Leopards and Marders had dual receive/transmit capability; the radios were compact; frequency-hopping eliminates the need for secure devices; and they appeared to be infinitely more reliable than the U.S. radios. The frequency-hopping characteristics of the German radios made them immune to direction finding, jamming, and interception. Throughout the week, an element of the 533 MI Battalion was able to DF and jam "locked-on" German, and unsecured U.S. radio transmissions. (SINGGARS or its replacement cannot come too soon!)

We overcame the language barrier in different ways at different levels. As is the case with most Bundeswehr officers, the commander of 3/141 was fluent in English. 4-67 Armor was lucky to have several officers and senior non-commissioned officers who spoke German. Planning for the FTX and the issuing of OPORDS was thus made easy. In this case, good fortune made thorough planning unnecessary. In other scenerios, however, the selection of units to fight together may be partially based on the language skills of their commanders and other key personnel.

In one scenario during the week, the 4-67 commander wanted to test the ability of D/4-67 and 3/141 to coordinate a common boundary, and gave the two companies the mission to defend a sector against the attack of the remainder of the battalion. To make matters more interesting, one platoon of each company was cross-attached to the other. The attacking forces consisted of two M1 companies and a *"kampfgruppe"* of M1s and the Marder platoon. If either side was to fight and maneuver as a cohesive force, the language barrier would have to be breached.

As previously mentioned, English was the common language of the two commanders. The platoon leaders of the cross-attached platoons, however, spoke very little of their new commander's language. To translate orders and messages, the loader of each platoon leader's tank was replaced by a bilingual soldier of the parent company. Again, the importance of bilingual soldiers was evident. Although the combat power of a tank with a mixed-nationality crew may be less than 100 percent, the benefits in C^3 greatly outweigh any losses.

The American tankers and German panzer crewmen proved quite adept at planning and fighting the battle together. Graphic symbols and control measures were readily shared, and both companies used the U.S. OPORD. During the defend-in-sector mission, D/4-67 and 3/141 defended in depth along several high-speed avenues of approach. The platoons of both units fought by sections along these avenues, and had little difficulty understanding the orders or intent of their new commanders. D/4-67 and 3/141 maneuvered in a sector 10-kilometers deep and 10-kilometers wide, falling back and launching counterattacks, while never losing the coherency of the defense. At the end of the day, D/4-67 and 3/141 still held the ground between the attackers and their objective.

On the battlefield, where harsh reality soon overwhelms buzzwords, 4-67 Armor and the 141st Panzer proved that interoperability can work, and work well. Obviously, the fog of war and the friction of real combat would magnify the difficulties overcome on the exercise. In addition, Class II and V resupply, as well as maintenance problems, would multiply with time and losses. The solutions discussed here are only one battalion's answers to the interoperability dilemma. Other battalions, in other situations, may find different solutions.

There will be a time, however, when German and American units will have to fight together to win the day. When that day comes, commanders will have to act quickly and decisively to destroy the enemy. There will be no time to ponder solutions, no time to train to master the myriad of tasks required for units to fight and win. Exercises like the one described here may be as vital to the outcome of a battle in Germany as REFORGER is to the success of NATO in Europe!

CPT TIMOTHY R. REESE
CO, HHC, 4-67 Armor
FRG

Determining a Successful Command

Company command is undoubtedly the highlight of any officer's career. At no other time can a leader so positively influence the lives of so many young men and women. The closeness that can develop between a commander and his soldiers is hard to explain, but I will attempt to qualify that feeling.

What determines the command success? To some, it's a "one block" on an OER; to others, it's measured by the awards they receive. A few consider it successful if they survive the change of command inventory without a report of survey.

I'd like to present a different concept for determining the success of command. We'll look at the command through use of the ten imperatives of Airland Battle:

- Ensure unity of effort.
- Anticipate events on the battlefield.
- Concentrate combat power against enemy vulnerabilities.
- Designate, sustain, and shift the main effort.
- Press the fight.
- Move fast, strike hard, and finish rapidly.
- Use terrain, weather, deception, and OPSEC.
- Conserve strength for decisive action.
- Combine arms and sister services to complement and reinforce.
- Understand the effects of battle on soldiers, units, and leaders.

These ten imperatives apply to the Army in peacetime, just as in war and can be adapted to most any thought process.

Ensure Unity of Effort

This process must start at the top. Properly planned operations, handled by competent leaders, will make the effort uniform. The commander must be the director of this process, and his first sergeant the administrator. Proper training of junior leaders, the main purpose of the commander and first sergeant, is a must. Channels of communication should be left open, while being stressed, developed, and strengthened. Prioritize workloads and execute training events uniformly to meld all efforts to a common goal.

Anticipate Events On the Battlefield

The commander must develop clear, concise guidance for his subordinates. He must look well ahead at the long-range training plan and identify problem areas for early resolution. Just as the commander's intent is vital to the operations order, his intent in all training must be clear and understandable. The commander must develop this in his junior officers so that their ability to "push-to-talk" becomes second nature. Written communication is as important as oral and should be developed and refined through commander's seminars and a solid officer professional development program. The ability to put one's thoughts on paper checks and balances the reception of oral communications.

Concentrate Combat Power Against Enemy Vulnerabilities

Before communicating to his soldiers, the commander must understand his own objective. After taking command, he should attempt to identify the unit's strengths and weaknesses. He develops a plan to tackle the weak areas, often by using some of the unit's strengths. The commander must also identify those individuals in the unit who possess skills necessary to accomplish the designated objectives.

There is no shame in tapping the expertise of a young noncommissioned officer or lieutenant, if he possesses a skill that will enhance unit growth and effectiveness.

While some soldiers will be great planners, others will be great executors. To find the right blend of these personnel and cause them to mesh, will make possible a much smoother command climate.

Designate, Sustain, and Shift the Main Effort

Many young commanders are hampered by the inability to change gears in midstream. Once a project or task has been interrupted, it is often hard to regain the momentum. This is especially true of peacetime

training. Right in the middle of a gunnery or ARTEP training program, there is a surprise inspection or visit. The commander must divert efforts to the new project and the training plan falls into a rut.

There is an easy remedy: by using the minimum manpower and maximum talent available, the leadership can develop a rotation plan. Once again, the commander must revert to his strengths. Use the soldiers who prepare well, rotate duties among platoons, and continue to train the program.

Remember, the small distractors take care of themselves. Don't lose sight of the primary objectives.

Press the Fight

Continue to develop your junior leaders. These officers and NCOs are the commander's greatest asset. The commander's ability to hone initiative in his junior leaders will allow the unit to get away from the reactionary role. The commander must allow his subordinates the freedom to err and aid them in bouncing back. He can best enhance this by face-to-face communication. The commander cannot allow himself to become deskbound. He must be where the soldiers are, and be personally involved in what they are doing. Nothing will gain the respect of a young soldier faster than seeing his commander in the motor pool during maintenance periods, working on his own vehicle and equipment. Command is truly a team effort, from the coach down to his players.

Move Fast, Strike Hard, and Finish Rapidly

When the commander receives a tasking from higher headquarters, he must act immediately. A reevaluation of priorities may be in order. The commander gathers his subject matter experts and together they develop a course of action to accomplish the new tasking. If no alteration of the current plan is necesssary, business continues as developed.

When a distractor of a more personal nature arises, the commander has a myriad of agencies within the Army structure at his disposal to assist and give guidance. Many commanders choose to work at the problem themselves, without any assistance, and the problem mushrooms, quite often at the expense of the soldier involved. When in doubt, don't hesitate to call in a specialist.

Use Terrain, Weather, Deception and OPSEC

This application in peacetime can be hard or simple to use, and often determines the climate of command. The commander must establish himself in his working environment, much as he will command his unit on the battlefield.

First and foremost, he should make his surroundings workable. Personnel and facilities must be adjusted to his style. The unit that establishes and practices organization in garrison, will more easily execute a tactical plan in the field than the unit that operates in chaos.

Locating well forward to "see" the battlefield can be likened to an open door policy in garrison. Many commanders meet the responsibility of having such a policy, but are the hardest people in the world to locate and talk to. As a commander, any time, any place, was my policy and, in garrison, my office door was always physically open.

I spent many nights in the barracks visiting and talking with the soldiers. I attended all of their social functions, dined with their families, visited their homes, and frequented their off-duty hangouts. The intent here was to blend into their environment, as you would have them operate in yours. The soldier's welfare is the commander's charter. You must allow the soldiers to get "into" your personality and character. This, in and of itself, will lend credence to your openness.

The weather can be a friend or enemy, as the commander chooses. Training must continue in all types of weather, until it becomes detrimental to the effectiveness of continuance. The leader must give the health and welfare of his soldiers first priority. Forcing soldiers to run in a freezing rain because it is the policy to run on that particular day has far less benefit than a like exercise conducted indoors.

Deception can have positive rewards. The commander must first detail what it is he expects of his men. His policies must be clear, concise, and realistic. The commander must then outline his plans to check adherence to those policies. He must also explain the consequences of noncompliance, without establishing a particular type punishment for each different violation. Each soldier is different and his circumstances cannot be generalized with all others. Treat individuals as individuals and you may gain their collective respect.

Conserve Strength for Decisive Action

Leaders must give soldiers time to relax and unwind. No other profession requires of its personnel what leaders in the military require of their soldiers. Soldiers can't call in sick, can't always take a vacation at their leisure, don't get as many holidays as the civilian sector would believe, and very few professions require their employees to be avail-

able 24 hours a day.

A continuous schedule, with few breaks for family and friends, will quickly deteriorate a unit's morale. Situations will occur when mission accomplishment must take precedence, but commanders can explain these instances and troops will understand. The commander who drives his men through a gunnery training program seven days a week for three months may have something to prove to his peers, and he may win his point, but he may also lose his most important asset, the respect of his men. Getting soldiers to perform out of fear and spite is a sad testimony to the whole concept of leadership.

On the other side of the spectrum is the commander who exercises sound judgement. He rewards performance with time off, unit functions, and trips, and he tells his soldiers how he feels. The unit has a strong wives' organization. The commander develops and participates in a well-rounded physical training program. He places soldiers in solid educational programs and counsels them on their future. In time, the commander gains not only the admiration of the soldiers, but also that of their families. With all these things going for it, the unit will have more than enough strength to perform its wartime missions.

Combine Arms and Sister Services to Complement and Reinforce

The commander must not work alone. He must not be too proud to ask for help from fellow commanders. Command positions in the unit will not all change at once, so there is always a commander with the knowledge and experience available for counsel and guidance. The ability to work closely with sister companies will develop a bond of understanding and cooperation and will bolster working relations in field operations. All things considered, when cooperation is minimal, the commander must not allow his leaders to develop a "payback" mentality. Disagreements between commanders may satisfy their own desires, but hurt the unit and soldiers involved.

This cooperation can be accomplished within the unit or with higher command. Cross-training is one of the best methods of establishing confidence among soldiers and their supporting arms. A commander should develop a system allowing time for these cross-training programs. A unit Job Swap Day is a good training tool. Mechanics train as armor crewmen; cooks fire mortars or howitzers; tankers become personnel clerks; leaders become workers; and soldiers perform duties of the leaders. All skills are properly supervised and conducted with safety the key. The soldiers gain an appreciation for one another, and the commander has once again gained a measure of their respect and loyalty.

Understand the Effects of Battle on Soldiers, Units, and Leaders

After a decade of peace, there is a shortage of small unit commanders with combat experience. Understanding the effect of battle is a difficult task. The commander who is well read in the history of war and can adapt those lessons to peacetime training, will make his job simpler and safer. Understanding stress and its causes, reading current doctrine in FMs, and practicing proper management techniques will greatly reduce the detractors of unit effectiveness.

These points are important to success in small unit leadership. A commander must become his soldiers' best friend and counselor.

Montgomery said it best in his book, *"A History Of Warfare":*

"A commander must understand that bottled up inside his men are great emotional forces which have to be given an outlet, in a way that is both positive and constructive, and which warms the heart and excites the imagination. In modern times, if the approach to these problems is cold and impersonal, a commander will gain little; but if he can gain the trust and confidence of his men, and they feel their best interests are safe in his hands, then he has in his possession a priceless asset and the greatest achievements become possible. This is vital because in the end, a battle is won by the fighting spirit of junior officers and men — whatever the quality of higher commanders."

This development requires time and great skill. Some commanders believe that this "touchy-feely" approach shows them to be soft and easy going. That is where the commander's control of the situation becomes essential. He is the one who will allow the boundaries of good order and discipline to be violated or obeyed.

One of the hardest things a commander must do is to punish his soldiers. If the soldiers clearly understand the commander — the man and his policies — it becomes easier to adjust to each situation.

No two soldiers are alike in personality or character, and trying to administer justice as if they were will degrade the commander's credibility with his men. Different soldiers require help from different sources. To understand each soldier and his background will make the commander more effective in his role as guide and counselor.

The commander must act as the buffer for all higher policies and programs that affect his men. When he establishes a training program, he must clearly state its purpose to be sure it is understood. Each event or task has a basis supported by doctrine or history. To allow the soldier to have this knowledge will help him understand the "why" of what he is accomplishing. The commander must prevent training from being viewed as, "We're only doing this because it's mandatory".

I have used all of the principles and ideas stated here in past leadership positions. I've addressed them from a commander's view, but they can be applied at all levels. The key point I've tried to emphasize is that the commander and his men must know each other. The commander must not use his rank or position as the sole motivational force for his unit. Trust, confidence, and the desire to do the best for the soldiers, will allow the commander to be effective and respected, while growing and maturing in his own leadership skills.

The training must be tough, realistic, and demanding of the soldier's mental and physical attributes. Above all, it should be safe and enjoyable. The soldier who is happy and comfortable in his job will allow that atmosphere to flow over into his personal life. His contentment, added to the unit's, will breed a climate of command that is successful, respected, and repeated.

Don't measure the success of the command by the material rewards available. Measure it by the feeling you get when, in years to come, you see the familiar face and outstretched hand of a soldier you have led and helped develop. Measure it in the pleasant memories of training long days in heat and cold. Or it may come in an unexpected phone call or letter. It is the inner peace of knowing you did it for the soldiers, not yourself, and they admired you for the person you were.

WAYNE K. HAMBERGER
CPT, Armor
Richmond, VA

Selection Board Schedules Announced by MILPERCEN

The following officer selection boards have been announced for the remainder of FY 88:

5-29 Jan. - COL, Army
9-26 Feb. - LTC, Combat Arms Command
8 Mar-1 Apr - CPT, Army and CVI
6 Apr-6 May - LTC, Army
17-20 May - Regular Army Integration
6 Jul-5 Aug - Senior Service College
23 Aug-30 Sep - Command & Staff College
7-23 Sep - CPT, Army and CVI

MILPERCEN encourages officers to prepare for upcoming selection boards by having a new photo taken. Once it has been mailed to Armor Branch, verify that it has been received. Visit your MILPO or RPC and review your ORB. Changes can be made at any time. You do not have to wait for your birth month.

A copy of your performance microfiche can be requested by writing: USA MILPERCEN, ATTN: DAPC-MSR-S, 200 Stovall Street, Alexandria, VA 22332-0400.

Assignment Officer Updates At MILPERCEN Armor Branch

LTC Tom Abbenante is the new LTC assignments officer, assisted by Mr. Joe Kuntze.

MAJ Ken Dryden has taken over the majors desk, assisted by Mr. Darvis Alfred.

CPT Bill Johnson and CPT Don Campbell, assisted by Ms. Jackie Paramore will assign branch-qualified captains.

CPT Terry Wolff, assisted by Mr. Gene Joseph, will handle OAC assignments of lieutenants.

CPT Terry Wolff, assisted by Ms. Bertagnolli, will handle OAC assignments of captains.

Activation With a Smile

The formation of a new unit begins when the adjutant announces the orders and the commander unfurls the guidon. The accompanying ceremony requires, as a minimum, the presence of the new unit commander, his commander, the sergeant-major, the adjutant, the guidon, and a photographer.

It is traditional on these occasions for the photographer to be in need of a haircut. Additional members of the new unit (who usually do not exist), a band, and a parade field are optional.

Next, after the ceremony, a lot of well-founded questions find their way into the mind of the new unit commander. Why are there no troops assigned to my unit yet? What barracks will they stay in when they arrive? When is my first formation? Where is my parking space? What training areas should I request for six weeks from now? (The last question is the most critical, as any assistant S3 will tell you.)

To answer these and other questions, the commander needs an effective problem-solving method. Since the unique problems encountered during the formation of a unit require a well-formulated approach, let us take a moment aside to address problem-solving. A method with which the author has had much experience is the Crisis Leadership Unsolved-problem Evaluation System, hereafter referred to as CLUES.

By employing CLUES, the commander prioritizes and acts upon the required activation tasks without ever resorting to common sense. The first CLUE is that tasks are prioritized using last-in, first-out logic. In other words, whatever happens to come up is the first priority. When other things come up they become the first priority. This will leave the former first priorities to be done tomorrow. By tomorrow, most people forget all but the last first priority, so just don't worry about it. Simply do whatever comes up.

If a task that comes up appears to be critical, then set it aside for a week. If it is actually critical, then the squadron commander will turn red the next time he sees you. This will confirm that it is a critical task, and it now becomes the first priority.

"...By tomorrow, most people forget all but the last first priority, so just don't worry about it. Simply do whatever comes up...."

In summary, do today's first priority today; do yesterday's and today's former first priorities tomorrow. If left totally CLUE-less, apply the rule of thumb that everything is at least as important as everything else. The first correlary to the rule is that you must please everyone all of the time. Once the commander understands these simple principles, he has effectively grasped the management style required for the complicated activation process.

With those principles in mind, the commander must now take affirmative action to effectively organize his newly-formed unit. At this point, of course, there will be no established operating procedures. As a result, none of the personnel arriving at the new unit will know what they are supposed to do. Therefore, the next step in the activation process is to use CLUES to establish a few procedures.

Policy letters help at this point. Here is the recommended sequence of letters:

Policy Letter 1 - Location and Administration of the Commander's Parking Space.

Policy Letter 2 - Wall Locker Labeling Procedures and Other Critical Things.

Policy Letter 3 - Privately-owned Vehicle Parking Procedures.

Policy Letter 4 - Change to Policy Letter 1.

Policy Letter 5 - Change to Policy Letter 2.

Policy Letter 6 - Recovery Procedures After Field Exercises

Through CLUES policy letters, the unit knows what it is doing long before anyone realizes it. Once policies are sort of well in hand (or rather, less out of hand), it is time to get into the meat of the activation. This begins with the Equipment Acquisition Phase. The unit

will need a bunch of equipment. (A "bunch" here means lots and lots.)

It is preferable, but not necessary, that all equipment acquired distantly resembles the unit MTOE requirements. In newly-activated units, the MTOE usually changes often anyway, so basically just collect a lot of general, good, Army equipment, like weapons and stuff. The Property Book Office people and the S4 office will assist in the collection process, but a little initiative in coordinating for lateral transfers from the excess of other units somewhere in your theater of operations is beneficial.

Believe it or not, a supply sergeant is not very important in facilitating this step. A junior second lieutenant is actually better at it. (The author speaks with authority in this matter). A supply sergeant would merely complicate the process with unnecessary paperwork, or even hand receipts. There is no need to worry about hand receipts or accountability; as Genghis Khan once said, "The S4 will understand... Eventually." If the S4 does not understand, then it is a good idea to memorize the amount of your base pay. The survey officer asks about that sort of thing.

The next, and easiest, step in the activation process is to get some soldiers for the unit. MILPERCEN is pretty helpful in this. They have plenty of bodies floating around. See the S1 (If MILPERCEN has sent you an S1).

What comes next is more difficult. You must find someone who is capable of telling the newly-arriving soldiers that this new unit will not necessarily be exactly identical in every aspect to their former unit. This step is intended to preclude them from beginning most sentences (and all complaints) with, "In my last unit...." A good candidate for this task is a person with persuasive communication skills, a winning smile, and who is not a member of the unit. They will not listen to anyone in the unit. A weightlifter or a karate expert is actually best for this task.

Another important part of the in-processing step is to retrain the new unit members to stop using inbred, respected former unit mottos, such as "Red Devils", "Black Horse", or "Anyone not in the 77th is a Loser." This, too, helps the personnel assimilation process. Prepare an exciting new unit motto, such as "We Are The Best," in advance.

The final step in the long activation process is training. It works well to use CLUES by training difficult collective tasks first, then working towards the basics. Do not worry that many of the new unit members have never been trained on some of your newly-acquired equipment. They probably will not use it anyway. That is about all you will ever need to know about training. There is no time for training anyway. Who needs it? (Cough, cough.)

Before concluding, a special note concerning marathon unit activation meetings deserves mention. Activation meetings are inherently long, mundane, and boring, since there is always so much coordination going on all of the time. To cope properly with these meetings, slouch in your chair, find a bug on the wall to stare at, and tap your pencil incessantly. If you find yourself asleep, ensure that your eyes are shielded from the group leader by a discreetely placed object, and continue to move your pencil. It is just like being back at school, except that there is no test at the end of class.

The whole activation process takes seven to ten months. With CLUES and intestinal fortitude, it can be cut down to 12 months, unless of course you have plenty of junior second lieutenants without supply sergeants, in which case it can be cut down even further. In conclusion, the seriously important advice for those required to participate in the formation of a new unit is: plan ahead with standard operating procedures; set priorities and stick to them; have plenty of prepared hand receipts on hand (along with a good supply sergeant); be quick to assimilate, motivate, and train the soldiers; keep marathon meetings as rare and concise as possible; and learn from mistakes (hopefully others'). If your unit is scheduled to receive recently-procured equipment, do not encourage high hopes. When and if that equipment arrives, it may not be exactly what you expected. Also, do not confuse CLUES with clues. Remember: someday you will look back at it all as Good Army Training. And even if the unit soon forgets your name, you are still an integral part of its institutional memory. Maybe, just maybe, you made an impact on this old world.

And maybe not.

1LT G.P. Field Rowe
Fort Ord, CA.

"...Plan ahead with standard operating procedures; set priorities and stick to them; have plenty of prepared hand receipts on hand...."

Jurisdiction, Responsibility, and the Commissioned Manual Laborer

The relationship between officers and non-commissioned officers is an issue of continual interest in our Army. While of particular interest to young officers just coming on active duty, the problems associated with this relationship concern all ranks on both sides. Two old Army saws exacerbate the problems: "Accomplish the mission" and "Let your non-commissioned officers do their jobs". I fully support both these goals, but I admit that I have on occasion, like many other officers, found these two goals in conflict.

I especially recall an incident at Fort Hood while I was a second lieutenant. I was the battalion's support platoon leader. One day, during tank gunnery, I was in the platoon office in the motor pool when the ammunition sergeant returned from the range with a truckload of empty ammo boxes. The truck had to be unloaded for another mission and the ammo NCO approached my POL section leader for help.

I could not help hearing the heated argument in the other room. These two ordinarily outstanding and dependable sergeants were fighting over who owed what favors to whom, who took orders from whom, and who "owned" what territorial rights over the enlisted men. The ammo NCO, having no help of his own besides the truck driver, had apparently crossed jurisdictional lines without permission.

Several enlisted men had stopped work to watch the show. Even more distressing to me was the loaded truck, which did not appear to be getting any closer to being unloaded as the moments went by.

A more mature officer would have easily handled this problem by calling the two sergeants aside, sorting out priorities, issuing the appropriate orders, and then presiding over a private "division of the kingdoms" session later. I took a different approach: I would teach my NCOs a lesson about their silly bickering and the importance of priorities and teamwork. Above all else, I would "accomplish the mission."

I walked out to the truck, past the two still-bickering sergeants, and grabbed the first three men I saw. I climbed into the truck bed and we began to unload the boxes, bucket-brigade style. By the time the two sheepish-looking and angry NCOs joined us, the truck was already half-empty.

My ammo sergeant later complained to me that I had embarrassed him and the POL section leader by usurping their responsibility and authority in front of the enlisted men. Later I admitted to myself that I was probably guilty of unnecessarily shaming these two good sergeants. I vowed once again that I would try not to meddle in NCO work in the future. Rather, I would try to ensure that the NCOs did the work.

This vow, however, is not an easy one to uphold, and I and many other officers have strayed from the goal from time to time. How easy it is to just do what has to be done in the press of the moment. The old adage of "If you want something done right, do it yourself," has no greater group of adherents than the American officer corps. Ouractions, however, can cause serious damage to the morale of good NCOs who work for us. We face resentment from these sergeants who feel frustrated in their attempts to do their jobs. We also face possible estrangement at home as we continue to work extra long hours to accomplish our own tasks and everyone else's. There is always more than enough work to go around. Officers must learn to respect the division of labor between themselves and their NCOs if the Army is to be run most efficiently.

"...My ammo sergeant later complained to me that I had embarassed him."

At this point, many people — especially NCOs — are probably cheering me on, even if this seems a repeat of what has already been said many times before. But not so fast! If officers do take over their sergeant's duties, there must be reasons worth deeper contemplation. I would suggest that these reasons may include a different out-

look toward authority and its use.

Trained from the beginning in the use of authority, officers tend to take it for granted. We more easily assume the mantle of authority and its attendant respect because we have always had it in some degree. Even as cadets, we were intentionally and continually in situations that tested our leadership capacities.

Officer cadets, constantly reminded of the responsibilities that accompany the commission, practice the judicious use of authority through their chains of command and various tactical and classroom problems. Even the most junior and unsure second lieutenant begins his career with immediate responsibilities and authority, and more are quickly added. He must exercise authority because it is expected, and most officers, trained as they are, adapt to those expectations. Authority then becomes more a means by which officers accomplish their missions than something to guard jealously.

Non-commissioned officers, on the other hand, work hard to achieve their rank with its concomitant authority and respect. They enter the Army at the lowest level and, despite the best efforts of basic and primary NCO courses,(and sergeants major), many soldiers enter the NCO ranks without any other preparation than their experience and the examples they see in other sergeants they have known. Perhaps because they are from the ranks, NCOs need to protect the authority and responsibility they have earned. NCOs thus tend to be more bound by tradition and precedent.

These are, of course, gross generalizations, but I believe they have some merit. Both officers and NCOs feel the need to accomplish the mission, but officers seem less patient in adhering to custom, preferring in the end to examine questions of responsibility or jurisdiction later, after the job is done. Of course, by then, there may be another mission to occupy our attention. If problems over jurisdiction are to be avoided, officers and NCOs need to discuss their respective responsibilities at the beginning of their association. Periodic discussions are also needed to resolve new conflicts as they arise.

"...As long as there are missions to be done, officers will show impatience, and sergeants will understandably try to protect their prerogatives..."

Will this completely alleviate officer/NCO conflicts over mission and responsibilities? Probably not, but hopefully we can better understand where each side is coming from. The mission must come first. But as long as there are missions, officers will show impatience, and sergeants will understandably try to protect their prerogatives. Given that conflicts may occur even in the best of working relationships, officers and NCOs need to keep the net open to resolve them in an honest and forthright manner.

Such impatience is actually part of our military tradition, with roots in the earliest days of our Army. In the winter of 1776, for example, when the British Army was under siege at Boston, the Continental Army undertook to improve and strengthen its fortifications surrounding the city.

While putting up a breastwork at Lechmere Point, a squad of men uncovered a rather large stone, which they left at the side of the ditch. While the squad continued to work, General Israel Putnam, American commander of the sector, rode by on an inspection.

Seeing the stone, the general turned to the non-commissioned officer who was supervising the squad, and said, "My lad, throw that stone up on the middle of the breastwork."

The NCO, recognizing General Putnam, saluted and replied, "Sir, I am a corporal."

General Putnam then responded, "Oh, I ask your pardon, sir," and getting off his horse, immediately picked up the stone himself and heaved it up on the breastwork. Then, without further words, the general remounted and rode on.

Upon reading this, I felt better about my own impatience. At least I was in good company. Perhaps there is a lesson here for non-commissioned officers as well. Forewarned is forearmed, and this warning places a premium upon good communication and a good working relationship between officer and NCO. Sergeants also must work to establish that relationship with their officers. And, of course, also be prepared to see a truck or two unloaded.

CPT STEVEN GRAVLIN
Instructor, USMA

The incident cited is related in a Revolutionary War veteran's pension application, found in The Revolution Remembered, John C. Dann, Ed. Chicago: University of Chicago Press, 1980, pp. 392-393.

M88 "Battlefield Workhorse" Is Upgraded to Support M1-Series Tanks

The M88AX tows an M1 at Aberdeen Proving Ground during tests in 1985.

The M88-series armored tracked recovery vehicle has been with the U.S. Army for more than 20 years. During this period, the 56-ton vehicle has provided outstanding recovery support for the M48- and M60-series tanks. It has become affectionately known as the "Battlefield Workhorse".

BMY of York, PA., designs and builds the M88. Although initially produced with a gasoline engine of some 1,050 horsepower, the design was converted to diesel power in the late 1970s, gave the vehicle an improved operating range and commonality of fuel, although it did not increase the system's ability to handle heavier tank systems. In fact, the change in engines slightly reduced the vehicle's top speed.

Time marches on, and the current M88A1 vehicle, while still representing an efficient and well-balanced design, is overtaxed in its efforts to effectively and safely handle the new, heavier armored systems which are moving onto the modern battlefield. To support these new systems, the Army needs a vehicle with more power, more traction, improved ballistic protection, and greater lifting and winching capabilities.

Recognizing that the Army would need data on potential improvements in order to make meaningful decisions, BMY embarked on an independent research and development program in 1984 to investigate potential power trains and other improvements necessary for recovery support of M1-series tanks. This effort received strong support from Teledyne Continental Motors (makers of the M88A1 engine) and Detroit Diesel Allison (makers of the M88A1 transmission).

The result was a test-bed vehicle, designated the M88AX. The M88AX was a basic M88A1 chassis, which had the engine's power increased from 750 horsepower to 1,050 horsepower, the transmission tailored to the engine's power curve and ballast weight to provide a vehicle with a test weight of 65 tons. The power train modifications were relatively simple upgrades, using today's technology. A variant of the 1,050-horsepower AVDS-1790 engine, without the M88's power take-off and cooling package, had already passed the Army's 400-hour NATO dyna-mometer test cycle. In 1985, the Army borrowed this M88AX vehicle for testing at Aberdeen Proving Ground, MD. In controlled tests, it demonstrated that such an up-powered and up-weighted vehicle could actually tow 65-ton M1 tanks at speeds substantially greater than the M88A1 had been able to attain while towing the lighter M60 tank. Mobility analysis by the Army's Corps of Engineers Waterways Experiment Station further predicted that this vehicle would actually have better mobility in Europe, even while it was towing a tank some nine tons heavier than the M60.

To bring this program to fruition and to expeditiously resolve today's unsafe and extremely constrained operating conditions, the Army has recently initiated a research and development contract with BMY to incorporate necessary improvements into the basic M88 design. The contract calls for the construc-

tion of five prototype vehicles, designated as M88A1E1s, which are to undergo developmental and operational testing in 1988.

From the automotive aspect, the M88A1E1 prototype design will build on technology demonstrated by BMY's M88AX. It will use an uprated Teledyne Continental Motors (TCM) AVDS-1790 engine and an improved version of the M88's Detroit Diesel Allison (DDA) XT-1410 transmission, which will receive necessary durability upgrades. It will also have significantly improved brakes. BMY and DDA developed and tested an upgrade package that uses the same friction material used for the M1A1's brakes. The upgraded system will also incorporate a power-booster system, which provides a brake pedal feel similar to the M1. The main winch system will receive a significant upgrade, with line pull increasing from 90,000 pounds to 140,000 pounds, which will be available over the new winch's 328 feet of cable, which is 128 feet longer than the M88A1's cable.

The hoist system will also receive a significant upgrade, from 25-ton capacity to 35 tons. The hoist system will retain the field-proven A-frame design, which provides the ruggedness necessary for recovery operations; however, it will be lengthened 34 inches to allow a greater lift height.

In order to gain the eleven or more additional tons of weight necessary for sufficient tractive effort, and to meet a significantly more severe ballistic threat, the Army has added an armor plate overlay to the existing M88A1 hull .

The Army's plan is to complete the necessary testing in 1988 to support an initial production contract in early 1989. This production would be phased in at the end of M88A1 production and provide deliveries of the M88A2 beginning in late 1989. Because of a need to transfer M88A1 assets to support new, heavier variants of the Bradley Fighting Vehicle System and the improved M109 howitzer, the Army does not plan to convert M88A1s into M88A2s. Instead, its initial plans call for the purchase of some 850 units over a multi-year period.

The M88 product improvement program is an example of how the Army and industry can work in unison to make timely and cost-efficient upgrades of existing systems. The result will be the expeditious fielding of an upgraded system that will remove serious operational and safety problems.

BURT S. BOUDINOT
LTC (Ret.)
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Recognition Quiz Answers

1. M88A1 ARV (US). Crew, 4; combat weight, 50,803 kg (60 tons); maximum road speed, 42 km/hr; maximum range, 450 km; engine, Continental AVDS-1790-2DR, 12-cylinder, air-cooled, 750-hp diesel; armament, 1 x .50 caliber machinegun; auxiliary power, Onan 10.8-hp. 2-cylinder, 4-cycle diesel; maximum A-frame lift, 22,680 kg (51 tons).

2. M9 ACE (US). Crew, 1; weight, loaded, 24,500 kg (27 tons); weight, empty, 15,800 kg (17 tons); maximum road speed, 48.3 km/hr; maximum water speed, 4.8 km/hr; maximum range, 322 km; maximum gradient climb, 60 percent; maximum side slope workable, 35 percent; engine, Cummins V903 295-hp diesel; air-portable.

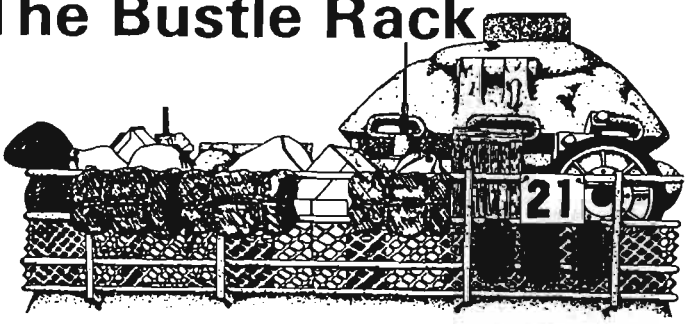
3. T-55 MBT (USSR). Crew, 4; combat weight, 36,000 kg (40 tons), maximum road speed, 48 km/hr; maximum range (w/aux tanks), 600 km; armament, 1 x 100-mm main gun, 1 x 7.62-mm coax machinegun, 1 x 7.62-mm bow machinegun.

4. T-62 MBT (USSR). Crew, 4; combat weight, 40,000 kg (44 tons); maximum road speed, 50 km/hr; maximum road range (w/aux tanks), 650 km; armament, 1 x 115-mm main gun, 1 x 7.62-mm coax machinegun, 1 x 12.7-mm AA machinegun.

5. Upgraded M60 MBT (Israel). Crew, 4; weight unknown due to applique armor added to turret and hull; armament, 1 x 105-mm main gun, 1 x 7.62-mm coax machinegun, 1 x 7.62-mm and 1 x 12.7-mm machineguns on turret.

6. M60AVLB (US). Crew, 2; weight, (w/bridge) 55,205 kg (60 tons); length (w/bridge), 11.28 m; maximum road speed, 48.28 km/hr; maximum range, 500 km; engine, Continental AVDS 1790 2A or AVDS 1790 2D, 12-cylinder, 750-hp diesel; bridge weight, 13,380 kg (14 tons); bridge gap span, 18.288 m; bridge maximum capacity, 54,431 kg (60 tons).

The Bustle Rack



General Dynamics Develops Recovery Vehicle Based on Abrams Chassis

Developed as a private venture by General Dynamics, a new M1-based recovery vehicle uses the basic M1A1 hull with a new superstructure for the recovery equipment. There is a three-man crew with space for a fourth man. A hydraulic jib crane on the vehicle's left side has a 35-ton lift capacity and also enables the vehicle to change its own power pack. A hydraulic dozer/stabilizing blade is at the front along with a 70-ton capacity winch that can be upgraded to 140 tons. There is an auxiliary 4-ton winch.

Other features include an overpressure NBC system, automatic Halon fire detection and suppression, a 350-hp auxiliary power unit. Over 80 percent of the Abrams RV is common to the M1A1, according to a GDLS announcement.

The Army has placed an order with BMY for an updated M88A1 called the M88A1E1 *(see Professional Thoughts, this issue. -Ed.)* .

Constitution M1 Dedicated

In keeping with ceremonies to honor the 200th anniversary of the signing of the Constitution, the U.S. Army Tank-Automotive Command (TACOM) in Warren, MI, dedicated an M1A1 Abrams main battle tank completed on 17 September 1987 as "The Constitution Bicentennial Tank," according to ARNEWS.

During the ceremonies attended by representatives from General Dynamics Land Systems, the prime contractor for Army tank systems, the Army also accepted the last M60-series tank to be produced. Officials cited the M60's nearly 30 years of service in the defense of the nation's constitution.

The special M1A1 has a six-inch- square brass plaque mounted inside the turret near the commander's station. The plaque reads:

"*The production of this tank was completed on the 200th anniversary of the signing of the Constitution of the United States of America. Detroit Arsenal Tank Plant, Warren, Michigan, Sept 17.*"

Lt. Col. Michael J. Neuman, commander of the tank plant, turned the "Constitution Tank" over to visiting tankers of the 3d Armored Division's 4th battalion, 8th Cavalry who had come from Germany for the ceremony. Neuman noted that Company D, 1st platoon, 4/8 Cavalry, the unit that recently won the CAT trophy, will become the tank's new owner.

M1A1 Units Growing

TRADOC's Tank Systems Manager reports there are now 7 battalions and 3 squadrons of M1A1 main battle tanks in the field.

D Co., 1st Bn., 67th Armor Wins 304th Light Tank Award

In the early 1920s, when COL George S. Patton Jr commanded the 304th Light Tank Bde, the soldiers of the brigade presented him with a silver cup upon relinquishing his command. This cup was passed on to his son, George S. Patton III.

When MG Patton commanded the 2nd Armored Division in 1975-1977, he passed on the cup to the 2nd AD, where it is now presented annually to the outstanding company, battery, or troop, as determined by the Commanding General. It is the 2nd AD's highest company-level award.

This year's winner was D Company, 1st Battalion, 67th Armor Regiment. The unit's 100% first-run qualification during its recent Tank Table VIII Gunnery live fire exercise, combined with the superior results during platoon and company ARTEPS, were significant factors in the awarding of this cup, according to an article in the Ft. Hood *Sentinel.*

New MBT Unveiled In Japan

A new, 50-ton main battle tank has been unveiled in Japan, according to "Jane's Defence Weekly," 12 Sept 87. To date, some $212 million has been spent on the new tank's development. It is armed with the West German Rheinmetall 120-mm smoothbore main gun, one 7.62-mm coax

machine gun and one 12.7-mm AA machine gun.

The new tank has a three-man crew, an automatic loader for the main gun, a fire-control system similar to US and NATO tanks, a thermal vision sighting unit, a TAG laser rangefinder, and digital ballistic computers and sensors.

The commander sits on the right side of the turret, his cupola fitted with large vision blocks. The new tank has an on-the-move target engagement/firing capability and automatic target tracking. Probably to be named Type 90, the tank has composite armor, and is 9.7 meters long, 3.4 meters wide, and 2.3 meters high. Its diesel engine produces 1,500 hp, and the tank has a claimed top speed of 70 km/hr. A hybrid hydropneumatic suspension on the first and sixth road wheels, and torsion bars on the second through fifth road wheels, gives good cross-country maneuver-ability.

Advanced Military Studies Program Selectees

The following armor officers have been selected to attend next year's Advanced Military Studies Program (AMSP) at the Command and General Staff College, Fort Leavenworth, KS: Majors Albert Bryant, Jr., Michael D. Heredia, Michael R. Matheny, Henry S. Scharpenbert, Charles D. Franklin, Mark P. Hertling, David C. Mock and Kent Thomas.

THE AMSP provides selected volunteer officers with an additional year of concentrated study in the art and science of war. To apply for the AMSP program, officers must be a resident student of the Command and General Staff Officers Course when they apply early in the Fall term; must be in the grade of captain (P) , major, or major (P), when they apply; must meet DA height and weight standards and have successfully passed the APRT within the last six months.

A board of colonels, headed by the deputy commandant, reviews applications and interviews applicants about their aptitude for and interest in warfighting at the tactical and operational levels, ability to complete a rigorous graduate-level education program in the science and art of war, an assignment/specialty career pattern making likely future assignments to principal staff positions at division and corps levels, and ability to meet availability criteria as outlined in AR 604-100, dated 15 July 1984.

Final approval of selected officers is made prior to the Christmas break.

New Mission Training Plan For M3 Scout Platoons

A new mission training plan has been designed for M3-equipped scout platoons organized under the following TOE's: 07246L000 HHC, Mech Inf Bn; 17376L000 HHC, Tank Bn; 17387L100 Cav Trp, Div Cav Sqdn; 17487L000 Cav Trp, Regt Cav Sqdn. It is also applicable to scout platoons not equipped with the M3.

The MTP presents descriptive exercises based on two operations that are critical to all mechanized scout platoons: Re-connaissance Operations (Route, Zone, Area), and Security Operations (Screen).

These exercises contain leader training required for mission accomplishment and are laid out in a scenario or situational environment. Specific guidance is provided to conduct and evaluate the training.

Worldwide distribution will be made soon. Limited quantities can be requested in approximately 60 days from:

Commander
USAARMC & Ft. Knox
ATTN: ATZK-DPT-NRT-AWTS
Fort Knox, KY 40121-5000

For more information, contact CPT Jussel or MAJ Ockrassa at AUTOVON 464-6235/3154, Commercial (502) 624-6235/3154, or write: Commandant, USAARMS, ATTN: ATSB-CS-ACT, Fort Knox, KY 40121-5200.

Armor Correspondence Courses Ready for Field

The Army Institute for Professional Development is accepting applications for the course, "Introduction to the Abrams Tank".

Curriculum: 9 subcourses, 27 credit hours.

Subcourse No.	Title	Cr Hr
AR 0615	Maint of M1 Tank	2
AR 065I	M1 Turret Famil.	4
AR 0544	M1 Fire Control Sys	3
AR 0477	M1 TC's Duties	3
AR 0442	Boresighting the M1	3
AR 0445	M1 Ammunition	2
AR 0446	M1 Loading & Misfire Procedures	3
AR 0580	M1 Tac Operations	4
AR 0590	M1 Tac Considerations	3

This course is not listed in the current edition (1 Apr 87) of DA Pamphlet 351-20, but will appear in the Jan 88 edition. For information on how to enroll, write: Com-

mander, USATSC, ATTN: ATIC-IPD-SS (171), Newport News, VA 23628-0001.

During normal duty hours, call commercial (804) 878-2079, or AUTOVON 927-2079. For information concerning the Armor Correspondence Program, contact the Armor Correspondence Course Liaison Officer at AUTOVON 464-5430.

X-Ring Xperts

The public affairs officer at HQ, 2d ACR writes that a tank crew from **Troop F, 2/2 ACR** in Germany fired back-to-back perfect scores in March and August at Grafenwohr. Average score for the 2/2 ACR was 896 with 95 of 96 tanks qualifying on the first run.

The crew of A-21 (M3 CFV), **A Troop, 4th Sqdn, 4th Cav, 3ID**, fired a perfect score of 1,000 points on Bradley Table VIII, according to a letter from the 4th Sqn adjutant. One hundred percent of Alpha Troop's vehicles qualified on the first run with seven M3s rated as distinguished. A Troop's 3d platoon scored highest with an average of 903 points. The squadron average was 838.

A tank crew of **A Co. 2d Bn, 67th Armor** fired a perfect run even though two crew members left the tank for outprocessing. When SGT McIntyre Jr., loader, and SP4 Bologna, driver, had to leave to outprocess, SP4 Humphrey and SP4 Kemp were substituted as driver and loader and the crew went on to finish a perfect run, according to the company commander.

The unit training NCO of **Company M, 3d Sqdn, 116th ACR**, Oregon Army National Guard, reports that a crew shot a perfect 1,000 while on annual training at Gowen Field, Idaho. The crew, SSG Viktor Kubat, TC; SGT James Rozzell, gunner; SGT Dale Gilbert, driver; and SGT Chris Gulden, replacement loader; tied for top honors with the crew of another troop. All 15 crews of the unit qualified, with 7 as distinguished, 7 superior, and 1 qualified.

The "Iron Knights" of the **1st Bn, 35th Armor** fired their last M60A3 gunnery and topped the 1st AD in all tank gunnery categories during IRON THUNDER I in March, according to the battalion adjutant. The battalion qualified all 58 tanks on TT VIII and claims a tie with the USAREUR record with 55 first-run qualifications, producing a battalion superior rating per tank. The "Iron Knights" transition to the M1A1 this fall.

USAARMS Commander Says Some Candidates Unprepared For Master Gunner Course

MG Thomas H. Tait, Chief of Armor and Commander of the U.S. Army Armor Center, has sent a message to armor commanders worldwide citing the continued high failure rate (20-25%) among master gunner course students, according to a notice in the "Hot Loop" newsletter.

The chief cause of academic/skill proficiency failure has been the Tank Commander's Gunnery Skills Test (TCGST) and course Exam IV, which evaluates technical skills on machineguns, gun tube technology, ammunition, fire control, conduct of fire, and armored vehicle ID. TCGST failure indicates that the students are having difficulty with the test, which is administered in strict compliance with manual guidelines, while Exam IV failures are primarily a result of problems concerning gun tube technology and conduct of fire.

MG Tait has encouraged all commanders to select master gunner candidates who demonstrate a high level of proficiency/aptitude in gunnery skills, and to see that these NCOs are actively prepared and coached by local unit master gunners prior to departing their home station. For more information, contact CPT Stuck at AUTOVON 464-8355, commerical (502) 624-8355, or write Commandant, U.S. Army Armor School, ATTN: ATSB-DOTD-CD, Fort Knox, KY 40121-5200.

Armor Hot Line Is More Than a Publication Service

Since its establishment, the ARMOR HOT LINE at Fort Knox has fulfilled numerous requests for publications, but the 24-hour-a-day recording service also affords personnel in the field an opportunity to ask questions, raise issues, and identify problems concerning training, personnel and logistics in Armor.

All records are transcribed daily and acted on as rapidly as possible. The ARMOR HOT LINE numbers are: AUTOVON 646-TANK; Commercial (502) 624-TANK.

BOOKS

Team Yankee, by Harold Coyle, Presidio Press, CA, 313 pages. $17.95

A novel of tank company combat in WW III. The nitty-gritty of out-foxing, out-maneuvering, out-shooting people who are shooting back. The word is survival. How does a captain steel himself to his dead men? How do the senior NCOs react when the chips are down? How do the troopers fend for themselves in the turmoil of combat?

Here are strategy, tactics, movement to contact - and deadly contact with an overwhelmingly numerically superior enemy. Here are the basics of what tankers do when the shooting stops for the moment. Here are the thoughts and the actions of the leaders and the soldiers in the fury of buttoned-down combat and the tentative relaxation of a staging area.

Sketch maps help to follow the actions and maneuvers of Team Yankee as it slogs into the Russians. An extensive glossary defines the multitude of acronyms so beloved by the Army.

The psychology of the combat team leader is explored here, as is that of the senior noncoms who are the direct, personal links between command and troops. The age-old dictum that the waiting is worse than the action is pulled out and realistically proved right.

This is good reading and educational, as well, for those who want to try to get an idea of what the small unit leader might go through in battle. Major Coyle does a good job in his first novel. He is a tanker. Worth the price.

ARMOR STAFF

Knights of the Black Cross, Bryan Perrett, St. Martin's Press, NY., 251 pages, including appendices. $17.95

"Annihilation was possible, only when the attacker initiated a mobile battle with the object of falling upon the enemy's flank or of encircling and destroying piecemeal." Such was the premise on which the German Armored Corps - the Panzerwaffe - was instrumental in the gigantic Nazi victories between 1939 and 1942.

The titanic struggles that took place on the Eastern Front proved the German tank soldier's superior tactical abilities and gave the Soviets much to learn. That they did learn is proved by their present armor organization within the Warsaw Pact, which faces NATO in Europe.

This is a book for the professional tanker. The author's meticulous research (he has written such volumes as A History of Blitzkrieg, Soviet Armour Since 1945, Allied Tanks in Italy During World War II, and Allied Tanks North Africa) and expanded appendices provide the reader - and researcher – with voluminous material for study and contemplation.

Other branches learned from armor, even as far back as between the World Wars. General Heinz Guderian, a former infantry officer and the epitome of German armor development officers, states that he learned the basics of his trade from the British tankers, Fuller, Liddel-Hart, and Martel. He learned well, as his successes on the battlefield showed. From Guderian came the concept of combined armored divisions – tanks, artillery and infantry, that served the Wehrmacht so well. The tactics were based on the fundamentals of a bold advance, an enveloping attack, and full initiative in the commanders of minor units – the tactics that completely annihilated the Roman legions at Cannae, and left every home in Roman Italy in mourning.
Perrett states that the German armor leaders were not solely concerned with the attack: the problems of defense were to be countered by the tactic that would make the attack to effective – mobility. Unfortunately, in France during 1944-45, the practice of a mobile defense was dominated by the Allied air power superiority, and German armor was effectively tied to a static defense role that destroyed it.

The appendices are succinct and provide much background material for reference and research.

This is almost a must book for the professional armor/cavalry soldier. Officers and senior NCOs can learn much here. Additionally, it is fascinating history.

ROBERT E. ROGGE
Assistant Editor

Platoon Leader, by James R.McDonough. Bantam Books, Inc., New York, NY. 197 pages. $3.50 (Paperback).

This book deserves a place in your library next to MacDonald's Company Commander, and S.L.A. Marshall's Men Against Fire. It's a classic account of small-unit leadership during war. The author, LTC James R. McDonough, relates his experiences as a platoon leader during the Vietnam War. LTC McDonough also reinforces leadership techniques that are taught in our schools, and should be enforced: technical and tactical competence and insistence on discipline.

LTC McDonough established his leadership by demonstrating his technical and tactical competence. He insisted on day and night patrolling and he accompanied these patrols. He personally critiqued the patrols, used the five-paragraph operations order, essentially all the little things lieutenants learn.

Attention to detail in these items kept his platoon together as a functioning fighting force. These same details are still critical to the functioning of our small units; from infantry/scout/tank platoons to maintenance companies. In demonstrating his tactical competence, LTC McDonough did not spare himself when he made an error. He made mistakes, but ensured that everyone in his platoon learned from them. Hand in hand with technical and tactical competence, he insisted upon perfect discipline.

Patton said that the only acceptable discipline was perfect discipline. McDonough had the courage to demand this from his men. He made them wash, shave, change socks, account for their equipment, etc. He inspected them, and ensured his platoon sergeant and squad leaders did the same. He did not tolerate drug abusers. He relates an incident in which one of his soldiers "accidently" fired an M-79 round past him as a warning. LTC McDonough's solution to that leadership challenge was unique. Read the book to find out what he did.

The experiences related in the book reinforce what we learn: disciplined soldiers will fight well, win, and survive to fight again. Time and again, McDonough concludes paragraphs with, "He was unhappy,...(but) He followed my orders." McDonough established discipline within his platoon, and his men accepted that standard.

LTC McDonough's story is also about the American soldier. The soldiers of the platoon were not Rambos or John Waynes. There were tough guys, scared guys, and laid-back soldiers. They were also men who fought for their friends, and for their country. The last line of the book says it all, "I was proud to have served with them."

Thankfully, many of us junior officers have not been to war. We owe it to ourselves and the soldiers we have the honor of leading to study war. In this book, we can see war through another's eyes and ask ourselves if we have the courage to do the same things LTC McDonough did.

My guess is that the book is also a final salute to the men of his platoon. It is a worthy tribute to his soldiers.

KEVIN C. M. BENSON
CPT, Armor
HHC, 2d Bde, 1AD

The Evolution of Blitzkrieg Tactics. Germany Defends Itself Against Poland, 1921-1933. By Robert M. Citino. Greenwood Press, Inc., Westport, CT, 1987, 209 pages, $32.95.

This book provides a tactical, operational, and strategic view of the German Army between WWI and WWII, with emphasis on its fighting organization. Robert Citino describes the process by which the Reichswehr accomplished its principal task, that of defending Germany's borders, especially those to the east, from the end of WWI to Hitler's rise to power in January 1933.

The author closely examines the period from the end of WWI to the reduction of the German Army to 100,000 men in early 1921, the reorganization of the German Army under General von Seekt between 1921 and 1926, and the process by which General von Seekt attempted to improve German security. He considers the Polish threat to Germany, based on German military intelligence records and on the actual condition of the Polish Army and arms industry under Pilsudski, and discusses the period from 1927 to 1933 under defense minister Groener, during which the German armed forces began to plan seriously for a possible war with Poland.

The book consists of seven parts: Preface; The Uncertain Years,1918-1921; An Army Restored: General Seekt, the Reichswehr, and the East, 1921-1926; The Polish Army in the Eyes of the German Military Intelligence, 1921-1933; The Era of Planning: The German Army and Navy During the Groener Era, 1927-1933; Conclusion, and Bibliography.

The author makes the point that the requirements made on the German Army and its organization by General von Seekt laid the essential groundwork for the rapid and effective expansion of the Wehrmacht after 1933. He stresses that if General von Seekt had opted for a conventional organization in 1921, that the environment that fostered the development of the Blitzkrieg would not have existed in the German military, and the Blitzkrieg doctrine would not have been implemented effectively in Germany.

The author is assistant professor of history at Lake Erie College and has worked as a civilian historian for the U.S. Army. He has no personal military background. The work appears to be a thesis reworked and prepared for public consumption.

Overall, I would recommend this book to anyone with a thorough grounding in the events surrounding WWI and WWII. The author at times assumes the reader is familiar with the events prior to the Armistice of 1921 and the events in Germany after 1933. This book emphatically is not for the novice in this period of history. The specific focus on German defense strategy on the eastern border with Poland, as well as the depth of detail regarding German wargames and maneuvers, makes this book appropriate for military historians and persons knowledgeable in German military and diplomatic history, and military officers. It is dry reading at times and rather expensive.

CPT DAVID ANDERSSON
Mil. History Instructor
USAARMS, Fort Knox, KY

Dilemmas of the Desert War: A New Look at the Libyan Campaign 1940-1942, by Michael Carver. Bloomington, IN: Indiana University Press, 1986, 160 pages, $20.00 hardcover.

The former Chief of the Defence Staff (UK) in the 70s, and a former armored brigade commander in WWII, has written one of those books for a very specialized audience. Dilemmas of the Desert War is for the military history reader who finds either the reality or armchair world of the great African littoral home. The reader who is going into a first-time study of this first truly armored war (unfettered armor-vs-armor) will have a difficult time, despite Field Marshal Carver's crisp and to-the-point style. Background reading helps.

Lord Carver enters a debate that has raged since the guns went silent. The British faced the Italian and German armies on the Western Desert of Libya. The Italians fought first and later were augmented by the Germans under Rommel. The battles raged and "lines" rolled west, and east, and west, and east, etc. Such was the tendency in this fluid armor-against-armor war. With each Rommel drive east toward the Suez there was a vast succession of British commanders. Naturally, with so many coming and going, the post-war memoirs were a growth industry as finger after finger was pointed at one another as the cause of failure. The author enters the fray once again (it is not unknown ground to him; he has written before on the theater). There have been several commanders who have taken "bum raps" for their performances. Correlli Barnet labeled Ritchie as staggering into tactical victory. Auchinleck and Montgomery schools vie for who really understood armored war. The author here brings the Ritchie papers, recently released and made available by the family, and other information into reinterpreting the battles in the Western Desert from the start until Alamein.

A key problem that many of these early commanders faced was their lack of experience. Commanders who had no combat experience, no tank experience, and no idea of the limitations or potential of their equipment took over. Even Rommel had problems, but he was making fewer mistakes! Armor stayed tied to infantry so the German tanks wouldn't destroy the infantry. Yet, when the British armor tore into German positions, the famous 88 tore the British to pieces, while the Germans had freed their tanks to raise havoc. Demands were made for advances. Politicians wanted lines on newspaper maps to show advances when one feature of war might be to hobble an enemy by stretching him to his limits and hitting with massed strength. (Imagine someone writing a memoir titled "Retreating into Victory"!). The author shows that many of these problems in the succession of commanders were caused by individuals and unfamiliarity with the new arm of warfare - armored forces.

PETER CHARLES UNSINGER
San Jose State University, CA.

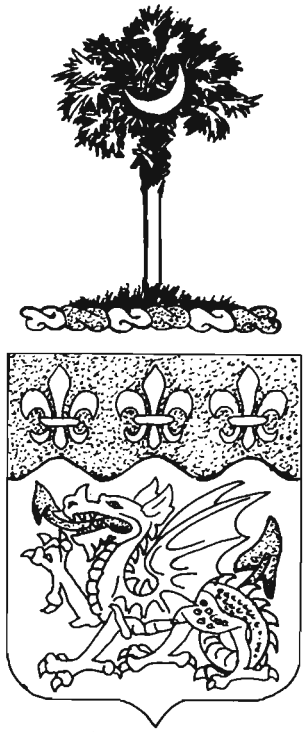
Napoleon's Marshals. David G. Chandler, editor. Macmillan, New York, 1987. 560 pages. $35.95.

David Chandler is probably the greatest living authority on Napoleon. Chandler's works, The Campaigns of Napoleon and Dictionary of the Napoleonic Wars, are classics. In this new work, Chandler has called upon many well-known military historians, several of them retired military officers, to write about the men who put into action the strategic genius of Napoleon: his marshals.

In a chapter devoted to each of Napoleon's twenty-six marshals, the writers describe the marshal's life: his formative years, his military training and education, and his battlefield experience. Then, at the conclusion of each chapter, the reader views, in detail, one particular battle in which the marshal played a central role.

The value of this book rests in the lessons the reader takes from each of the marshals' lives. One learns how Murat used the aggressiveness and initiative of his force to become one of the greatest cavalry leaders in history. We see the personal leadership of Oudinot, "The Father of the Grenadiers," who led from the front of his forces. Marshal Macdonald's ability to give even unpopular views to Napoleon is a lesson in candor to us as well.
While one wishes for more maps (only one appears in each chapter), the writing is excellent, and the appendices (including "Notes on Military Organization and Tactics") are superb. I recommend this book to you. It is well-researched and the bibliographic work will provide hours of future reading.

G. PATRICK RITTER
Major, Armor
FRG



Symbolism

The red line of the chief and wavy partition line allude to the unit's origin as coast artillery. Campaign participation credit by elements of the regiment are shown by the gold fleurs-de-lis, denoting campaigns in WWII in France, and the dragon, representing WWII campaigns in Europe and Africa. The barbs on tongue and tail of the dragon, symbolic of arrowheads, signify assault landings in Sicily and Southern France by certain elements of the regiment.

Distinctive Insignia

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

263d Armor

Never Surrendered

Lineage and Honors

Organized in eastern South Carolina and Federally recognized 6 March 1947 in the South Carolina Army National Guard as the 263d Coast Artillery Battalion with Headquarters at Florence.

Converted and redesignated 1 February 1949 as the 263d Heavy Tank Battalion and assigned to the 51st Infantry Division. Location of Headquarters changed 17 March 1949 to Mullins. Redesignated 1 September 1950 as the 263d Tank Battalion.

Consolidated 1 April 1959 with the 2d Battalion, 218th Infantry (organized and Federally recognized 7 February 1947 with Headquarters at Rock Hill); consolidated unit reorganized and redesignated as the 263d Armor, a parent regiment under the Combat Arms Regimental System, to consist of the 1st Medium Tank Battalion and the 2d Reconnaissance Squadron, elements of the 51st Infantry Division. Reorganized 1 April 1963 to consist of the 1st Medium Tank Battalion and the 2d Battalion, nondivisional units. Reorganized 30 April 1964 to consist of the 1st, 2d, and 3d Battalions, nondivisional units. Reorganized 1 January 1968 to consist of the 1st Battalion, a nondivisional unit, and the 2d Battalion, an element of the 30th Infantry Division.

Campaign Participation Credit

Company B, 1st Battalion (Dillon), entitled to:

World War II - EAME

Tunisia
Sicilly (with arrowhead)
Rome-Arno
Normandy
Northern France
Southern France (with arrowhead)
Rhineland
Central Europe
England 1944

Headquarters Company, 2d Battalion (Rock Hill [Catawba Rifles]), and Company B, 2d Battalion (Fort Mill), each entitled to:

World War I

Somme offensive
Ypres-Lys
Flanders 1918

World War II

Northern France
Rhineland

Decorations

None

* U.S. GOVERNMENT PRINTING OFFICE 1987 748-050/87-6