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CROSSING THE LINE IN THE SAND: 4TH BATTALION, 67TH ARMOR IN SOUTHWEST ASIA

BY

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USAWC MILITARY STUDIES PROGRAM PAPER

CROSSING THE LINE IN THE SAND: 4TH BATTALION, 67TH ARMOR IN SOUTHWEST ASIA

AN INDIVIDUAL STUDY PROJECT

by

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LIST OF ILLUSTRATIONS

INTRODUCTION

In the preliminary draft for the Army capstone manual FM 100-5, Operations, a new operational tenet, "versatility," joins agility, initiative, depth, and synchronization as a basic tenet for generating and applying combat power at the operational and tactical levels. The Army's ability to apply these tenets in combat operations is a key to success on the battlefield.[1] Versatility is characterized by

> ... the ability to shift focus, to tailor forces, and to move from one mission to another rapidly and efficiently.... A versatile force can prosecute violent offensive operations one week and aid a dislocated and desolate population the next... Its essence is competence in a variety of missions and skills... Versatility ensures that units can conduct different operations, either sequentially or simultaneously, with the same degree of success.[2]

The tenet of versatility was amply illustrated when the VII Corps in Stuttgart, Germany was alerted for deployment and combat operations in Southwest Asia (SWA) as part of Operations Desert Shield and Storm. VII Corps units were called on to perform a wide variety of missions during the deployment that were not part of their unit mission essential task list (METL). The ability of a unit to successfully move across a difficult spectrum of missions, from deployment to combat to security and humanitarian assistance, is one of the key lessons of Desert Storm which has shaped the revision to Army operations in the new manual.

This paper deals with one particular unit of VII Corps, a tank battalion assigned to the 3d Armored Division. From

deployment in January 1991, through combat in February, to redeployment in June 1991, the experiences of the 4th Battalion, 67th Armor in Desert Shield and Desert Storm illustrate the multiplicity of missions which are demanded by contingency operations. These missions were not limited to combat operations, but included support of units moving into theater, security, humanitarian assistance, peacekeeping, and civic action missions. The battalion's operations in Southwest Asia in 1991 provide insights into the tasks and competencies demanded during force projection into a distant theater, as well as other tactical lessons applicable to task force operations.

BACKGROUND

In the time frame of Desert Shield and Desert Storm the 4th Battalion, 67th Armor was an M1A1 heavy armor tank battalion assigned to the 3d Brigade of the 3d Armored Division. Geographically located since 1956 in Friedberg, a small town 30 kilometers north of Frankfurt, Germany, the battalion had undergone unit designation and assignment changes due to the changing practices of the Combat Arms Regimental System and the restructuring of the Army in Europe. The battalion's nickname, "The Bandits," and its unofficial crest, the grinning skull, are holdovers from its designation from 1956 to 1986 as 1st Battalion, 32d Armor.

Organizationally, the 4-67 Armor was a

J-series MTOE divisional armor battalion, equipped with 58 M1A1 heavy armor Abrams tanks assigned to four companies, with six M3 Cavalry Fighting Vehicles in its scout platoon, and six M106A2 4.2-inch Mortar Carriers in its mortar platoon. The battalion complement of 552 officers and men was normally augmented with engineers, air defense, and cross-attached infantry to form a task force for combat operations.

A key to the success of the battalion in the desert was the rigorous training program and the numerous operations conducted by the battalion during the year preceding deployment to Southwest Asia. In November 1989 the battalion was selected to be one of the three USAREUR participants to train for and compete in the Canadian Army Trophy (CAT) Competition in June 1991. A NATO-wide tank gunnery competition requiring specialized, very technical tank gunnery skills, CAT added a high-visibility mission to the normal training calendar. The battalion focused over half of its overall training effort into the training of Delta Company for the CAT competition. The unit training program, with the addition of the CAT mission, stretched the battalion's ability to operate by forcing the battalion to execute many simultaneous missions during 1990. The challenge to the Bandits was to maintain unit readiness while executing a complex CAT gunnery training mission for a small part of the battalion.

Past experience with CAT had shown that it could be a divisive mission for a battalion. Command attention, training resources, and top quality personnel were focused on the CAT Team, and this caused problems for the other companies in the battalion,

who had to give up resources and personnel, but still perform the necessary, and less glamorous, daily missions. Early on, my focus was to challenge the rest of the battalion using the September-October 1990 Grafenwoehr training density as their "CAT Competition." I challenged the companies to be the equal of the CAT Team in gunnery and masters in maneuver, even though they would have less training time, with the results to be measured in the upcoming training density. The companies were included, as much as possible, in the specialized gunnery training developed for the CAT Team. With the support of the 3d Brigade commander, Colonel Rob Goff, this program was approved by Major General Paul Funk, the 3d Armored Division commander, and executed by the battalion.

The rigorous training program for the Graf density and the execution of the CAT mission in 1990, as depicted in Table 1, was very successful and had two important benefits for the battalion. First, and most importantly, every combat mission the battalion was to execute in SWA was practiced with the complete battalion, less the attachments who joined the battalion in the desert. There was no loss of training because of the diversion of resources to the CAT competition. Second, the CAT mission raised the battalion's tank gunnery skills to a very high level. This was because of extra gunnery training received from the Armor School, lavish attention paid to the fire control systems of the tanks, the influx of master gunners and expert tankers for the CAT team, and the competition level it fostered among the tank companies of the battalion. On the negative side, the battalion's equipment

Table 1. 1990 Training Calendar for 4-67 Armor

January 1990	REFORGER Exercise near Munich Preparation for turn-in of tanks CAT Team screening Gunnery training
February 1990 - March 1990	Turn-in of all M1A1 tanks Draw of new heavy armor M1A1s New tank validation Gunnery qualification at Grafenwoehr Mortar ARTEP CAT Team selection
April 1990 - May 1990	CAT Team selection and processing Scout Platoon training for Cavalry Cup Expert field medic and expert infantry badge training for medics and mortars Tank Platoon ARTEPs 3d Armored Division BCTP
June 1990	CAT Team formation Tank Platoon ARTEPs Scout Platoon participation in USAREUR Cavalry Cup
July 1990 - August 1990	Tank, scout, and mortar services CAT Team training Battalion maneuver training and CATTS exercise
September 1990	CAT Gunnery at Grafenwoehr 3d Armored Division MSE FTX Gunnery and maneuver training
October 1990	Gunnery Qualification/CALFEX at Grafenwoehr
November 1990	Mortar ARTEP Initial CAT Competition at Graf 120-km Battalion Road March to Hohenfels CMTC Rotation at Hohenfels
8 November 1990	Alert for deployment to SWA

and personnel were worn from seven months in ten away from home station. Significant equipment maintenance was needed from the long period of field use. As a consequence, the battalion was fully combat ready, despite the need for personnel and equipment maintenance prior to further deployment preparations.

PRE-DEPLOYMENT (8 NOVEMBER 1990 - 4 JANUARY 1991)

The alert for deployment to SWA came in what was to become the typical method for obtaining critical information, the battalion heard it from the Cable News Network (CNN) while preparing for the first training mission of its rotation at the Combat Maneuver Training Center (CMTC) in Hohenfels. Of course, rumors had been rampant for days, but official Army channels were silent. The lack of authority in the chain of command to officially release information to the unit before a press announcement became a morale factor, an irritant that would plague all units throughout the deployment to Operations Desert Shield and Storm.

After notification the battalion continued with its training rotation at CMTC from 8-12 November, practicing missions specifically chosen to match possible upcoming desert scenarios. Despite the obvious terrain differences, the training missions served to validate the battalion's standard operating procedures. It provided valuable experience, particularly in conducting a movement to contact, night attacks and road marches, and resupply operations. The time lost from initial preparation for deployment while training at CMTC was amply compensated by training value and

the confidence gained by the entire battalion from exercising in the realistic battle intensity at Hohenfels and under the expert tutelage of the observer-controllers at the CMTC.

The battalion was released from its mission of participating in the Canadian Army Trophy Competition on its return to Friedberg on 15 November and Delta Company, the base of the CAT Team, was integrated back into normal battalion operations. After initial post operations maintenance checks were complete I gave a much needed five-day break to the battalion over the Thanksgiving holiday and canceled the unit partnership events which normally took place during that time. A good rest was needed by all personnel, and the time would be the last full break the unit would receive until its return from the desert in June 1991.

Upon return to duty the preparation for deployment began in earnest, and centered on four key areas: soldier and family deployment preparation, equipment maintenance, acquisition of additional equipment, and deployment to the port of unit equipment. A reconnaissance to Saudi Arabia in late November by the brigade and battalion commanders identified requirements and helped to focus the preparation process. During the recon battalion commanders were able to visit the port, initial tactical assembly areas, and units of the 24th Infantry Division, already living in the desert in Saudi Arabia. The recon gained much needed information on the mission, the area, and desert living conditions.

Deployment of a forward-stationed European unit presented significant problems for the battalion chain of command and the

spouse "chain of concern." We actively discouraged families from returning to the United States while their husbands were deployed, as contact and care for them in so many dispersed locations would have been extremely difficult. Instead, a thorough family preparation program attempted to bring all dependents into a company-level support net that would be responsive to their needs and able to communicate with them during upcoming crises. The program met with mixed success. Dedicated spouse volunteers, working with the chain of command, enrolled and accounted for all family members, who occasionally needed considerable encouragement to provide needed information on family history and emergency notification. The spouse chain of concern proved to be the key element in family support, as the small military chain of command left to support the families was seriously overtaxed in attempting to deal with the 268 spouses and over 400 children left behind.

Preparing the soldiers for deployment was less complex. The division and community organized an efficient, complete program to process the soldiers, including everything from wills and finance matters to shots and urgent dental care. Overseas movement processing for the bulk of the battalion took less than three days to complete.

Two weeks of intensive maintenance brought the battalion's equipment to a high state of readiness. Most parts were made available, occasionally from theater stocks. The most critical shortages were in M1A1 service kits, air filters, and vehicle canvas. The tanks could not be given a complete maintenance service, and in most cases would not receive one until they

returned from the desert. As the future parts supply was uncertain, Lieutenant John Moreno and Warrant Officer Roger Behrens, the battalion maintenance officer and technician, scrounged every spare vehicle part available and the battalion took a large, and unofficial, spare parts supply with it.

A need for certain types of supplies, unavailable immediately through the supply system, made the field ordering officer (FOO) critical to deployment preparation. FOOs and their "bag men" (Class A agents authorized to dispense cash payments up to $25,000), aggressive lieutenants from the battalion, were given shopping lists and turned loose on the local economy. They ranged throughout Germany to procure such standard items as flashlight batteries, cots, compasses, spare locks, and other needed items.

By 12 December the battalion was ready to load out its vehicles and equipment. Trucks and combat vehicles were loaded and secured. Critical items, such as the coaxial machineguns for the tanks, were kept with the vehicle to the maximum extent possible. Vehicles were festooned with locks and chain to discourage theft while in transit. The battalion was authorized ten CONEX containers for its non-vehicle equipment, an amount that proved excessive. Because of the uncertain political situation, the planning guidance was to deploy prepared "for peace or war," and recreation equipment, weight sets, and other comfort items were taken. Much of the equipment taken was unnecessary, and would later be lost, stolen, or simply not used. On 14 December the tracked vehicles departed for Rotterdam by train and the wheeled vehicles were convoyed to Mannheim to be sent to the port

by barge. The only equipment left in the battalion area was individual baggage, personal weapons, and a small amount of TAT (To Accompany Troops) equipment to be moved by air.

Unit training during the deployment process was minimal and done only as gaps appeared in the preparation schedule. My guidance for training before deployment was to concentrate, when possible, at the individual and crew level on the soldier and crew survival skills needed for the desert and a possible NBC environment. Tank and Bradley crews also kept up their tank gunnery skills in the unit conduct of fire trainer (UCOFT), but there was simply too much deployment preparation required to allow for a systematic training program above the crew level. The companies kept the skills attained during the recent training by classroom and sand table exercises.

The 3d Armored Division conducted leader training for brigade and battalion commanders, operations officers, and the division staff during the first week of December. This training was particularly valuable in the formulation and dissemination of the division commander's concept for fighting the division in the desert, away from its normal European environment. The leader training, conducted by the Battle Command Training Program (BCTP) staff from Fort Leavenworth, also sketched the first concept for the division's participation in the planned deep flank attack to be conducted against the Iraqi Republican Guards. The session was a no-nonsense motivator for all attendees.

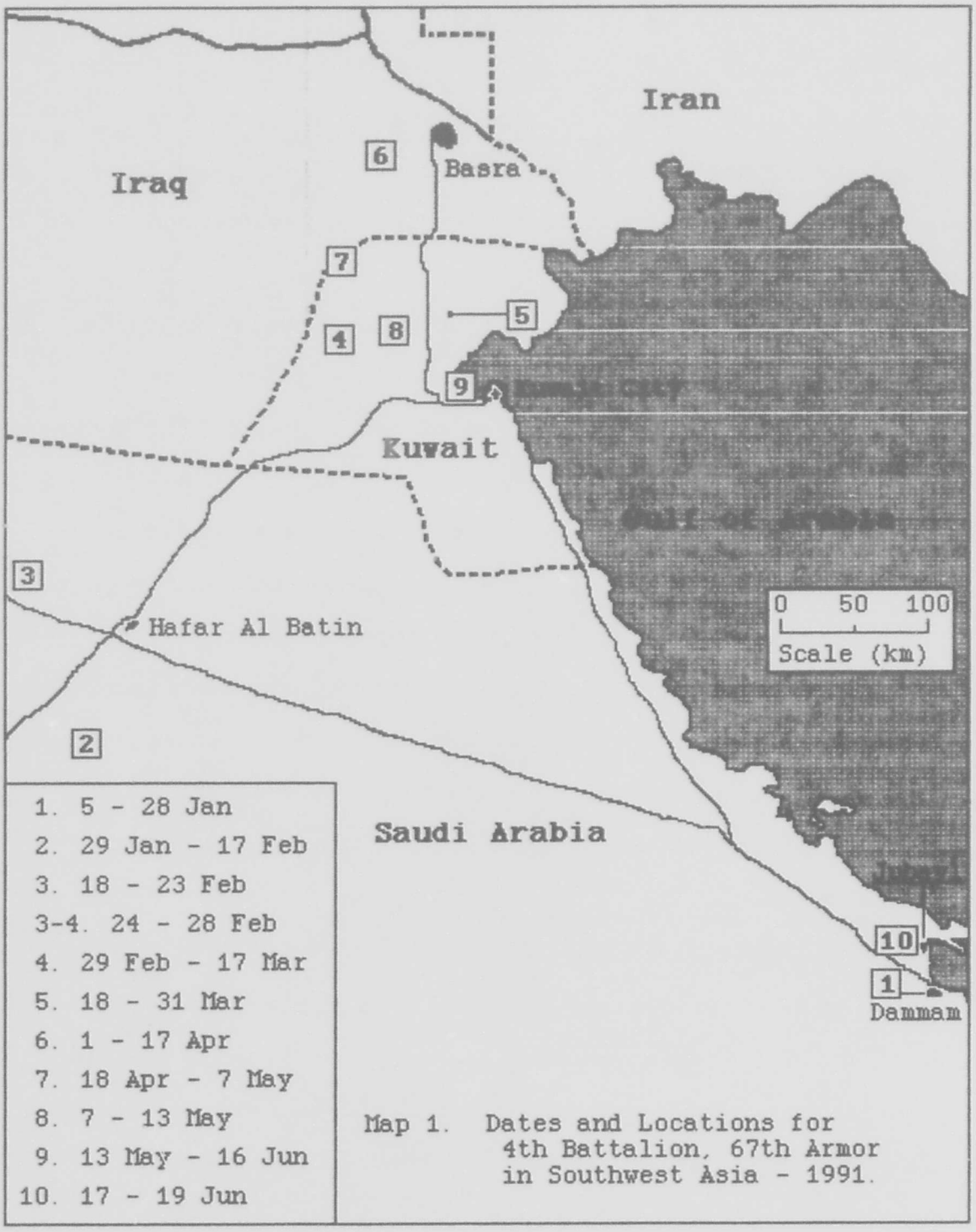
By 18 December all equipment was at Rotterdam, the advance party had departed for Saudi Arabia, and the battalion's projected

deployment date was fixed at 27 December. Selected battalion personnel were given short leaves, and all personnel were given five days to be with their families in the local area over Christmas. On 27 December all personnel were restricted to the area around Friedberg and the battalion put on 72-hour notice for deployment.

A final note on unit deployment requires special emphasis. A unit cannot deploy itself overseas, it must have significant outside help to accomplish the myriad of tasks incident to unit movement. The help required varies from the normal legal, personnel, and financial support for readying the soldiers to extensive support for movement of vehicles and equipment to port. The VII Corps deployment could not have been conducted without the professional support supplied from both the 8th and 3d Infantry Divisions. In addition to moving vehicles, they ran ports and airheads, controlled convoys, and in some cases gave their vehicles to deploying units to make up last minute shortages.

DEPLOYMENT AND BUILDUP (4 JANUARY 1992 - 23 FEBRUARY 1992)

The Bandits of 4-67 Armor deployed from Rhein-Main Air Base, Frankfurt to Saudi Arabia on three aircraft, arriving in a cold rain at Dhahran Air Base on 4 and 5 January 1991 (see Map 1). The immediate impression gained on arrival was of the immense magnitude of the effort in SWA. Hundreds of cargo pallets and vehicles were scattered about the air base, and at least ten cargo aircraft were loading, unloading, or staging to depart. After



Map 1. Dates and Locations for 4th Battalion, 67th Armor in Southwest Asia - 1991.

linking up with guides the battalion was moved to Al Khobar Towers in Dhahran, an immense housing area given to the US by the Saudi government as a troop billet. When the battalion arrived Al

Khobar had 21,000 troops in residence, a mix of Army active, reserve, combat, and support troops from every unit in theater. Billeted in company-sized groups in multi-story unfurnished apartment buildings, the battalion was to spend almost a month at Al Khobar, waiting for equipment and preparing to deploy to the desert.

The billets were ten miles from the port of Dammam. Two days after the battalion's arrival the first bad news about unit equipment was received. One ship carrying 28 tanks and other assorted vehicles had broken down in mid-ocean and its arrival time, scheduled for 14 January, was now unknown. News about other vehicles was equally uncertain. The battalion's equipment was loaded by the port teams on 11 different ships, in no particular order, and with an incomplete record of loading. Major Mike Byers, the battalion executive officer, was obliged to take up residence at the port and screen the large holding yards constantly for new arrivals. When the vehicles arrived they were checked, serviced, painted desert tan, and moved to a battalion holding area. Life at Al Khobar Towers quickly moved into a pattern of daily PT and acclimatization inside the compound, such training as could be accomplished with no equipment, and service on the few vehicles that had arrived. Installation of commercial phone banks allowed contact with home and were very popular, despite the long wait in line to use them. The rate of $2 per minute quickly ran some of the soldiers into financial trouble.

Before the battalion's arrival in country, the battalion advance party had deployed to 3d Armored Division Tactical

Assembly Area (TAA) Henry, a flat piece of rocky desert 300 miles west of the port. Living initially under very austere circumstances, they established the initial battalion field laager and drew field showers, latrines, and other equipment in anticipation of the battalion's arrival. A tent fire in early January, which destroyed the personal equipment of ten soldiers, highlighted both the crude conditions and continuing supply difficulties, as no spare field equipment was available to replace the destroyed personal equipment. The soldiers were finally re-equipped by scrounging equipment from soldiers who were medically evacuated out of theater and by having other equipment mailed in from Germany.

By 14 January it was apparent that the battalion would not move to the desert on time and the Bandits were instead detailed to administer the entire Al Khobar complex, now grown to house 22,000 soldiers. This caused everyone to wonder if this might be the battalion's desert mission, as hotel-keepers instead of combat soldiers. To accomplish all of its missions, I split the battalion into three parts. Major Rick Kerr, the battalion operations officer, took two tank companies and administered the housing area. His detail was responsible for housing assignment, life support, and security for the entire complex. It was augmented with military police and an infantry company. Major Byers, remained at the port to receive vehicles and prepare them for movement. He also controlled the ever-handy FOO, with his bag man, still in the pursuit of those items not available from the supply system. The advance party at TAA Henry, under Captain Nick

Brunstein, an assistant S3, received deploying soldiers and filled the desert base camp. I sent all soldiers and vehicles forward to the desert laager as quickly as possible, to get acclimated to the desert, to prepare for combat operations, and partly to discourage our permanent assignment as garrison support troops.

The beginning of the air war on 17 January 1991 added more excitement to an already busy existence. Near a primary air base and the port, Al Khobar was in a primary SCUD target area, and alerts began almost immediately. The alerts were initially a cause for great concern by the soldiers, but the actual danger was soon seen as quite small. It was a novelty to have a SCUD alert, watch from the billets as Patriot missiles were launched from nearby air defense batteries, and seconds later see the same picture on the television, relayed by satellite from the United States, with commentary by CNN. The chemical threat dictated that chemical protective gear be donned for each SCUD alert. The wear and damage to the chemical protective suits during an average of three alerts daily sent the chemical officer scurrying to acquire additional replacement suits for future ground operations. The SCUD alerts did serve a useful purpose in tightening the control of the chain of command in the battalion, and demonstrating the absolute necessity for having a reliable notification and personnel accountability scheme. These would be critical points during later operations.

By 28 January over half of the battalion had deployed to the desert and the battalion was released from its troop support mission at Al Khobar Towers. Since all of the battalion's

equipment was not due until 6 February, Major Byers moved the remainder of the battalion to the port to concentrate rear operations in one place and to provide security for the vehicles there.

By this time theft had become a major problem at the port. Military histories often laud the American soldier for his "initiative" in acquiring needed equipment, not necessarily his own, to support the mission. These histories seldom report the effect on the unit which loses the equipment. Theft proved to be a major distractor during deployment from the port. Vehicles were broken into and equipment stolen, and some vehicles were stolen outright. Threats did little to solve the problem, and a constant vehicle guard was required. Unfortunately, the Bandits did their share to support this soldier tradition, despite repeated warnings and chain of command attention. The "frustrated cargo" lot, the home for misrouted equipment, and new, unissued vehicles in storage lots at the port were prime targets for cannibalization and theft. Misappropriation of property was to be a major contributing cause in the relief of the Bravo Company Commander on 28 January.

Relief of a key officer so close to probable combat operations was a difficult decision for me. The Bravo Company commander had only six months in command, all of them rocky. He had received numerous counselings, both formal and informal, from me for serious disagreements with his fellow commanders and junior leaders, questionable ethics, and several failures to follow my orders. Peer contact with fellow company commanders, and the

assistance from the battalion command sergeant major, did not improve the situation. Two incidents in Saudi Arabia finalized my decision to relieve him. In the first, the commander was caught personally taking parts from vehicles in port, a direct violation of my orders. Second, during the movement to TAA Henry, the commander disobeyed orders and left several battalion support elements behind to fend for themselves in the desert, saying "they are not my responsibility." These incidents convinced me that the commander was not a team player or equal to the tasks ahead, and that relief was indicated. With the concurrence of the brigade and division commanders, the Bravo Company commander was relieved for cause and returned to Germany. Six days later Captain Steve Wallace, with previous tank company command experience, transferred from command of Headquarters Company to assume command of Bravo Company. Captain Paul Funk was moved down from the brigade staff to assume command of Headquarters Company.

The ship bearing the last of the battalion's equipment arrived on 6 February. Major Byers, the division leadership, and the port crew did an admirable job in processing, painting, and moving the vehicles to the desert in record time. Some of the tanks were on their way to the desert as little as six hours after being unloaded from the ship, their wet paint left to dry on the trip out. The battalion was finally consolidated into TAA Henry by 8 February, the last battalion in the division to close into the TAA.

With the battalion now concentrated, the final hectic preparations for combat took place. The 3d Brigade received the

last of its attached units and 4-67 Armor became Task Force Bandit. The brigade assumed the final task organization that would carry it through the remainder of its time in the desert. 3d Brigade was structured as shown in Table 2.[3]

Table 2. Organization of 3d Brigade, 3AD

Task Force Spartan	Task Force Duke
5-18 Infantry (-)	2-67 Armor (-)
A/4-67 Armor	C/5-18 Infantry
B/2-67 Armor	C/12 Engr
Task Force Bandit	33 Engr Bn (Prov) (-)
4-67 Armor (-)	2-82 Field Artillery (DS)
A/5-18 Infantry	54 Support Bn (Fwd)
D/12 Engr	Division Support Slice
HHC, 3d Brigade	

Task Force Bandit received attachment of an infantry and an engineer company, assorted combat support elements, and detached Alpha Company to 5-18 Infantry as shown in Table 3.[4] In all, the task force totaled 850 officers and men, and counted soldiers from eight different battalions in its ranks. The robust task force organization was structured to accomplish a wide variety of

Table 3. Organization of Task Force Bandit

4-67 Armor (less A Company)
A/5-18 Infantry
D/12 Engineers
Fire Support Team - 2-82 FA
1/A/5-3 ADA (Vulcan/Stinger)
GSR Section - 533 MI Battalion
Chemical Recon Section - 22 Chem Co
Support Team - 54 Support Bn
USAF Forward Air Control Team

combat missions in the open desert terrain.

The major task remaining for the task force in the TAA prior to combat operations was to complete the necessary training and logistics preparations to bring the unit to full effectiveness. Only nine days were available in TAA Henry to complete all preparations, as movement to the forward assembly area was scheduled for 17 February.

Logistically, the major challenge was to complete the draw of the basic load of ammunition. 1LT Joe Secino and his support platoon spent days at the ammunition supply point at Log Bases Alpha, Charlie, and Echo competing with other units to fill out the basic load for the vehicles and supply trucks. Eventually all of the major ammo types were complete, including ample TOW missiles and 25mm ammunition for the scouts and infantry and M829A1 depleted uranium sabot rounds for the tanks. But shortages were to remain in hand grenades and portable AT weapons for the infantry and the combat support soldiers in the unit trains. These shortages were never filled.

The maintenance posture of the battalion remained high throughout the operation, because the tanks and Bradleys were new and there was a liberal cannibalization policy. The extra parts acquired by the maintenance platoon were key maintenance factors. At Dammam port the M1A1 Fielding Team, in country to issue new M1A1 tanks to some of the other Army and Marine units, was very liberal in their policy of issuing operational parts in exchange for defective ones. All combat vehicles left the port completely operational, and an adequate supply of line replaceable units was

available. The parts supply through normal channels was skimpy, despite the best efforts of the support battalion. Major end items, such as engines and transmissions, were available with some delay, but other parts, such as M1A1 air cleaner filters, were hard to find. Similarly, parts for low density vehicles, such as the combat engineer vehicles and other engineer equipment, were difficult to find. The policy in the division allowed some excess vehicles to be stripped for spare parts, and these vehicles subsequently proved to be the major source for parts to fix deadlined vehicles.

The final logistics challenge was to decide what to carry forward and what to leave behind. Captain Paul Funk, the Headquarters Company Commander, and First Sergeant Tom McGarry spent many hours tailoring vehicle loads and cutting excess equipment, so that the battalion was fully mobile. Other decisions, such as using only one mobile kitchen trailer, and how much spare ammunition and life support equipment to carry, streamlined the battalion down to fighting trim. The task force eventually left two GP Medium storage tents, four vehicles, and six full CONEX containers of equipment in TAA Henry.

The line companies did similar load drills for their combat vehicles. Each vehicle was carefully inspected to ensure that its load did not interfere with the fighting capability of the vehicle. For example, the bustle rack load of an M1A1 tank had to be packed level with the top of the turret, so that the tank commander had all around vision while buttoned up. A loaded M1A1, with all basic issue equipment, a full ammunition load, five days

of rations and water, and crew personal equipment, does not leave any room for non-essential equipment. Soldiers manning the Bradley Infantry Fighting Vehicle, because it carries nine soldiers inside, strapped virtually all of their equipment outside the vehicle, and the soldiers carried very little personal equipment with them.

Because of the late arrival of the Bandits into theater, the training and combat preparation by the task force was more abbreviated than the extensive training program used by other units, both in 3d Armored Division and elsewhere. While at the port, training was limited to individual training, land navigation, and "skull sessions" held for key leaders and at company and platoon level. At Al Khobar, the division and brigade plans were known in rough form and discussions as to how to execute the plan were conducted. The initial availability of five sets of 1:250,000 maps also hampered preparations. The key element of leader training in port was to reinforce the execution of the unit SOPs which were the basis of the battalion's operational scheme. Chalk talks, logistics rehearsals for the support personnel, and "rock drills" using sand table mockups hammered home standard procedures.

The key combat principles I emphasized in training were fire discipline, control, and the use of the full range of weapons available, at the appropriate time. We wanted to engage the Iraqi forces from long range initially, and close with them only after inflicting massive damage. Our simple memory key was "air - artillery - TOW - tank - 25mm - ground close assault," indicating

the manner and sequence in which we wanted our weapons to engage ground forces. Intelligence reports gave us the maximum range of Iraqi direct fire weapons, and we planned to stay out of effective range until the last possible minute. Additionally, the frontal armor of the M1A1s could not be penetrated by the sabot ammunition of the Iraqi 100mm, 115mm, and 125mm tank guns, so I emphasized the use of the tanks up front, protection by positioning for the more vulnerable Bradleys as much as possible, and the desire to fight mounted as much as possible. Task force maneuver tactics, both in training and during combat, emphasized these basic principles.

In the days at TAA Henry no full-scale maneuver above company level was done, due to time constraints and the fear of unrepairable maintenance problems. Limited maneuver training for companies was conducted as they moved from the task force laager to Spearhead Range, 25 kilometers from base camp. At the range all tanks fired a main gun screening exercise and all Bradley 25mm cannons were zeroed. All machineguns and individual weapons were also test fired and carefully zeroed. As a final dress rehearsal, each company was allowed to complete an abbreviated company live fire exercise, practicing coordinated fire and movement over the limited maneuver range available. The crews left the range confident of their ability and the functioning of their weapons.

As 3d Armored Division's attack plan matured Major General Funk conducted plan briefings, leader rehearsals, and two mounted leader rehearsals, called HUMMEX I and II. Leaders down to company commander participated, riding in wheeled vehicles and the

tracked vehicles of the command post (CP). These exercises gave the first indication of the challenges of division level maneuver. Brigades and battalions practiced movement at combat interval and speed, and commanders at all levels learned how to maneuver their units within the larger unit formations. The difficulties of land navigation and formation control were worked out on the ground. As the lead battalion in the brigade formation, Task Force Bandit set the pace and direction for all of the units in the brigade. Learning to synchronize and pace a change of direction so that all other battalions would stay in contact was a challenge for the Bravo Team commander, the lead team, and myself. It was mastered only with a great amount of practice. The brigade also rehearsed several "plays" in which it would maneuver in response to division orders in differing tactical situations.[5] Colonel Goff emphasized that desert maneuver in the upcoming combat operation would be brigade level maneuver, and that little independent battalion maneuver would be possible because of sector width and terrain restrictions on formation size. Quickly and accurately maneuvering one brigade to support the flank of another brigade, regardless of weather and blowing sand, was a complex operation which required close coordination, a feel for the size of the units involved, and excellent land navigation devices.

The task force completed its tactical preparation using the lessons of the HUMMEX and the brigade plan. I designated the standard "task force diamond" as the primary maneuver formation during combat operations. This SOP formation, shown in Figure 1

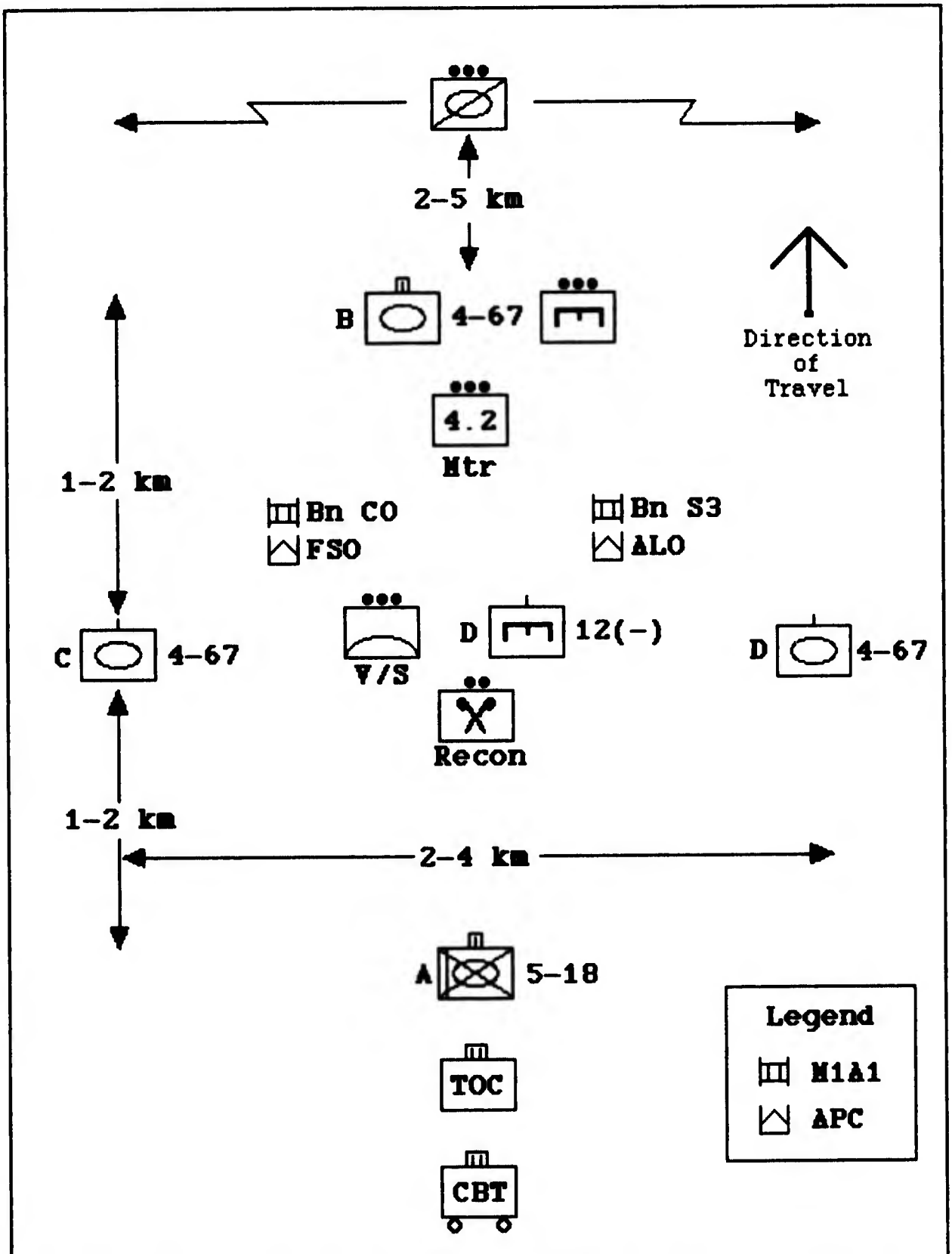


Figure 1. Task Force Diamond Formation (Not to Scale)

and used many times in Germany,[6] provided the task force with maximum maneuver flexibility and directional firepower.

The diamond formation gave the task force the ability to provide a base of fire, maneuver and mass fires in any direction, and breach obstacles without unnecessary exposure to enemy fire. In the open desert, with unknown enemy locations and strength, it was the optimum combat formation.

With all of the elements of the brigade plan known, the final training involved rehearsal of the proposed plan for task force elements and training on newly issued land navigation devices. Walk-through rehearsals were conducted for possible tactical situations and the SOPs were reviewed again. Logistics operations, such as the "hot refuel," or refuel on the move, were practiced. Companies and platoons held rehearsals in their company areas.

The issue of land navigation devices was finalized in the TAA. A few devices had been available previously, but at last both LORAN and GPS devices were available in adequate quantity. These devices revolutionized the ability to navigate in the desert. Previously, finding the blacked-out brigade command post, five miles away, in the dark could take two or more hours. Now, coupled with recently issued PVS-7 night vision goggles, it was a 20-minute task. The LORAN and GPS devices used different technology, employing either ground radio stations or satellite transmitters. Each system had its strengths and weaknesses, but together they complemented each other and were indispensable to movement in the desert. Training was required to use them

properly, and they were fragile devices that had to be handled with care. The final distribution of navigation devices within the task force is shown in the following table.

Table 4. Use of Navigation Devices in TF 4-67

Command Group	2
Line Companies	3
FIST Teams	5
Mortar Platoon	2
Scout Platoon	3
Engineer Company	5
ADA Platoon	1
Headquarters Company	7
Total	28

This scheme provided precise navigational capability in the flat desert environment to each of the critical elements, combat, combat support, and combat service support, of the task force.

By 16 February all training and combat preparations were complete, and 3d Armored Division began its move northwest to forward assembly areas (FAA) as part of the VII Corps operational move to jump off areas for the ground war. Vehicles were combat loaded and final checks made, unnecessary equipment was stockpiled and left behind, and the task force advance party moved forward to recon and establish the new laager in FAA Butts. The last movement before the start of ground war had begun.

The 3d Brigade began its movement early on 17 February, the last of the 3d Armored Division's maneuver brigades to begin movement to the FAA. The move had to be closely coordinated to avoid conflicts with the movement tables and routes of the other brigades and divisions of the corps. Because the brigade had

never conducted maneuver with all of its vehicles in their tactical formations Colonel Goff used the 120-kilometer march from TAA Henry to FAA Butts as a final brigade training exercise and a combat rehearsal. Task Force Bandit headed the brigade formation, and the movement was an excellent shakeout of all systems. The brigade used its combat formation, a brigade wedge, during the movement, which took almost two days to complete.

During the move to FAA Butts several important changes were made to the brigade standard formation as a result of the movement training. The brigade formation was altered to move 2-82 Field Artillery, the brigade's direct support artillery battalion, closer to the lead elements of the brigade. This simplified indirect fire support and allowed greater coverage forward of the brigade elements. The final brigade formation, as used in combat, is shown in Figure 2. The brigade also practiced a defile drill for use in constricted areas. The defile drill allowed the battalions to rapidly collapse their formations from wide combat spacings down to multiple columns. By moving in four to ten column formations the battalions could easily transit the lanes in minefields and other breached obstacles, and then spread back to dispersed combat formations. This change in formation was used numerous times and the early practice with it eliminated confusion and increased speed of execution.

Finally, the brigade arrived at, by experimentation, 20 kilometers per hour (kph) as its best cross-country combat speed. Although the tanks, Bradleys, and APCs could travel much faster, over 50 kilometers per hour cross country, any speed faster than

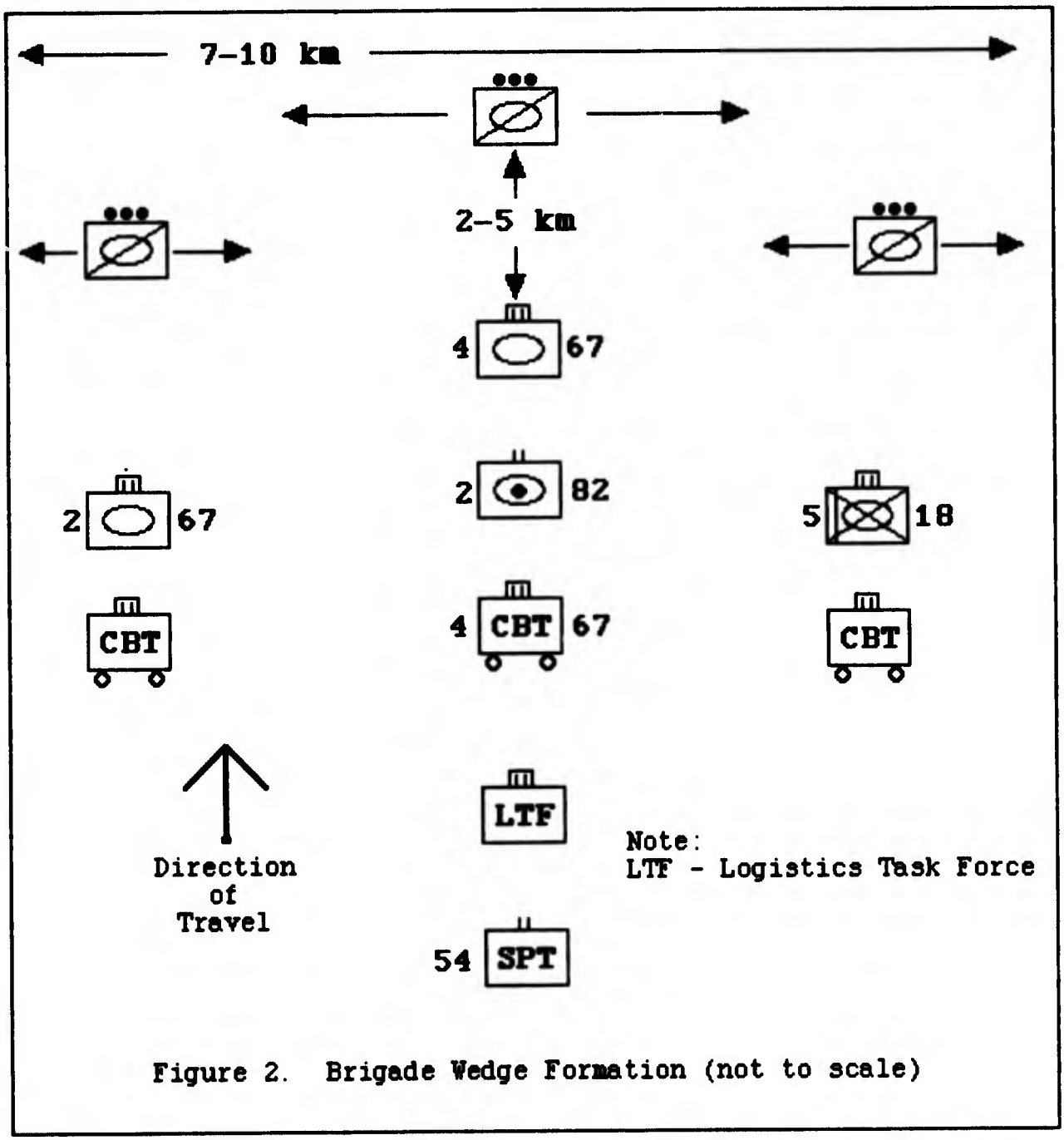


Figure 2. Brigade Wedge Formation (not to scale)

20 kph left the engineer vehicles, Vulcan ADA guns, command post vehicles, and the resupply vehicles behind. In order to move as a coordinated group the vehicle speed was set and not increased unless combat required it.

The task force reached FAA Butts, with the rest of the brigade task force, on the afternoon of 18 February. The march

had been made without incidents or major maintenance problems. Upon arrival, the task force met the advance party and laagered in its combat formation, with line companies and the combat trains at the forward edge of the brigade area and the field trains linked with the logistical task force from 54th Support Battalion, the brigade's forward support battalion.

With the laager established the task force settled in to perform maintenance and conduct more sand table rehearsals for the upcoming ground war. To maintain operational security and peak capability no training with vehicles was done. Colonel Goff made final updates to the brigade's plan and held a final detailed rehearsal for all commanders. Held on a large scale mockup by the brigade command post, the rehearsal detailed the exact actions for the brigade up to Objective Collins. Sub-unit missions were rehearsed, and all leaders were given a chance to review the plan and demonstrate their understanding of specific tasks. The final task force order mirrored the brigade plan, and individual company and platoon rehearsal continued.

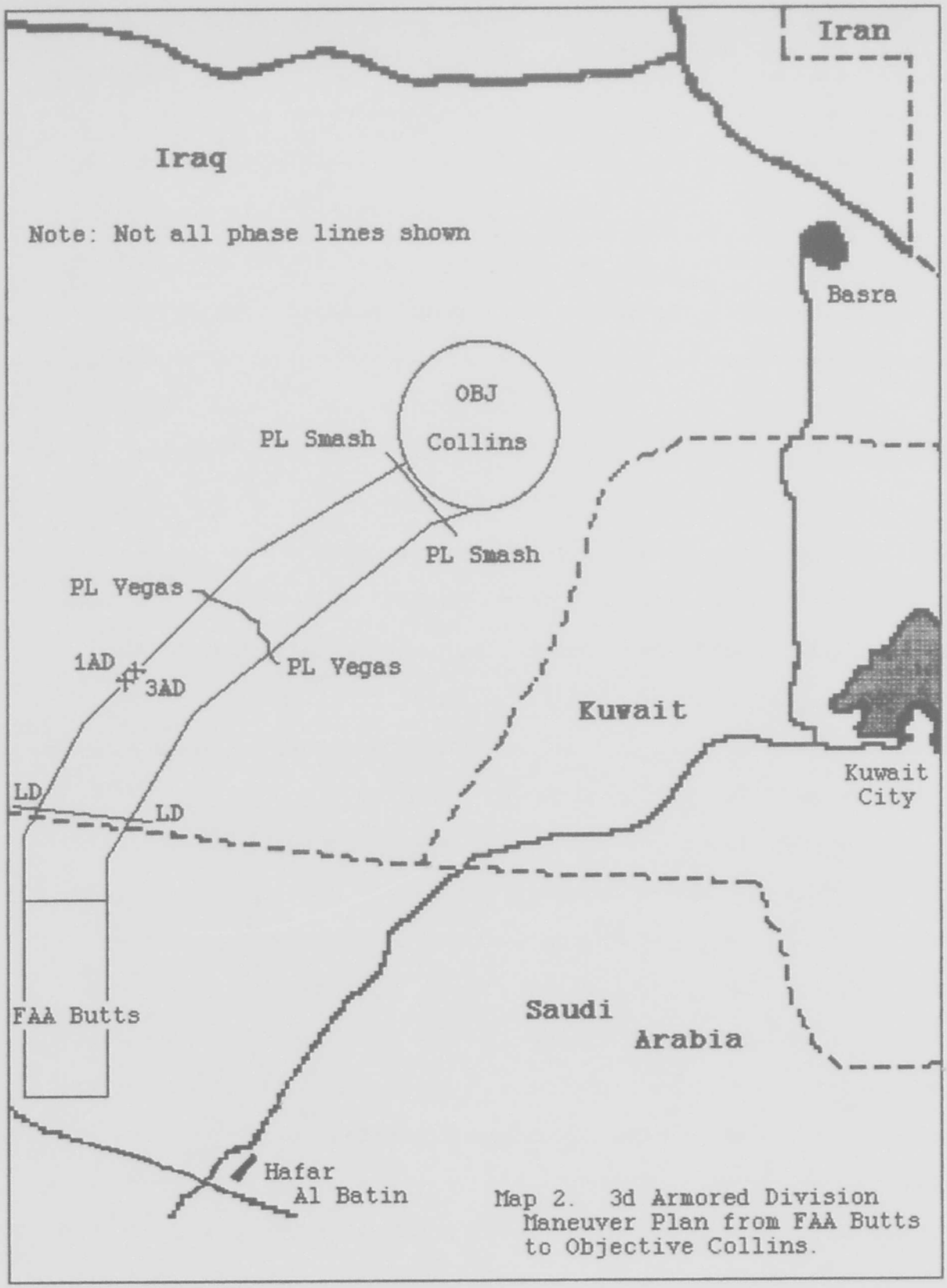
The task force had two discipline problems while in FAA Butts, both probably due to the rising tension from upcoming operations. In one, a soldier drew his weapon and accidentally discharged a round while in an altercation with his sergeant over an upcoming guard shift. The soldier was placed in pre-trial confinement and eventually discharged from the Army. In the second instance, a sergeant lost his personal weapon after leaving it unsecured in a latrine. Despite an intense search and much

questioning the weapon was never found. The circumstances surrounding its disappearance were never fully explained.

The ever-present AT&T satellite phones gave soldiers a chance for a last call home and final supplies were drawn from Log Base Echo. While in the FAA, the on-again, off-again diplomatic maneuvering by the Soviets to avoid a ground war confused soldiers and leaders alike, putting everyone through an emotional roller coaster, thinking alternately about the possibility of peace and the imminence of ground combat. In the end, the best solution was to turn off the radio and not listen. It was best to just wait for the final decision. On 23 February Colonel Goff gave all units their final instructions, and an air of calm preparation took over. It was so calm in the task force area that James Wooten, a correspondent from ABC News who was interviewing units in the area, remarked to me that "the ground war must not be very close because there is so little activity going on around here."

COMBAT OPERATIONS (24 FEBRUARY - 1 MARCH 1991)

The distant rumble of artillery and the visible arc of MLRS rockets on the horizon erased all doubt that the ground war had started early in the morning of 24 February. According to the ground plan, 3d Armored Division was not scheduled to move until the morning of G+1, 25 February. At that time the division, operating as a part of VII Corps, would advance, on line with 1st Armored Division, behind an offensive cover provided by the 2d Armored Cavalry Regiment (see Map 2). The corps would move on a



Map 2. 3d Armored Division Maneuver Plan from FAA Butts to Objective Collins.

dogleg axis north and then northeast, until it reached Objective Collins. At Objective Collins the corps would then undertake operations aimed at the destruction of the three heavy divisions of the Iraqi Republican Guards Forces Command (RGFC) located to the east of Objective Collins.[7] The operational scheme for the engagement and defeat of the Republican Guards was intentionally vague, and several contingencies were planned to counter the Guards' movements, engage them, and complete their destruction. The brigade plan was a straight-forward subset of the division and corps plan. The 3d Brigade was to move as division reserve, third in line as the division moved in a column of brigades. After crossing the line of departure the division would continue to move in sector. As the division neared the probable contact the two lead brigades would then move on line and pass through the 2d Armored Cavalry in the vicinity of Phase Line Smash. The 3d Brigade would continue in reserve and be prepared to pass through either brigade and be committed as required.

At about 1000 hours on 24 February 3d Brigade was notified by Division that because of success across the coalition front, and with the rapid movement of the 2d Armored Cavalry across the Iraqi border, the VII Corps would move early, and that the 3d Brigade would move at 1500 hours instead of the next day. At that point the task force went "on automatic." No one had to be told what to do, and there was no time for the micro-managing that occurs in peacetime exercises. The oft-rehearsed plans and SOPs took over and all units executed on command. Because of the prior practice

all combat and tactical vehicles were loaded and ready to move within 90 minutes of notification.

As it moved from FAA Butts 3d Armored Division was composed of over 7,000 vehicles and, in tactical formation, was almost 100 kilometers long and 15 kilometers wide. Since the brigade had laagered in its combat formation six days earlier, it was simple to start north with the battalions in a wedge formation at 1500 hours. Although somewhat hampered by the bad weather and dust, standard movement techniques and the absence of opposition south of the border made the movement routine. The move on the first day covered about 50 kilometers in three hours and ended with a confused dance across the border, the division's line of departure, and then back south again.

The task force started and stopped a number of times as it maintained the brigade interval five kilometers behind the 1st Brigade. At dusk, a defile drill was used to pass the task force across the Iraq-Saudi Arabia border, using four lanes made by the engineers in the defensive berm. However, in crossing, the task force passed the logistics trains of 1st Brigade and vehicles of the 533d MI Battalion, causing Delta Company to become cut off from the task force and creating a confusing situation. The entire task force was recalled, and it moved to a laager two kilometers south of the border berm for resupply and rest during the night.

On 25 February the march north resumed as Task Force Bandit crossed the border berm into Iraq at first light. The march continued through the morning in bad weather and in fits and

starts as the struggle to maintain interval in the division formation continued. At 1030 hours Charlie Company picked up the first prisoner, a rather forlorn Iraqi soldier who had evidently deserted or had been left by his unit. He was turned over to the MPs for processing as movement continued. In the late morning, a one-hour maintenance and refueling halt was called for the entire division. This set into motion a well choreographed drill in which fuel tankers were brought forward to refuel all the vehicles. Air filters for all the vehicles were cleaned of the fine desert dust. Boresight checks and weapons cleaning were also completed in a stable temperature environment. Past rehearsals paid off as the stop was completed without incident and the fuel vehicles returned to the combat trains for refilling.

After the halt, Major General Funk executed a pre-planned maneuver which moved the division into a different formation, because the unwieldly length of the division column made it difficult to mass it for combat. In the new formation 2d Brigade led in the center, and 3d and 1st Brigades were on the left and right wings respectively. The formation change immediately increased the movement rate for the brigade and there were no more slowdowns or halts for other units.

Moving the brigade out of the division column uncovered its front to possible enemy action, even with the 2d Armored Cavalry screening far to the front, and the company commanders immediately requested my permission to load all of their vehicle weapons. While in the division column ammunition belts had been loaded across the feed trays of the machineguns, but no rounds were

chambered in the weapons. Because there had still been no enemy contact close to the brigade sector, I elected to continue this policy. An accidental discharge seemed more of a danger than enemy action. In their semi-ready state the tank main guns and machineguns could be fully loaded within five to ten seconds, a safe time given the almost unlimited visibility in the desert. This was not a popular decision, but a correct one in that a soldier in a neighboring battalion was hit that day during a fueling halt by the accidental discharge from a loader's machinegun.

In the early afternoon the scout platoon reported a large number of Iraqi soldiers directly to the front. Their intent was unknown, but they were grouped in a mass, not in a tactical formation. I deployed the mortar platoon and a fire mission was prepared. I moved the advance guard, Bravo Team, forward to reinforce the scout platoon. Sensing a non-hostile situation Captain Wallace closed on the Iraqi mass and fired a warning burst from his coax machinegun. Immediately, white surrender flags began frantically waving and Captain Wallace was confronted by an angry female MP officer and her military police detachment. Stranded in the desert, they had been guarding a group of 269 Iraqi prisoners. The incident, however humorous, served to raise the confidence of the task force, now veterans of their first contact with a "hostile" force.

As the task force neared Phase Line Vegas the scout platoon executed a pre-planned reconnaissance by fire on a small village on the left flank of the brigade sector. Air reconnaissance

photographs had indicated a possible enemy position. According to the brigade plan Task Force Bandit would recon by fire and, if there was no resistance, bypass the village and keep moving. Task Force Duke, TF 2-67 Armor, would then clear the village. As there was no reply to a few dozen 25mm cannon rounds fired by the scout platoon, the task force bypassed the village. An hour later TF Duke cleared the village and areas beyond and captured over 120 demoralized Iraqi soldiers.

At dark the task force continued to move, now into rain, blowing sand, and cloud cover that reduced visibility to less than 50 meters. The move was complicated by the loss of satellite and LORAN coverage from 1800-1930 hours, the GPS and LORAN position-locating devices were useless. The task force tightened up the formation and used compasses and a lone inertial navigation device in a Fuchs chemical recon vehicle as guides and continued to move in sector. A halt was called to movement at 2030 hours, and the next few hours were spent collecting vehicles, refueling, and repairing weather damage to the equipment.

Night halts followed a preset routine in the absence of contact. The task force laagered in three groups for security: a perimeter which contained the combat elements and command post, the combat trains laagered with the logistics task force, and the field trains remained with 54th Support Battalion. The combat trains sent forward fuel and ammunition trucks to resupply the line companies. Hot food and coffee were normally not available from the rear, but the tank exhausts were used by the crews to heat their rations. The task force command post set up one canvas

extension and established a hasty headquarters for planning, meetings, and night communications. The S3 completed reports and orders, while the executive officer ensured vehicles were operational and directed maintenance efforts, if needed. The night ended with a quick meeting with the commanders, who updated me on unit status reports and highlighted problems.

Fifty percent alert for security and four hours of sleep nightly for all personnel was the norm during the move through the desert. Stand-to was conducted for all personnel at 0430 hours, and at that time the task force was ready to move. A brief morning meeting was held at the CP, if possible, and last minute changes to orders were published. Often, this meeting was canceled because of time limitations.

On 25 February the task force had advanced another 85 kilometers. By this time the division closed to within 35 kilometers of Objective Collins, still without meaningful contact, but all personnel knew from intelligence reports over the brigade net that the next day would bring enemy contact. The advance was resumed at first light on 26 February, amid reports of enemy movement and contact forward of the brigade. The morning advance continued without incident through the mid-day maintenance halt. Vehicle availability continued to be surprisingly high, with only two minor tank problems. The older vehicles, M113-type armored personnel carriers and engineer vehicles, had more trouble, but their availability remained at over 97 per cent. M88 tank retrievers had the most trouble. The age of the M88 fleet and the

slogging through the soft sand caused many problems, including a fire on one vehicle that required it to be abandoned.

After the maintenance halt, the division, now in the southern part of Objective Collins, was ordered to make a 60 degree turn to the right, in formation. The 2d Armored Cavalry executed a movement to the southeast which cleared the division's front and the two heavy maneuver brigades of the 3d Armored Division took the lead. This movement headed the division east toward enemy contact, and eventually led to the division's contact with the Tawakalna Division of the Republican Guards and several other armored and infantry divisions.

Although practiced before, the frag order process used to change the division axis of advance illustrates the difficulty of combat maneuver on the billiard table desert surface. Since maps were of no practical use, all navigation was done using "waypoints," military grid coordinates or latitude-longitude references for use with the navigation devices which guided the unit's advance across the desert. The 3d Brigade was given an axis of waypoints by division headquarters for its advance, and a set of sector boundary waypoints to define the width of the brigade sector. The brigade S3 then subdivided the brigade sector into battalion waypoint sets for each of the battalions to follow. In this way each unit had an axis of advance which kept it in formation and provided a clear course in the event of bad weather. The brigade S3, Major Larry Schultz, had to do a precise translation of the waypoints, since the sector was very narrow. Once the task force received the coordinates of the waypoints,

they were converted into the proper format for use on either a LORAN or GPS receiver, as each used different formats, and transmitted downward.

Transmission of the frag order and dissemination down to company level took about one hour to accomplish, and the process was repeated several times over the next days. However, once the waypoints were received, land navigation became a simple matter of moving from waypoint to waypoint without the need to refer to a map. The GPS receivers, with their built-in capability to use the military grid reference system, were also useful in establishing target reference points for the call of indirect fire.

Almost immediately after the shift in the division axis of advance reports were received of enemy contact to the east and south in the 2d Armored Cavalry and 1st Brigade sectors. As the move east continued contact increased, with now the 2d Armored Cavalry and both 1st and 2d Brigades of the division in contact. The late afternoon twilight and early evening darkness of 26 February brought visible signs of very heavy contact, with gun flashes, secondary explosions from burning vehicles, heavy artillery fires, and the arching rockets from MLRS launchers clearly visible forward of the task force. The bad weather of the early afternoon broke intermittently, but the cloud cover provided an eerie backdrop for the flashes of battle.

As the division reserve, and still not in contact, the task force and 3d Brigade had a clear view of the ongoing action. Just before dark the brigade was given a warning order for commitment into combat. The brigade was ordered to prepare to conduct a

night forward passage of lines through the 2d Brigade to assume the battle and continue east. Evidently, the 2d Brigade, which was the lead brigade in the division, had units running dangerously low on fuel.

The warning order induced a flurry of activity. Weapons were checked and final preparations made. Since it was to be a night passage of lines directly into combat, a very difficult operation, I directed that all unnecessary vehicles were to be stripped from the combat formation. Excess engineer vehicles, the air defense platoon, and the mortar platoon were moved out of the combat diamond and placed with the command post behind the reserve company. In this way there would only be "killer" vehicles, infantry, and essential engineers forward in the combat formation, easing command and control in the darkness and lessening the possibility of fratricide.

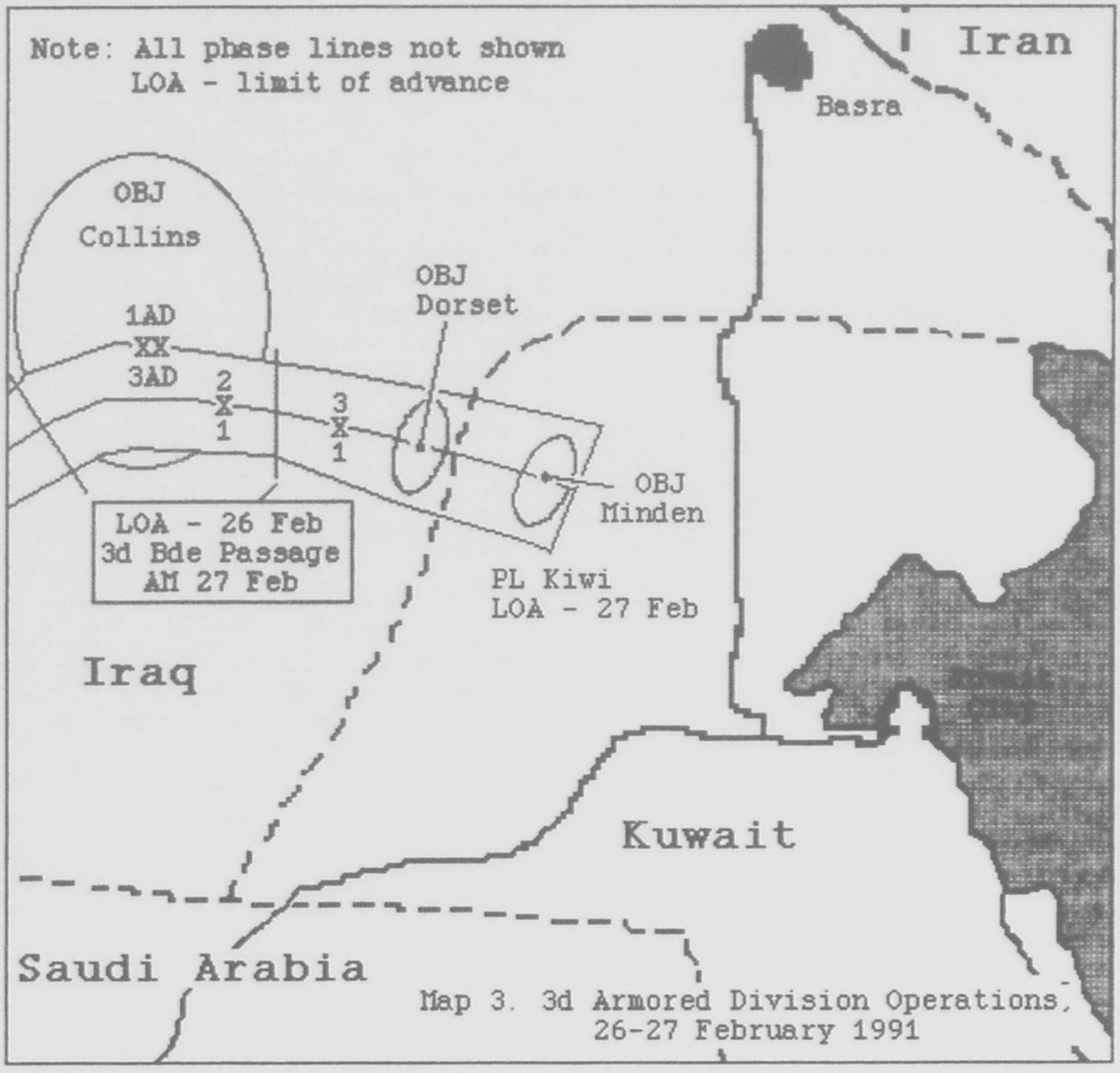
The 3d Brigade's forward passage mission was postponed at 2000 hours, as 2d Brigade had successfully resupplied and was continuing its fight. The passage into the fight would take place in the morning. The task force continued to monitor the heavy contact across the division front most of the night, and heavy firing was also seen to the north in the 1st Armored Division sector. I directed the task force to remain at 50 percent alert and use a thermal watch in its night combat laager. Most personnel got a nervous few hours of sleep. Numerous vehicle sightings were made through the thermal sights, all were confirmed as friendly, and the possibility of fratricide was eliminated as each incident of vehicle movement outside the perimeter was

investigated thoroughly, without any accidental engagement of friendly vehicles. The 3d Brigade moved approximately 60 kilometers on 26 February.

To facilitate the brigade passage of lines through 2d Brigade in the morning, Colonel Goff modified the brigade formation during the night. Task Force 5-5 Cavalry, an infantry task force previously assigned a division rear security mission, was attached to 3d Brigade on early 27 February to add more combat power. Additionally, 3-20 Field Artillery was given a reinforcing mission to 2-82 Field Artillery, adding a second battalion to the brigade's immediate artillery support. To maximize both maneuver space and the amount of armor forward with such a large force Colonel Goff elected to use a brigade box formation, with the two armor task forces leading, two infantry task forces trailing, and the artillery battalions in the center of the formation. The battalions moved into this formation during the night.

Orders, waypoints, and graphics for the operation were distributed by brigade in the early hours of 27 February. The 3d Brigade mission was to pass through the 2d Brigade, attack on line with the 1st Brigade on its right, and continue the attack through two objectives, Dorset and Minden, to a limit of advance about 50 kilometers to the east (see Map 3). The brigade was to destroy all forces in zone.

I issued an oral order at the task force command post at 0430 hours. Because of the proximity to execution time there was no time for extensive meetings or rehearsals. Company commanders received my commander's intent, the scheme of maneuver, waypoints



Map 3. 3d Armored Division Operations, 26-27 February 1991

for the navigation devices, and fire support information. Execution by task force SOP was the only way to accomplish the mission with minimum confusion. By first light the task force was prepared to execute its mission.

To the east, on the front line with 2d Brigade, the fighting had died down during the night. Colonel Goff had collocated his combat vehicle with that of Colonel Bob Higgins, the 2d Brigade commander, and was making final coordination for lanes, guides,

and fire support during the passage. Just after daylight, as a result of his coordination with Colonel Higgins and seeing the situation up close, Colonel Goff changed the brigade formation to mass more combat power forward during the attack. He elected to use the brigade wedge formation with three task forces (TF 5-18, TF 2-67, TF 4-67) in the wedge and TF 5-5 Cavalry in reserve. Because of the previous positioning of the task forces, TF 5-18 was brought up onto the left flank of the brigade, while TF 2-67 headed the wedge. TF 4-67 occupied the right flank position, out of its accustomed position at the head of the brigade (see Figure 3). The new frag order and waypoints to support the new brigade formation were complete and distributed by 0630 hours.

The task force moved to attack positions to the rear of the 2d Brigade and was in position by 0830 hours. The scout platoon, less one section, then moved forward to meet 2d Brigade guides at the entrance to the passage lanes. The remaining scout section was given a mission to maintain contact with TF 4-32 Armor, the left flank task force of 1st Brigade. Shortly after 0900 hours all coordination had been completed throughout the brigade.

Heavy contact in the 1st Brigade sector delayed the coordinated attack by 1st and 3d Brigades, but forward passage began shortly after 1000 hours. Again, the defile drill was used to squeeze the task force into four passage lanes through the 2d Brigade sector and the passage was accomplished with nervous anticipation, but without incident. As the task force moved forward of the 2d Brigade's positions it fanned into its diamond-shaped combat formation and began to encounter large numbers of

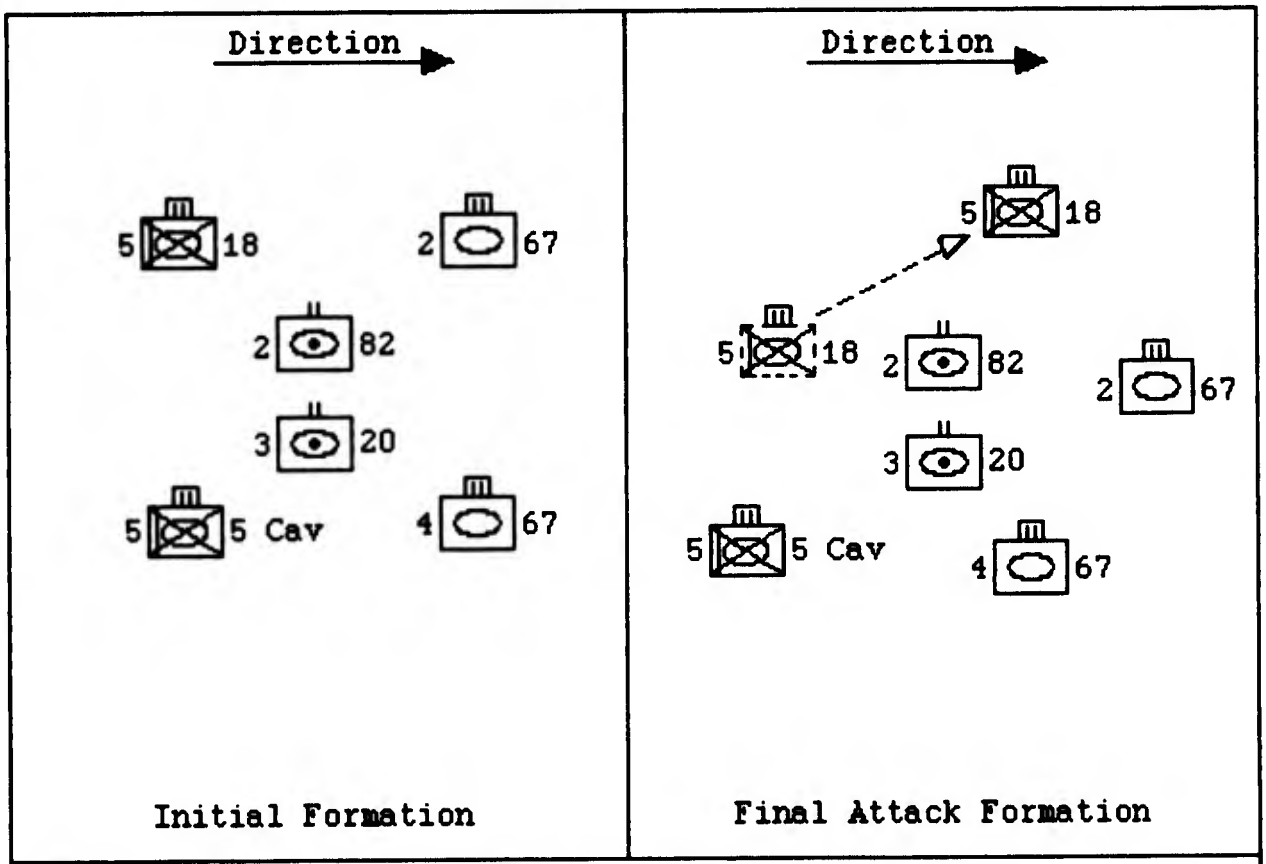


Figure 3. Formation for 3d Brigade Attack on 27 February

blackened and burning tanks and BMPs, remnants of the 2d Brigade's night battle. Most of the armored vehicles were catastrophically destroyed, as tank fire and TOW and Hellfire missiles had exploded the vehicles and blown the turrets off. Several of the tanks had been destroyed behind sand defensive berms, where the M1A1's 120mm depleted uranium sabot round pierced both the banked sand and the vehicle behind it.

The 3d Brigade made enemy contact less than 5000 meters after crossing the line of departure as the scout platoon from TF 2-67 destroyed three enemy tanks maneuvering to the front of the task force. I halted the formation and the task force secured the brigade right flank while TF 2-67 destroyed numerous enemy

vehicles and neutralized an enemy bunker complex with massed fires from the two artillery battalions supporting the brigade. The task force front was quiet, so I directed the tanks to shut down their engines to conserve fuel and maintain surveillance to the front. It was while TF 2-67 Armor engaged the bunker complex that the brigade suffered its only battle death. Ironically, the casualty was a soldier in the brigade logistics task force, at the rear of the combat formation. The soldier picked up a dud munition or enemy mine and was killed when it exploded.

After 40 minutes of contact, the brigade again moved east. Almost immediately Lieutenant Scott Kendrick, the scout platoon leader screening forward of the task force, reported enemy bunkers and vehicles. These positions were undoubtedly a southern extension of the bunker line just cleared by TF 2-67. I ordered Captain Steve Wallace to bring the two tank platoons of his Bravo Team, the advance guard, on line with the scouts and they began to engage numerous dug-in enemy vehicles, at ranges from 400 to 2600 meters. The task force received ineffective return small arms fire and scattered artillery, none of which impacted within the task force combat formation. Captain Rob King, the Delta Company commander on the right flank of the diamond, reported contact to his front, so I ordered him to move his team forward in echelon, to engage both to the front and to the right flank of the task force. The engagement was hot for about 15 minutes, as the task force destroyed about 35 armored vehicles, mostly T55 and T62 tanks and BMPs, and numerous trucks and support vehicles. The tank fire was extremely effective, causing mushrooming explosions

and large fireballs with every vehicle hit. The extreme vulnerability of the Iraqi vehicles and the ballistic overmatch of the US tank rounds was demonstrated with almost every round fired.

The company commanders did a superb job of controlling the distribution of their fires during the engagement. Since the SOP defined unit sectors of fire in the diamond formation, minimum task force level control of fires was needed. Company commanders directed platoons to engage groups of targets and cross-talked between themselves on the task force radio net to distribute, coordinate, and limit fires. My main function was that of overseer, observing the action, receiving reports, and orienting fires onto uncovered sectors. I was concerned about fratricide with the high volume of fire, so the command group, Major Kerr and I, stayed forward to be able to see the battlefield.

As the firing lessened Captain Joe Giunta, the Charlie Company commander on the task force left flank, reported numerous tanks passing diagonally across his front at a range of over 2000 meters. He quickly brought his company on line with Team Bravo and prepared to engage the tanks with the massed fires of his entire company. Before engaging, I directed him to make a final identification check on the moving vehicles. By switching to the daylight channel of his tank fire control system he was able to identify the characteristic square turret of an M1A1 tank, not previously visible in the blob-like image of the thermal sight. He immediately called a check fire on his company and for the entire battalion. He had narrowly avoided engaging the right flank company of TF 2-67, which had become misoriented in its

movement and strayed into the task force sector. His experience prompted an urgent radio call to all neighboring units to warn of the danger. After that, daylight sights were used to verify enemy targets prior to engagement. The task force had a close call, saved by the cool thinking of a company commander.

When all resistance ceased, the task force again moved east. Shortly after beginning movement Captain King received an excited radio call from his company trains. First Sergeant Larry Pollard reported that the combat trains were under fire from a mechanized force on the right flank of the battalion. I ordered Delta Company to eliminate the threat. Captain King detached his executive officer, Lieutenant Tom Skinner, and his 3d Platoon to cut back to the rear of the task force formation to assist the company trains.

The platoon moved about 1500 meters to the rear and encountered BMPs and trucks with machineguns attempting to destroy vehicles in the task force rear. The platoon located all of the enemy vehicles and began to engage them with main gun and .50 caliber machineguns. The platoon destroyed three combat vehicles with tank fire at a range of 800 meters. The secondary explosions resulting from two simultaneous tank gun hits caused one BMP to explode and sent its turret flying forty feet into the air.

As the task force continued to move east it quickly became apparent that resistance was very disorganized and that the enemy had abandoned a large number of vehicles on the battlefield. Recognizing this, Colonel Goff directed that the brigade initiate a pursuit in an attempt to regain contact with the main enemy

force. This order had two major effects on task force operations. First, I ordered the companies to stop unnecessary engagement of abandoned vehicles. The task force was to engage only those vehicles which posed an actual threat, and to stop killing every armored vehicle encountered. This order was intended to save time and the task force basic load of highly effective sabot rounds and TOW missiles for the live enemy ahead. Second, I brought the scout vehicles which normally screened ahead of the task force by 2000-5000 meters back into the task force diamond formation. Our speed of movement prevented effective reconnaissance techniques, and there was no reason to expose the scout vehicles to the needless risk caused by high speed maneuver. Tank thermal sights, which were identifying enemy vehicle signatures at ranges in excess of 5000 meters, provided the early warning for the task force for the remainder of the operation.

Thus configured, the task force moved east at 20 kilometers per hour, pursuing the Iraqi forces which had opposed the 3d Armored Division. In the next two hours the task force breached two more enemy brigade-sized defensive positions, employing identical tactics to reduce each one. Iraqi vehicles were initially identified in their defensive positions using tank thermal sights, always out of effective Iraqi direct fire range. I then moved the task force to within 2500 meters of the enemy positions, still out of Iraqi tank range, but within the range of the M1A1's 120mm gun. Concentrated tank fire was then used to destroy all visible enemy tanks. As there was no effective return fire from either position, the task force then assaulted through

the enemy position, detached the reserve infantry team, Alpha Team from 5-18 Infantry, to sweep the bunkers, and continued to move east.

After breaching the second Iraqi defensive line the task force had a second brush with potential fratricide, this time as a target. I received a call from Colonel Goff reporting that TF 3-5 Cavalry, a 1st Brigade unit now on the brigade's right flank, was preparing to engage an enemy column moving east. Cross-talk on the command radio net between Colonel Goff and Colonel Bill Nash, the 1st Brigade Commander, established that TF 3-5 was targeting TF 4-67 Armor. TF 4-67 was traveling very close to the brigade southern boundary and had been identified as an enemy force by 1st Brigade. Effective command and control by the two brigade commanders shut down the planned fires and prevented a serious incident.

Task Force 4-67 Armor encountered the last Iraqi defensive line just before 1700 hours, immediately after the task force crossed the border into Kuwait. The first volley from Team Bravo's tanks caused the entire defending tank company, about 40 Iraqi soldiers, to stand and surrender. Captain Rich Ward's Alpha Team moved forward, disarmed the prisoners, destroyed what equipment they could, and turned the prisoners over to the MPs. The task force then continued to move to the east in the twilight.

By complete darkness the brigade was well inside Kuwait and about ten kilometers short of its limit of advance. With the overcast and the smoke from the oil well fires the night was very dark, and I closed the task force into three columns to speed

movement, still lead by Bravo Team in its wedge formation. Showing no lights, the task force continued to move rapidly east, destroying an occasional vehicle, but meeting no effective resistance.

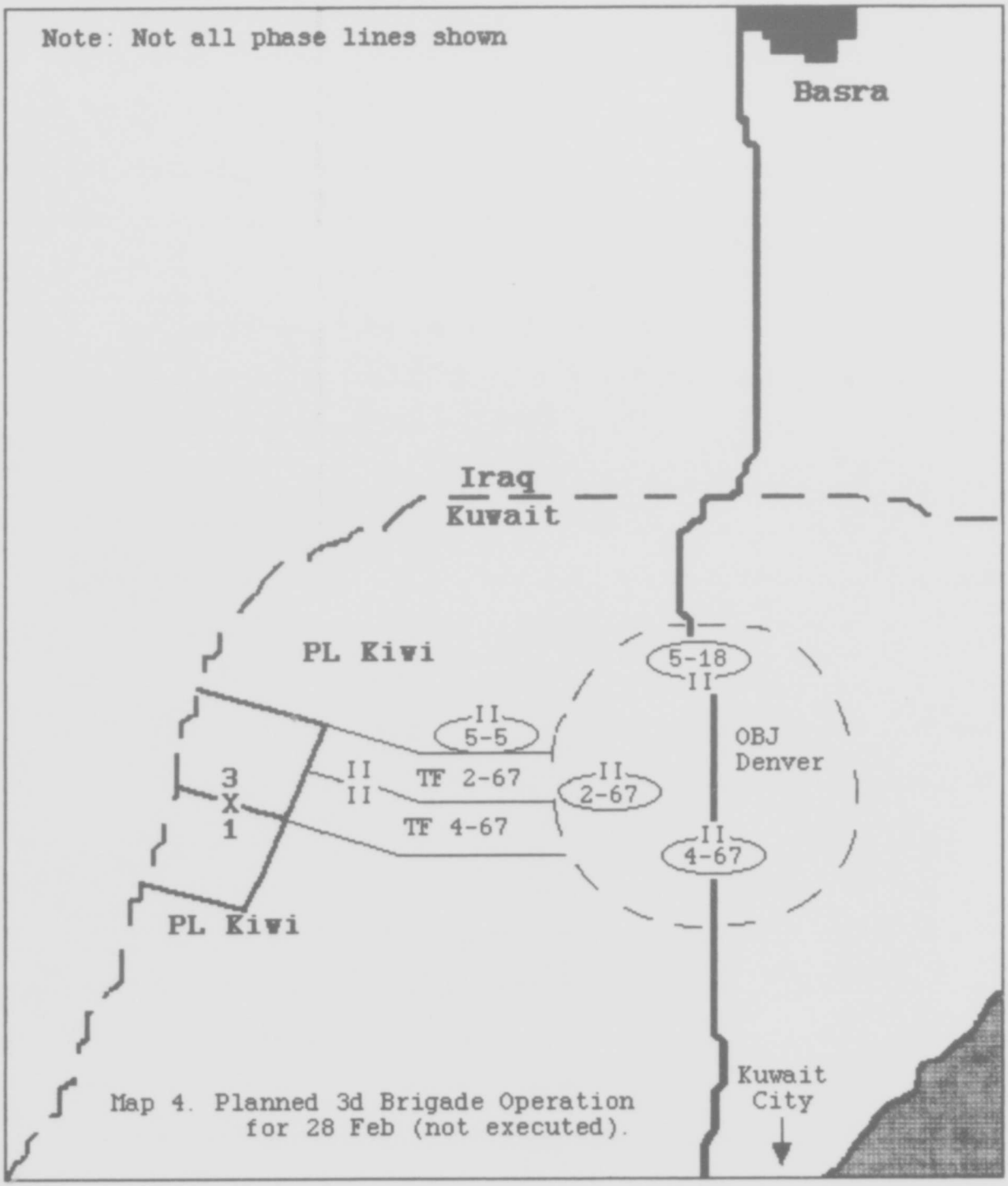
By 1900 hours the brigade swept through the northern part of Objective Minden and had reached Phase Line Kiwi, its limit of advance. Third Brigade at this time was the tip of the VII Corps thrust. The brigade was in Kuwait, about 20 kilometers in front of the other brigades from 1st and 3d Armored Divisions, and some 30 kilometers west of the main north-south road from Basra to Kuwait City. The brigade was ordered to halt its eastward movement, lest it become engaged out of supporting distance of the other division units. TF 2-67 Armor destroyed three Iraqi tanks near the limit of advance as the brigade halted for rest and resupply. In consolidating the task force perimeter Delta Company discovered a prowling tank and a BMP, which I ordered destroyed, and Bravo Team collected 13 hapless Iraqi prisoners, the last real contact of the day. The task force advanced 55 kilometers since passing through 2d Brigade earlier in the day.

An alert task force refueled, rearmed, and got a little sleep the night of 27 February. Ammunition status was excellent. Only 77 rounds were needed to destroy over 50 Iraqi tanks and BMPs, and these were quickly replaced by supplies from the combat trains. All vehicles were refueled for next day operations, but the task force overall fuel status was becoming a serious problem. After topping off all vehicles, only 8,000 gallons of diesel fuel remained for the task force out of the 50,000 gallon supply

initially carried by task force fuel tankers. This was barely enough fuel for one more day, and for the tanks only. The more pressing question concerned the location of enemy forces. Bad weather had limited visibility and the situation to the east was uncertain. The Iraqis were defeated, but the brigade clearly had not caught any effective forces. Where were they? Would they be found in the morning? One more day might be enough.

After midnight the orders for operations on 28 February were received. Reverting to the brigade box formation, with TF 2-67 Armor in the north and TF 4-67 Armor in the south, the brigade was to attack east to secure Objective Denver, 30 kilometers east and astride the road from Basra to Kuwait City. Upon securing the objective TF 4-67 was to establish a task force battle position astride the highway and facing south. The other task forces were given similar battle positions which effectively severed the road and eliminated all north-bound traffic on the highway (see Map 4).[8]

The task force order was issued by 0500 and by 0530 all units reported ready for movement. My intent was to move fast, establish contact, and then destroy the Iraqi forces using the stand-off tactics which worked so well on the previous day. But by 0600 the BBC was reporting that a ceasefire would take place at 0800 hours local time -- the end of the 100 hours of ground war. As the order was confirmed all ground units were held in place, and by 0630 the upcoming ceasefire was official. Despite the ground fog, a flurry of activity was heard as attack helicopters, close air support aircraft, and MLRS units got in last missions



Map 4. Planned 3d Brigade Operation for 28 Feb (not executed).

against any Iraqi units that could be found. Combat operations officially ceased at 0800 hours local time, with the task force 20 kilometers inside Kuwait, having moved and attacked 240 kilometers

in four days, taking 90 Iraqi prisoners, and destroying 51 enemy combat vehicles by combat action. Task Force 4-67 Armor suffered no casualties during combat operations.

POST COMBAT AND REDEPLOYMENT (28 FEBRUARY 1991 - 19 JUNE 1991)

The task force spent the first few days after the cease-fire in recovery and local security operations, conducting prisoner sweeps, and destroying enemy equipment. Local patrolling, conducted by the scouts and Alpha Team, netted about a dozen prisoners, most of whom had been hiding in nearby bunkers. Between Alpha Team and Captain Joe Schweitzer's Delta Company, 12th Engineers, an intensive program of destruction of enemy equipment was executed. The infantry team cleared and destroyed all bunkers in the task force sector, while the engineers destroyed all enemy vehicles. In all, over 100 enemy combat vehicles were blown up by the engineers, and forces were sent back over the route to destroy bypassed enemy vehicles.

The fuel shortage in the task force was remedied within three days of the cease-fire, and recovery operations were completed in about the same length of time. Three vehicles had been left in Iraq due to maintenance failures: an M88 recovery vehicle, a truck, and a trailer. Patrols were sent back to recover these vehicles and clear Iraq of all US equipment, in anticipation of a formal cease-fire agreement. The task force followed the BBC accounts of Iraqi-Coalition negotiations with interest, and maintained its readiness to go back into combat, but there never seemed to be a threat of renewed fighting. The Iraqis seemed

decisively beaten and all prisoners taken were docile and thoroughly cowed.

Task force operations for the next two weeks settled into a routine of patrol and local security, maintenance, and training. The biggest danger to the unit was from the unexploded US ordnance which seemed to be everywhere. Isolated casualties throughout the division caused great care to be taken when venturing away from known cleared areas. Strict rules were observed on the use of cleared roads, using lights when traveling at night, and the avoidance of restricted areas, such as Iraqi bunker complexes. Rules confining the soldiers to a few cleared areas were burdensome and caused troop boredom, but the task force suffered no casualties from unexploded ordnance. The engineer company did a thorough job of clearing every company laager site to prevent injury.

A return to the world of administration brought a deluge of war time awards requests as citations, medals, combat medic and combat infantry badges were processed. A liberal awards policy by the division commander was intended to recognize virtually every soldier's contribution with a Bronze Star Medal or Army Commendation Medal (ARCOM), and this policy resulted in 96 percent of the soldiers receiving an award. There was a careful review of valor award recommendations to avoid undeserved awards for bravery, and the task force eventually recommended awards for one Silver Star, 6 Bronze Stars with "V" device, and 8 ARCOMs with "V" device.

The return to more normal operations dictated that some officer moves be made within the task force. The resumption of combat seemed a remote possibility, and several company commanders had over two years of command, while others waited for their first command. I agreed with Colonel's Goff's decision to rotate two new commanders in to the task force. Bravo Team's Captain Steve Wallace relinquished command to Captain Nick Brunstein and in Team Alpha (attached from 5-18 Infantry) Captain Craig Reistad replaced Captain Rich Ward.

Troop recreation immediately after the cease-fire was extremely limited, confined to battlefield tours, athletics, organized scavenging, and trips to the telephone/PX complex. The satellite phones were put into operation within a week of the ceasefire and soldiers were rotated to the phone center to call home. The phones were a great morale booster. To show the soldiers exactly what they accomplished during the fighting, companies loaded the soldiers on trucks and took them to local battle areas, such as the so-called "Highway of Death" northwest of Kuwait City and the raging oil well fires nearby. The vivid scenes of hundreds of wrecked vehicles, the bodies and the smell of death, and the spewing inferno of dozens of burning oil wells impressed on the soldiers the terrible cost and waste of war. A convoy sent back to Saudi Arabia returned with tents, equipment, and soldier items which had been left at TAA Henry, easing the shortages somewhat.

The equipment littered battlefield proved to be an irresistible attraction to the soldiers, one which would be

difficult to control. To accommodate the inevitable thirst for souvenirs, and to make the collection process safe, I authorized the companies to organize scavenging forays into the bunkers and vehicles which littered the battlefield. Properly lead parties were allowed to go searching for souvenirs of specified types. Because they were controlled, the parties were safe. Dangerous souvenirs, such as hand grenades and certain types of weapons, were not brought back to the unit area. Bayonets, binoculars, compasses, helmets, and web gear were the most popular items. Since the process was controlled and everyone gradually got the souvenir he wanted, the fascination with scavenging gradually lost its appeal, and the dangers associated with unaccompanied scavenging disappeared.

By mid-March the 3d Armored Division was ready to begin a new mission. Because the division was the last to arrive in theater, it was determined that it would be the last to redeploy back to Germany. This news was accepted as inevitable, but was disheartening to the soldiers, as the papers were filled with the news of redeploying units, homecomings, and parades. Talking to the soldiers and establishing a "rumor control net" were essential elements in keeping morale and effectiveness up.

The 3d Armored Division's new mission was to provide internal security for Kuwait, until Kuwaiti national control could be effectively reestablished. The 1st Brigade's mission was to operate a refugee camp and conduct surveillance on the Demarcation Line (DML) established between Iraq and Kuwait by the ceasefire. The 2d Brigade was to conduct surveillance and security in another

sector of the DML, to the west of 1st Brigade. The 3d Brigade went into division reserve, to conduct training, and prepare to rotate up to replace one of the other brigades.

On 17 March the task force moved 40 kilometers east and set up new positions east of the Basra-Kuwait City highway, about 30 kilometers north of Kuwait City. The new location was only 10 kilometers south of a large burning oil field. At night the roaring of the burning wells could be heard, and on a still day the smoke from the oil fields was so thick that headlights were needed for moving vehicles. The new laager area was also close to an abandoned Iraqi logistics complex, and troop ingenuity soon furnished the living area with comfortable desert tents, furniture, and air conditioned vans for a few fortunate companies. The rotation of company commanders continued as Captain Ray Soyk replaced Captain Rob King as commander of Delta Company. The task force now had three new commanders in its four line companies, and my emphasis in leader training was to integrate the new commanders into the tactical scheme of the battalion.

On 24-29 March the task force conducted weapons firing and realistic company live fire exercises at a range complex developed by the 3d Brigade. Actual Iraqi vehicles, some loaded with ammunition, and a bunker complex in the range area, made the exercise a very real one as the companies crossed the line of departure, breached a minefield, cleared a bunker complex with dismounted infantry, and destroyed an enemy armored unit at extended range. The task force used indirect fire support from the artillery and mortars, and allocated a mine clearing line

charge (MICLIC) and mine plows for each company to use in its minefield breaching drill. The realistic exercise polished command and control and fire discipline, and gave the new team commanders a chance to maneuver their units under live fire conditions. I felt confident that the task force continued to be highly combat ready

Simultaneously with the live fire exercises, the brigade and task force staffs were making preparations to rotate up to the DML to replace 2d Brigade. TF 2-67 and TF 4-67 were given missions to patrol and secure a 30-kilometer stretch of the DML, establish and operate a refugee center and checkpoint, and destroy all military equipment in sector. TF 5-18 became the brigade reserve. Upon receipt of the mission the task force conducted a leader's reconnaissance and selected forward laager sites across the Iraqi border. In accordance with brigade direction the task force developed and executed a training program to prepare the units to accomplish their new missions. My thrust in the training was to duplicate many of the procedures that were used for so many years in US patrolling of the East German and Czech borders. Over the next week rules of engagement (ROE), patrol and checkpoint techniques, and procedures for handling prisoners and refugees were established and the soldiers were thoroughly trained in the use of the new procedures.[9]

After dispatching the scouts and quartering party the task force made the 110-kilometer road march into Iraq and occupied its sector without incident on 1 April. To accomplish the diverse missions assigned to the task force each company established a

separate laager, with a separate command post site and a field trains site in the rear of the task force sector. Delta Company manned Checkpoint Charlie, the main checkpoint and POW-holding area on Highway 8, the highway which linked Basra with Baghdad. Charlie Company manned another checkpoint on a secondary road slightly south of Delta Company. Bravo Team established security posts and patrolled the DML with its armored vehicles. Alpha Team was in reserve, reinforcing Bravo Team's patrols and assisting the engineer company in the destruction of large amounts of enemy war material.

The task force remained in Iraq from 1 to 17 April. The checkpoints on the Basra-Baghdad highway and secondary road saw the most action. Delta and Charlie Companies processed an average of 100 prisoners per day and turned them over to 3d Armored Division MPs. The prisoners were apprehended either by the DML security patrols or they surrendered at the checkpoints. Hundreds of vehicles, filled with refugees or local residents, passed through each checkpoint daily. Each vehicle was searched for weapons and the occupants screened to separate out possible Iraqi soldiers. Refugees were directed to the refugee camp at Safwan and humanitarian aid, in the form of food, baby formula, medicine, and water, was distributed as needed to refugees. The battalion aid station, setup at Checkpoint Charlie, handled an average of 50 cases per day, seeing ailments which ranged from gun shot wounds and broken legs to social diseases. The task force also found time to participate in the division change of command on 7 April

as Major General Jerry Rutherford replaced Major General Funk as the "Spearhead's" Commanding General.

Bravo Team's DML patrols, after recon and border trace training, secured the truce line from Iraqi incursion. Iraqi patrols, attempting to retrieve weapons, were turned back by armed patrols and security outposts. I directed the security teams to meet each Iraqi patrol with overwhelming force, using tanks and Bradleys to confront the truck-mounted patrols. This tactic discouraged violence and the Iraqis always turned back without incident. A brigade inspection team made random checks of the patrols and the checkpoint to ensure compliance with the ROE.

Delta Company, 12th Engineers, destroyed all military equipment in sector, over 300 vehicles and 750 tons of ammunition. Assisted by Alpha Team work parties the engineers prepared large amounts of ammunition for daily destruction. In the afternoons, caches of ammunition, some as large as 175 tons, were destroyed with resulting explosions that resembled small nuclear detonations. For all the hard work done by the engineers to destroy military equipment, the task force saw, upon withdrawing, large amounts of equipment and ammunition in other sectors which could not be destroyed due to lack of time.

On 17 April, in response to a realignment of the DML negotiated by the coalition, the task force withdrew from Iraq and moved 70 kilometers south to a position on the northwestern border of Kuwait. From this position the 3d Brigade screened a 100 kilometer stretch of the demilitarized zone (DMZ) established on both sides of the Kuwait-Iraq border. The task force sector was

in the center 35 kilometers of the brigade sector, with TF 5-18 on the north and TF 2-67 on the south. The task force mission was to man three company-sized security outposts, patrol the DMZ, and then turn over the sector to UN peacekeeping forces who would man the sector permanently.

The task force established base camps by 18 April and the DMZ was manned by that evening. Delta Company, Charlie Company, and Alpha Team manned the three outposts, with Bravo Team in reserve. The task force sector was truly a desolate stretch of desert, with no buildings or towns, and only low hills for terrain relief. Sector patrols turned back an Iraqi incursion about every other day. Only some visitors and the arrival of the United Nations peacekeeping forces relieved an otherwise monotonous existence. Both new Army Chief of Staff General Gordon Sullivan and Secretary of Defense Dick Cheney came to visit, paying compliments to the soldiers and promising a quick return to Germany. The former were received with pride, the latter with some skepticism.

At the end of April two groups of UN peacekeeping forces began to arrive in sector. The observers were a multinational group from the United Nations Iraq-Kuwait Observation Mission (UNIKOM). The observer parties traveled in four-officer groups, each officer coming from a different nation. The UN security providing security for the observers and keeping military forces outside of the buffer zone was an infantry company from Fiji. Both groups of UN forces lived and worked in base camps and observation posts carved out of the desert by the task force engineer company. On 7 May the task force was formally relieved

of its buffer zone security mission by the UN and moved out of Iraq into an administrative laager with the rest of the 3d Brigade units. In the laager Task Force Bandit was dissolved as Alpha Company returned from its attachment to 5-18 Infantry, the engineer company reverted to 12th Engineer Battalion, and the air defense platoon returned to 5-3 Air Defense.

By this time the rest of the Desert Storm combat units either re-deployed back to the United States, or were in Saudi Arabia preparing to redeploy. The 3d Armored Division was relieved of its Kuwait security mission and began preparations to redeploy to staging areas in Saudi Arabia. Despite persistent rumors in the division that a 3d Armored Division brigade was going to be left behind in Kuwait as a security force, the battalion advance party of 30 officers and soldiers prepared to redeploy back to Friedberg and ready the battalion area. After the advance party departed for the airfield at King Khalid Military City (KKMC) the battalion was officially notified that it would remain in Kuwait, attached to the division's 1st Brigade, for another six weeks.

As with so many other announcements to the battalion during the desert deployment, this one was not structured or timed with any consideration of troop morale. The advance party was pulled from the waiting area at the airfield and sent back to the battalion in Kuwait. The chain of command, from the Corps Commander down, attempted to rebuild unit morale and cast the operation in a positive light, but more care in the manner and timing of the announcement would have eliminated the entire morale problem. Since the decision was known early on, it should have

been communicated earlier to the units, instead of allowing the soldiers to plan for a May departure from SWA.

By 13 May the 3d Brigade had broken into two pieces. The brigade headquarters, 5-18 Infantry, 2-82 Field Artillery, and the engineers moved to KKMC to turn in equipment and redeploy back to Germany. 2-67 Armor, 4-67 Armor, and 54 Support Battalion were attached to 1st Brigade. The 1st Brigade's mission was to continue to provide internal security for Kuwait, until replacement by a unit from Germany within six weeks. On 13-14 May the five battalions of the brigade moved south to Camp Doha, a warehouse complex on the northwest side of Kuwait City.

Camp Doha, unofficially called "Camp Thunder Rock" because it was manned by troops from the 3d "Thunder" Brigade and from "the Rock," home of 1st Brigade, was a welcome change from the primitive living conditions of the desert. For the first time in 111 days the soldiers in the battalion slept out of the dirt. Paved roads soothed posteriors used to feeling the bumpy desert tracks. The battalion was quartered in large warehouses, and outstanding support from the Kuwaiti government and CENTCOM, plus the usual soldier ingenuity, quickly transformed the trash filled buildings into adequate living spaces. Within three weeks the troop support program brought in hamburger and pizza stands, Baskin & Robbins ice cream, telephones, movies, and basketball courts. The troop area featured quarters with beds and hard surface motor pools. The morale disaster of 13 May was finally drowned in a sea of troop comfort items.

While at Camp Doha the battalion performed three missions: local security for the camp, development of a defense plan for Kuwait and the US Embassy in Kuwait City, and a maintenance and recovery plan to prepare for redeployment. Local security was tight, with the memory of the bombing of the Marine Barracks in Beirut in everyone's mind. The brigade began a defense plan in the event of an Iraqi incursion, and the battalion was tasked to develop a defense plan for the US Embassy in Kuwait City. Several trips to the embassy and meetings with embassy staff provided a barely workable plan for the vulnerable embassy site.

Most effort at Camp Doha was placed on equipment maintenance, as the battalion finally had a relatively clean environment for effective maintenance. Vehicle services were pulled, and equipment was cleaned, accounted for, and prepared for redeployment. The tanks had run for over 3100 kilometers on average, over two years of normal travel, most without breakdown. Some of the trucks had traveled five times that distance without periodic servicing.

By the end of May the 11th Armored Cavalry Regiment from Fulda, Germany was assigned to replace the brigade. By 10 June, the advance party departed for Germany and departure preparations were moving in earnest. CONEX containers and vehicles were packed, soldier equipment packed and inspected, ammunition was downloaded from combat vehicles and turned in, the living areas organized for turnover to the 11 Armored Cavalry, and mission handover briefings were prepared. All the soldiers finally received the much discussed desert camouflage uniforms and boots,

finally replacing the European woodland camouflage uniforms. On 15 June the handover was completed and the battalion began to move to the port of Al Jubayl in Saudi Arabia to turn in its equipment for shipment. The tracked vehicles moved on the familiar, overworked Mercedes transporters, with their Filipino and Pakistani drivers, and miraculously all made the port. Vehicle convoys made the 420-kilometer journey, mostly without incident. The battalion had its only vehicle accident of the entire deployment in the last serial, when a truck turned on its side seven kilometers from the final destination at port.

The last four days in Saudi Arabia were spent in a departure camp at Al Jubayl. The vehicles were inspected and re-inspected, painted green camouflage, and turned into the port for shipping, not to be seen again until late August. The 30 volunteers of the stay-behind detachment were assigned to the Jubayl port detachment.

On the evening of 18 June the rest of the battalion was transported to the airfield outside Dammam port, the arrival location of some five and one half months earlier. Customs inspections took all night and a weary group boarded a Tower Airlines charter flight early in the morning on 19 June. The battalion departed at 0830 hours, the last Desert Storm combat battalion to leave the Southwest Asia Theater. General Rutherford and the division band greeted the battalion upon its arrival at Rhein-Main Air Base in Frankfurt. Much warmer greetings, and lots of yellow ribbons, were waiting in Friedberg.

The weeks following the battalion's return to Germany were filled with a little work and lots of leisure. A two-week acclimatization program was used to clean and account for equipment, occupy barracks, and give the soldiers time to re-acquaint themselves with families, girl friends, and German beer after the time in SWA. After that period, a liberal leave policy granted a 30-day leave to any soldier who desired it. On 12 July 1991, after 25 months in command, I turned over command of the Bandits to Lieutenant Colonel Marty Dempsey. On 17 July, as a result of drawdown restructuring, the battalion was re-assigned from 3d Brigade, 3d Armored Division to 1st Brigade, 1st Armored Division. The move anticipated the deactivation of the 3d Armored Division in January 1992.

LESSONS

The experiences of Operations Desert Shield and Storm have cast a long shadow over the way the Army does its business. In most cases it has validated the structure, training, tactics, and technology that took so long to develop. In other ways it has challenged the army to re-think operational methods, and indeed its basic operations for war. While it is dangerous to draw too many profound conclusions from a war that featured an unimpeded six-month buildup, an uncontested air campaign, and a 100-hour ground war fought with technologically superior forces on open desert terrain, there are nonetheless vital lessons to be learned.

The Price of Versatility

The 4th Battalion, 67th Armor's operations in Southwest Asia typify the concept of versatility as defined in the draft revision of FM 100-5, Operations.[10] The battalion rapidly shifted from mission to mission, and often executed multiple missions simultaneously. Missions which varied from operating a personnel reception center, to heavy force combat, to refugee assistance, were all completed very successfully. The battalion's experience in this area was duplicated by the experiences of numerous other units of all types and sizes in the theater.

The lesson to be derived from this display of versatility is not that units can do diverse missions, but that there is a cost to be borne by doing so. Combat maneuver battalions, indeed most Army units, are capable and flexible organizations. They were designed to support themselves through a wide range of operations. A tank battalion, for example, has tankers, scouts, and mortar men. But it also has cooks, clerks, medics, and mechanics, the full range of personnel to support battalion life in the field. If these elements are well trained, they become a base, expert cadre for the accomplishment of a great number of non-standard missions. By forming a core of subject area experts under good leaders, and supplementing them with combat soldiers, almost any mission can be done. In the operation of a refugee center, for example, the basic organization of an Army tank battalion allows it to use its medics and cooks to support a kitchen and aid station, mechanics to repair civilian vehicles and generators, and

combat soldiers to erect tents, maintain order, and do the myriad of tasks necessary to supplement the main effort.

The danger in versatility is not the variety of missions to be done, but the degradation in the ability to perform the basic unit mission - combat operations. The more a unit's attention is focused away from combat readiness, the more rapid the decay in its capabilities. While 4-67 Armor ran the reception center at the port, and while it conducted refugee and security operations in the buffer zone in Iraq, crew and small unit proficiency were being degraded. When normal unit rotations of personnel and leaders were started after the ground war, the degradation became more pronounced, as there was little chance to train new leaders to the required combat proficiency.

The need for unit versatility is a by-product of the Army's success, downsizing, and the military situation in today's world. But, just as there is a cost, there are also solutions to the problem of maintaining readiness while executing non-standard missions. The first, and most obvious, solution is to recognize the problem and take care with what is asked of units in the structuring of the unit mission essential task list. A well-structured METL keeps the regular unit training load at a reasonable level and emphasizes unit combat effectiveness. While executing a non-METL task the higher headquarters must build in the time and training resources to maintain combat proficiency. Assigning more troops than required for a non-combat mission allows a unit to establish a rotational training cycle. Training resources can also be committed to the unit. For a tank

battalion, the best crew gunnery trainer is the unit conduct of fire trainer (UCOFT). A small, portable version of the UCOFT should be developed which can accompany a tank unit on an extended mission. Finally, if there was no way to shield a unit on a special mission from the degradation of extended non-METL operations, then a training cycle must be programmed to return the unit to proficiency following mission termination.

Army units are by their nature versatile organizations. The use of their innate capabilities for other missions must not compromise their fundamental mission -- to fight.

The Mobility of a Nation - Deploying Heavy Forces

In his 1950 essay "The Soldier's Load and The Mobility of a Nation," S.L.A. Marshall described a military problem that affected operations in World War II -- the Army takes too much, and often the wrong type, equipment to war.[11] Marshall's thesis in the separate parts of his essay is that US combat soldiers are individually too heavily burdened to be completely effective in combat and that US forces in general take too much unnecessary equipment with them, clogging supply lines and reducing unit effectiveness. He would also be correct in applying this conclusion to the US deployment to Southwest Asia, and could add a discussion on the difficulties of deploying equipment into theater.

Since the Gulf War for the 3d Armored Division was a mechanized war, and little foot-marching was done, the major lessons drawn come from equipping units for combat. Units simply

took much equipment with them, some of it poorly designed and poorly deployed into theater, and the result was wasted space and supply shortages elsewhere. TF 4-67 Armor deployed with most of its cargo vehicles loaded to capacity, and also with ten forty-foot milvans. Some of the supplies taken were necessary consumables, but far too many were "nice to have" items, such as refrigerators, bulky tents, and excess troop support items that were never used. When the unit arrived in SWA it was apparent that the battalion, after it drew the remainder of its basic load of ammunition, could not move itself in one lift, a cardinal sin for an armor unit. To pare the unit down to fighting trim much equipment was left in the rear area, and never used at all. The simple solution is to impose a limit on the unit and use pre-designed packing lists to determine the equipment which will be taken on a deployment. This rule has to be enforced at all levels, for unit headquarters, from battalion to theater army, are usually the biggest offenders.

Additionally, some equipment was poorly designed and not adaptable to the climatic ranges encountered in the desert from January to June. Each man needed a cot, as there were too many insects to safely sleep on the ground, but the bulky standard Army cot did not fit easily on a combat vehicle. The hex tent, standard sleeping quarters for a crew during extended field service, is much too bulky and poorly shaped for crew comfort. Commercial, expedition-weight tents would give long service and the required comfort for the crews in the field. The equipment that a combat crew carries, from the infantry squad to the tank

and carrier crew, must fit on the vehicle, and must not encumber its fighting capability. Much of the Army's current equipment does not fill this need.

Vehicles required for specific purposes, such as the company maintenance and PLL parts trucks, must be configured to perform their mission in the field. The crude wood and canvas shelters used to hold tools, parts, and functioning as workshops in the field, are cumbersome, ineffective, and dangerous. Lightweight metal shelters, designed with inside lights and standard fixtures, and made to deployable dimensions to fit on tool trucks, should be procured for all mechanized and armor units.

If the Army is truly to be a power projection force, then movement of the force must become a METL task, especially for the higher echelon transportation agencies. TF 4-67 Armor's vehicles and equipment went to SWA on 11 different ships. In most cases there was no method or organization to the loading of a ship, and the unit had no say in vehicle shipping priority or organization. Equipment was packed to fit the ship without regard for unit designation. A friendly port at the far end and adequate buildup time prevented catastrophic problems, but unit deployments, ship allocation and loading, and cargo tracking are problems that have to be addressed. The computerized equipment labeling and tracking system seems to offer great potential as a means of organizing a unit deployment, but the issue of ship loading must be addressed. If left to the ship captain, the ship will be loaded as he sees fit, not the best solution to a combat loading problem.

Are the Home Fires Burning Out of Control?

The deployment of VII Corps to Southwest Asia marked the first large commitment of a forward stationed unit to combat in another geographic theater of operations, a hallmark for power projection operations of the future. Most VII Corps soldiers stationed in Europe left their dependents in Germany. The experiences of the families left behind during the deployment to SWA provide some valuable lessons for future campaigns.

When the 4-67 Armor was alerted for deployment the families in Germany were urged by the chain of command to stay in country. Provisions were made for those spouses and families desiring to return to the US, but most families chose to remain near the unit home station in Friedberg. Communication was the key element necessary to support the families. By staying close to Friedberg, in a family support group, dependent families were kept informed of all activities of the unit and the support group, and could communicate their problems to someone who had an interest in their welfare. Such would not have been the case for families in the United States who did not have access to a dedicated Army post.

While family care and the family support groups were officially a chain of command responsibility, the "chain of concern" was the vital element in their success. Headed by the brigade commander's wife, the chain of concern for 3d Brigade mirrored the chain of command, with a spouse, normally the unit commander or first sergeant's wife, in charge of a family support group. Family support groups were organized to company level, with large units, like the headquarters company, having several

sub-groups. Spouse volunteers came from all parts of the unit, motivated only by their interest and capacity to give, and participation in the support group was not mandatory. While the chain of command could accomplish the official tasks required, such as helping with ID cards and doctor's appointments, the chain of concern handled the morale and well-being of the families by being a presence, a helping hand, and a willing ear to replace departed soldier spouses. The support groups were forcibly proactive in seeking out and solving personal problems among reluctant spouses before they seriously affected the individual or family.

While the chain of command worked very hard to support the families, some problems surfaced. First, not enough support personnel were left behind. Rear detachment soldiers were swamped with family support requirements, without the resources to handle the problems in a timely manner. Second, higher ranking rear detachment leaders were needed. A brigade required a field grade officer in charge, each battalion needed a captain. While a high personnel price to pay, especially with the unit needing all of its good men for combat, the tradeoff would have left behind experienced officers with the maturity and rank to deal with the inevitable child abuse and spouse financial problems. Instead, the chain of concern often handled those problems, with the assistance of the rear detachment, instead of vice versa. While the chain of concern was capable of dealing with family problems, its members often did not have the official standing with the Army agencies required to solve a problem. The chain of concern was

often not empowered with the authority to accomplish the tasks it was required to do.

In addition to larger, more capable rear detachments, two suggestions are proposed to increase the effectiveness of the rear detachments and family support groups. First, provide better training for those left behind, both rear detachment and family support group leaders. Just as soldiers are trained prior to combat, the training of the stay behind force prepares them for upcoming problems. Both the rear detachment and chain of concern must know the local personnel, legal, and financial systems, and how to get things done. Second, define the role of each part of the community and empower the chain of concern to deal where they can be most effective, in spouse and family matters. A unit commander's spouse normally has a breadth of experience and insight into problems not possessed by the chain of command. Defining the scope of authority of the chain of concern is an effective way to deal with a wide range of problems. The chain of command must know the chain of concern and accept their role in assisting unit families, as peace of mind about the family back home is a combat multiplier for the effectiveness of a deployed soldier.

Standard Drills for Effective Tactical Execution

The pace of combat operations during the ground war left the battalion with little preparation time, and no time for rehearsals, prior to mission execution during the ground war. The quick pace placed a premium on standardized battalion and company

drills during combat operations. The battalion used two basic movement formations and a set of seven practiced battalion drills to deal with a variety of combat situations.[12] Companies used five formations and three drills in their operations.[13] The drills and formations covered the basic missions that would be executed by the battalion - movement to contact, hasty attack, night attack, hasty defense, obstacle breach, and passage through a defile. Company drills consisted of formations and standard responses to combat situations such as hasty attack, action left and right, and defensive situations.

The standardized drills were developed after the battalion's ARTEP in August 1989, refined during REFORGER 1990, and finalized in the battalion SOP by September 1990. The drills constituted the focus for the maneuver training conducted for over a year by the companies and the battalion and were practiced until the members of the battalion were thoroughly familiar with each drill and its possible variations due to combat action. Company drills were practiced in a similar manner and incorporated into a combination company/platoon SOP which was common for all line companies in the battalion. All SOPs were also distributed and practiced with the attached elements of the task force.

Because of the rigorous training on the battalion and company drills, execution became automatic during crisis times. For example, during the night move on 26 February visibility became so bad that units could no longer maintain their directional bearing. By going to a closed formation in which units relied on a central guide, and on their relative position in the formation, the task

force was able to continue to move with complete effectiveness. In the pursuit on 27 February, the task force diamond, and training in how to fight from it, enabled the task force to maneuver and engage enemy armor from different directions without danger of fratricide, and to rapidly change direction to continue its mission.

Standard maneuver formations must become a part of a common SOPs for a division, agreed upon and accepted by divisional units. All units should train alike and have a common frame of reference for combat operations, making operations like the attachment of a battalion to a different brigade a simple matter of moving and changing call signs and frequencies. The publication of the new manual FM 71-123, Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion/Task Force, and Company Team, has defined the drills in outline form.[14] It is now up to the field units, centralized at division level, to standardize and publish drills applicable to the entire unit. Commonality in training and execution can pay big dividends during battle execution, if the necessary price is paid in sweat and time in the training area.

ENDNOTES

[1] Department of the Army, Field Manual 100-5: Operations (Preliminary Draft), (Washington, D.C.: Government Printing Office, 21 August 1992), 2-7.

[2] Ibid., 2-10.

[3] Department of the Army, 4th Battalion, 67th Armor, "Operations Order 91-2-2 (Thunder Strike), with Overlay and Annexes, 21 February 1991," unpublished papers, Author's Collection, Carlisle Barracks, Pennsylvania: 1.

[4] Ibid., 1.

[5] Russell W. Glenn, "DIVOPS: 3d Armored Division," Military Review LXXII, 2 (February 1992): 20-21.

[6] Department of the Army, 4th Battalion, 67th Armor, "Task Force Standard Operating Procedures, 19 October 1990," unpublished papers, Author's Collection, Carlisle Barracks, Pennsylvania: Y-2.

[7] Peter S. Kindsvatter, "VII Corps in the Gulf War: Ground Offensive," Military Review LXXII, 2 (February 1992): 17.

[8] Department of the Army, 3d Brigade, 3d Armored Division, "Overlay for Brigade Operations on 28 February 1991, 1991," unpublished acetate overlay, Author's Collection, Carlisle Barracks, Pennsylvania.

[9] Department of the Army, 4th Battalion, 67th Armor, "Demarcation Line Training Program, March 1991," unpublished papers, Author's Collection, Carlisle Barracks, Pennsylvania.

[10] Department of the Army, Field Manual 100-5: Operations, 2-10.

[11] S.L.A. Marshall, The Soldier's Load and the Mobility of a Nation (Quantico, Virginia: The Marine Corps Association, 1950), 79-81.

[12] Department of the Army, 4th Battalion, 67th Armor, "Task Force Standard Operating Procedures", Y-1 to Y-7.

[13] Department of the Army, 4th Battalion, 67th Armor, "Bandit Company/Team SOP, October 1990," unpublished papers, Author's Collection, Carlisle Barracks, Pennsylvania, 6, 9-18.

[14] Department of the Army, Field Manual 71-123: Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion Task Force, and Company Team (Washington, D.C.: Government Printing Office, 30 September 1992), 3-78 to 3-168.

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