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LESSONS FROM THE DESERT

BY

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LESSONS FROM THE DESERT

A PERSONAL EXPERIENCE MONOGRAPH
based on the exploits of the 498th Support
Battalion, 2d Armored Division (Forward),
during OPERATIONS DESERT SHIELD and DESERT
STORM.

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ABSTRACT

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This paper records the major experiences of the 498th Support Battalion, 2d Armored Division (Forward), during that unit's involvement in Operations DESERT SHIELD and STORM. The 498th was a unique unit, well-suited for the gamut of operations conducted by 2AD (FWD) during its stay in SWA. The author commanded the 498th Support Battalion from June 1989 until June 1991, throughout preparatory training in Germany and the period of deployment. Portrayed herein are the diversity of missions and challenges faced by the entire 2d Armored Division (Forward), and the ingenuity and flexibility of logistical soldiers as they met their particular challenges.

Organized essentially as a separate brigade support battalion, the 498th Support Battalion was substantially more robust than divisional forward support battalions. This structure made the organization more flexible and capable. Because the 498th was organic to the brigade it supported, it was thoroughly integrated into the combat team. The flexibility and capability of this structure argues for a more robust Forward Support Battalion, perhaps even at the expense of other Division Support Command assets. In these days of declining resources, a more robust FSB, better teamed with a maneuver brigade, may be the basis for a workable, alternative CSS structure.

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INTRODUCTION

This paper is an attempt to record the major experiences of the 498th Support Battalion, 2d Armored Division (Forward), during that unit's involvement in Operations DESERT SHIELD and DESERT STORM. The 498th was a unique unit, well-suited for the gamut of operations conducted by 2AD (FWD) during its stay in Southwest Asia (SWA). I commanded the 498th Support Battalion from June 1989 until June 1991, throughout preparatory training in Germany and the period of deployment. Portrayed herein are the diversity of missions and challenges faced by the entire Brigade, and the ingenuity and flexibility of logistical soldiers as they met their particular challenges.

The information is presented in several chapters. Chapter 1 is a brief chronology of the activities of the 2d Armored Division (Forward) just prior to, during, and just after operations in SWA. It is intended to illustrate the range of missions assigned to 2AD(FWD), which the 498th Support Battalion had to support, and the pace of activity. Chapters 2 - 8 are a compilation of some significant events and experiences of the 498th Support Battalion, as best I can recall them, in general chronological sequence. Necessarily, these chapters refer to events already mentioned in Chapter 1. I have tried to avoid elaborate duplication unless it is essential to understand events from the Battalion's perspective. In Chapters 2 - 8, I have endeavored to highlight things that proved our training, solved a problem in an innovative way, vindicated the efforts of the Chain of Command to build a strong team, or taught

me a lesson. I have deliberately avoided dwelling on the logistical systems that did not work. Most of these problems are well known and have been captured in official Lesson Learned documents. I have highlighted their impact on support operations, because they affected the entire 2AD(FWD) profoundly. Chapter 9 is a wrap-up of my conclusions from this experience.

I have also included two annexes. Annex A delineates the unique organizational structure of the 498th Support Battalion, which was essentially a separate brigade support battalion with a few extra pieces added. It is my impression that we fared very much better - were pressed much less close to our limits - than most support battalions. This argues for a more robust Forward Support Battalion structure, perhaps even at the expense of other Division Support Command assets. In these days of declining resources, a more robust FSB may be the basis for a workable, alternative CSS structure. Annex B is a vignette about something that happened to a friend of the Battalion. It didn't seem to fit anywhere very well, and I wanted to put it in here. Maybe it'll help someone.

Chapter 1

2d Armored Division (Forward) and Operations

DESERT SHIELD and DESERT STORM

The 2d Armored Division (Forward) was originally organized from bits and pieces of the 2d Armored Division moved from Fort Hood to Germany in 1976. The 3d Brigade, 2d Armored Division, was its basis. The unit moved to Garlstedt, which lies between Bremen and Bremerhaven, upon completion of facilities in 1978. 2AD(FWD) was organized essentially as an armor-heavy, separate brigade, composed of two tank battalions, one mechanized infantry battalion, a direct support field artillery battalion, a support battalion, an engineer company, a Military Intelligence company, and a headquarters company. Within the headquarters company were the Division (Forward) staff, a signal platoon, an MP platoon, a decontamination platoon, and an air defense platoon, armed with Stinger missiles. The 498th Support Battalion, like its parent brigade, was a composite of several CSS MTOEs. It most closely resembled a Separate Brigade Support Battalion. Authorized 777 soldiers, it was substantially more robust than a typical Forward Support Battalion of 350-400 soldiers. The 498th's structure is detailed in Annex A.

A general officer was assigned as Commander, 2d Armored Division (Forward), and given several USAREUR command hats to round out his responsibilities. To cope with this, perhaps, a reinforced

staff - a G-staff - was provided. At the time of the deployment to Southwest Asia, 2AD(FWD) was commanded by BG Jerry R. Rutherford. The organization also included a command selected colonel, designated the Brigade Commander. COL Paul V. Baerman held this position as we began to prepare. Sadly, a medical condition prevented him from deploying. He was replaced by COL David S. Weisman, but stayed in Garlstedt as rear detachment commander.

The 2AD(FWD) staff was unified in the sense that there was not a separate brigade staff within the headquarters. Despite what might be considered an awkward top command relationship, personalities were such that the senior leaders, including the battalion commanders, all understood who was in charge of what. The brigade commander rated the battalion commanders and the CG senior rated them. The CG and Brigade Commander shared the staff, which from a battalion perspective, was their problem. In actuality, "turf" problems were relatively few. We had a solid, well trained, team-oriented Chain of Command and staff.

2AD(FWD) was alerted for deployment to Saudi Arabia on 8 November 1990, with the USAREUR units (VII Corps headquarters, 2d SUPCOM, 2d Armored Cavalry Regiment, 1st Armored Division, 3d Armored Division, 2AD(FWD), and various artillery and aviation units). As things turned out, 2AD(FWD) was one of the last units to deploy. In December 1990, while 3d Armored Division (3AD) was moving to the BENELUX ports, we moved to Bremerhaven. 2AD(FWD)

equipment was shipped by sea in mid-December. An advanced party flew from Rhein-Main Air Base on 24 December 1990. The rest of 2AD(FWD) followed from Hamburg just after the New Year. We landed at King Fahd Airbase and were bused north to the port of Jubayl. Altogether, 2AD(FWD) deployed about 4200 soldiers to Saudi Arabia.

For about three weeks, 2AD(FWD) - hereinafter called "the Brigade" - lived in warehouses and a tent city in Jubayl, awaiting the ships carrying the equipment. The air campaign began with the Brigade still in Jubayl.

With the arrival of the equipment, the Brigade earnestly prepared to deploy to the desert. 2AD(FWD) was attached to the 1st Infantry Division (1ID), which was moving from Dammam to the desert simultaneously. BG Rutherford became ADC(S) for 1ID at MG Rhame's request, filling a key vacancy in *The Big Red One*. The Brigade joined 1ID in TAA Roosevelt about a week into the air campaign. In the TAA, we merged with 1ID and prepared for combat as the Big Red One's 3d Brigade.

In early February, 2AD(FWD) moved west with 1ID from TAA Roosevelt to Forward Assembly Area (FAA) Manhattan. 2AD(FWD) drew a counter-reconnaissance mission and a reinforced task force began combat operations immediately. Task Force Iron, as it was called, was built around the Brigade's TF 1-41 Infantry and 1ID's 1-4 Cavalry, under 3d Brigade control. After several days of light

contact and a tragic friendly fire incident (an Apache inadvertently attacked a TF 1-41 Infantry scout vehicle), the Brigade had its first taste of battle and had been bloodied.

A few days later, the four day war began. 1st and 2d Brigades, 1ID, attacked and penetrated the Iraqi defense to our north. 3d Brigade moved through as the exploitation force and deepened the penetration. That night, the Brigade assisted the passage of the British 1st Armoured Division, which turned east to attack Iraqi tactical reserves. The morning of the second day, 1ID attacked due north, then northeast, to catch VII Corps' attack. The Division moved initially with brigades in column, 3d Brigade leading. Further north, as the sector opened up, two brigades moved abreast - 1st in the north and 3d in the south. 2d Brigade trailed as Division Reserve. This formation remained in effect until the end of the war.

On the morning of the cease-fire, the Division's maneuver units had reached the Kuwait City-Basra highway, in northern Kuwait. 1ID was the only division to reach the highway.

For the next 2 months, 2AD(FWD) moved wherever 1ID went. For a week or so, the Brigade secured the eastern end of 1ID's sector of the demarcation line in northeastern Kuwait and southeastern Iraq. 3AD eventually assumed the sector and 1ID withdrew. 1ID assembled a few miles to the south, in the Kuwaiti desert, and

became VII Corps reserve. The next day, 1ID moved west, back into Iraq, positioned centrally to the Corps.

As XVIII Airborne Corps withdrew and redeployed, VII Corps units spread themselves west, across the vacated sectors of the demarcation line. Shortly after 1ID's move back into Iraq, the 2d Armored Cavalry Regiment (2ACR) assumed the western sector of the line. 1ID was tasked to move one brigade to a forward position as a response force for 2ACR. 3d Brigade was given the mission first, with the promise of relief in a week or so. The Brigade moved about 25 miles northwest of AA Butts (1ID's assembly area), into an area closer to 2ACR. Shortly after settling up, the 3d Brigade Commander volunteered to keep the mission instead of rotating brigades back and forth. As a result, we were there for about two weeks. While in this position, BG Rutherford was promoted and appointed CG, 3AD. BG Gene Blackwell came from 3AD to command 2AD(FWD). The Change of Command ceremony was conducted in Iraq.

Shortly after Easter, 2ACR withdrew. Responsibility for their sector passed to 1ID's aviation brigade, with 3d Brigade continuing as a response force. A short time later, 1st Armored Division (1AD), the next unit to the east, was ordered to withdraw. To fill 1AD's gap, 2AD(FWD) detached from 1ID and assumed 1AD's entire sector as a separate brigade.

In late April, 2AD(FWD) withdrew from Iraq. The move out took two days. On the way out, the Brigade was directed to send two infantry companies with support, to Rafha, Saudi Arabia, to secure a refugee camp. While moving, we planned the operation, selected the people to go and coordinated the transportation. The force ended up securing a camp inside Iraq, constructing two, new camps inside Saudi Arabia, and moving several thousand refugees to the new camps. The entire operation was politically sensitive and required BG Blackwell's personal attention. The rest of the Brigade occupied 2ACR's former Redeployment Assembly Area (RAA) at King Khalid Military City (KKMC) and got ready to go home.

Troops began flying from KKMC to Hamburg around 10 May, the same time our vehicles and containers moved to the port. Most of the Brigade was home by 20 May 1991. The Rafha Task Force finally redeployed some two weeks behind the main body. By the end of May, everyone was home except a group of volunteers who stayed behind to load ships. They came home in early Fall.

Chapter 2

The Beginning

The so-called Persian Gulf Crisis was widely reported in the media, even in Germany, so all of us in 2AD(FWD) were generally aware of the situation from its beginning, in August 1990. After major deployments from CONUS began, BG Rutherford, CG, 2d Armored Division (Forward), began a series of weekly updates for the commanders and key staff officers. The updates were conducted by the G-2 and followed a standard, doctrinal format. We examined maps, discussed climate, terrain, forces on both sides, enemy capabilities and probable courses of action. We also discussed, conceptually, what it would take for us to deploy, should a fight develop, and how we would operate in the desert. From newscasts and other open sources, we began to discuss how the early deploying units were living in the desert and what we could learn from them.

These were not planning meetings *per se* and, to the best of my knowledge, no one was working on either deployment or tactical plans. (In a place as small as Garlstedt, it is unlikely that our G-4 could have conducted any significant planning without my knowledge.) Though I've never asked him, it seems likely that BG Rutherford had advance knowledge of our deployment. Since the decision to give General Schwartzkopf an offensive option was made in September, the coincidence is too suspicious. If he did know, he

kept it to himself. Whether he knew or not, the briefings were prudent.

Other than this "awareness training", we did not prepare for deployment; rather, we continued the training we had already planned, though perhaps with heightened interest.

Lesson: The weekly briefings were a low effort way to get all our heads into the situation. It saved us a lot of time later and was good training for the G2 and S2s. This is a useful technique, easily emulated in any future crisis; one I'll long remember.

The 498th's involvement in DESERT SHIELD began when my bedside telephone rang late in the evening of 8 November 1990. The wife of the artillery battalion commander called and asked if my wife and I had seen the late news, which we had not. She then described the President's news conference and the announcement of the additional units by Secretary Chaney. Shortly, the 2AD(FWD) Chief of Staff called and announced a commanders' meeting at 0630 hours the next morning. Unit commanders were instructed to call down the Alert Rosters and assemble our units at 0700 hours. I called all my company commanders and XO to make sure they knew what had happened and what we knew to be factual. We also discussed controlling rumors.

At the morning meeting, the CG confirmed the content of the news conference. We discussed what we knew to be factual and agreed upon what we would tell our soldiers. We also decided to release them to notify their families. The meeting was business-like and very short. We broke in time for the unit formations.

The ninth of November was to have been a training holiday for the 498th Support Battalion, so I was apprehensive that we would not be able to reach soldiers who had departed early to take advantage of the day off. This was not a problem. Enough people saw the news and passed the word that we had fewer absent than expected. Soldiers on leave and pass at home even showed. On a tennis court behind the battalion headquarters, our usual location for battalion formations, I told the troops the facts and that we did not know how quickly we would deploy. We discussed the likelihood that it would be soon. I told them to go home and tell their families and return for duty at 1300 hours. We would begin preparing our vehicles that afternoon. There was work to do and it seemed pointless to let people spend the day fretting over things. So much for our training holiday. Thus began preparation for deployment, the most stressful period of sustained activity that we experienced, save the four days of the war.

Commander's Assessment

At the time of notification, I had been in command for sixteen months. My CSM was new. My XO, MAJ Dave Sanders, had been aboard since June; the S-1 and S-4 were similarly new. The S-3, MAJ Mike Leatherwood, had arrived with me and was both competent and experienced, but he was doing double duty as both S-3 and Support Operations Officer. Mike's principle assistants, the Chemical Officer, S-2 and Communications Officer, were all old-timers, with more than a year in their jobs. The Support Operations Section had an experienced captain and a solid lieutenant, but the NCOs were unproven. The MMC Chief, MAJ Vinny Boles, was new in the job but had previously been the Support Operations Officer for a year. He knew the operation of the Battalion and his MMC deputies were strong. Three of my four company commanders were new, having four months or less under their belts. While only the Medical Company had an experienced commander, all of them had been in the Battalion for a year. Their First Sergeants were a mixed bag - two were new, two had been with us for a year. Leadership-wise, we were on the up-swing following the previous Spring's personnel changes.

The Brigade had not been to the field as a whole since our Grafenwoehr/CMTC rotation in March 1990. While the entire Brigade, us included, had performed very well at CMTC, we had spent the Summer fielding new tanks and APCs. The 498th had supported two short gunnery periods at Bergen-Hohne and, like the other units, we

had been gearing up for a CPX to be held later in November. While we were not at the peak of training readiness, we weren't at the nadir, either. We had enough well-trained people who knew how we operated in the field to bring the others along quickly.

The systems and procedures we used for supporting the Brigade were our strongest suit. We managed maintenance through a system of meetings which brought the battalion XO's to me at least once each week. We had practiced ration issue and fuel delivery, including LRPs, during the gunnery periods. The ambulance platoon had done exceptionally well at CMTC and was stable, personnel-wise. Our customers knew our SOPs and had confidence in the ability of our Support Operations Section to meet their needs. In general, teamwork between us and our customers was very good. The only things we had not practiced extensively were moving the whole Brigade and operating a Brigade Support Area (BSA) with the Field Trains in it.

We were highly proficient operating convoys in Germany. All the units were - but only for the wheeled vehicles. We always sent the trucks by rail. We had never had an opportunity, even at CMTC, to move the whole Brigade in a tactical formation. Our only experience was a theoretical discussion or two and CPX play.

Most of the Brigade's field training was conducted at battalion level, one battalion at a time. This was true even at

CMTC. Because of this, we had no experience operating a BSA with all the battalion's Field Trains in it. We had practiced the coordination during CPXs and the 498th had even controlled the movement of the Field Trains' command posts, but we had never controlled them with all vehicles and equipment present.

Internally, the 498th had strong supply, maintenance and medical procedures in place. Soldiers were of exceptional quality, generally well trained, and morale was high. Our biggest weakness was our own motor pool. While paper readiness was good, keeping up with scheduled services was a constant battle and we frequently lapsed into crisis management to keep up with daily repairs. Unlike the rest of the Brigade, we owned just about everything we needed (tents, heaters, cots, etc.) to take care of all our soldiers, knew how to load it and had practiced with it. The 498th, like 2AD(FWD) in general, was relatively modernized and had enough new equipment to adequately support the Brigade.

Over all, we were pretty solid - within the "band of excellence" - in all areas. The things that concerned me most, as we prepared for deployment, were rounding up all the things 2AD(FWD) would need to live in the desert indefinitely, packing and moving everything (we owned more than we could haul and I knew containers would be a problem), and the readiness of my own battalion's wheeled vehicle fleet. I will discuss how we addressed each of these, in turn.

Getting the Stuff We Needed

As stated previously, 2AD(FWD) was a small, isolated unit reporting directly to DCINCUSAREUR. As such, we enjoyed reasonably high priority for the fielding of new systems. In fact, we were often used as the "test case" for USAREUR fieldings. While this occasionally exposed us to the vagaries of fielding plans, it also got us many systems early. Thus, we were fairly well modernized. We had the usual hodge-podge of mixed models for a wheeled vehicle fleet, but our CUCVs, HMMWVs and HEMTTs were in good shape. We had received M1A1 Heavy Armor tanks in July 1990, M113A3s and Mobile Subscriber Equipment in the last year. We were below authorization for certain test and diagnostic equipment, but had enough to sustain daily operations in Germany. While we had basic M2 Bradleys (the oldest in Europe), they were in good shape and almost all had been retracked the summer prior. In the 498th, our biggest desire for support items was the special trailers for hauling Full-Up Power Packs for the M1A1s (we had four FUPPs).

Upon notification of deployment, USAREUR offered all its deploying units a number of "enhancements" - either fill of shortages or fielding of modern equipment. Some of the items came from the fielding stream, some from POMCUS and war reserves, and some from non-deploying units. The early deployers did not have time to absorb many of the items, but 2AD(FWD) benefitted greatly.

Most of the items we received were not new, but no worse for wear than our own equipment (all 2 1/2 ton trucks are old), so we were not burdened for the sake of a paper readiness improvement. Most of the items were also easily integrated, without extensive training.

We filled nearly all of our FM radio shortage in this way. We received many of the test and diagnostic equipment items that had been fielded in quantities below total authorization. We updated the Bradley TOW systems. We turned in our four Operational Readiness Float (ORF) M2 and M3 Bradleys and received new M2A2s in their place. We shipped out most of our oldest, chronic deadline vehicles and received better ones from POMCUS or war reserves. We were also issued water trailers, which we had been short, up to our authorization.

Very soon after notification, the Brigade had NBC personnel conduct detailed inspections of all NBC equipment. We also installed wartime mask filters and hoods. We discovered that a lot of items had to be replaced. Even more problematical was the discovery that we had several soldiers who needed special masks (in fact, they had needed them for years). NBC items are bulky and soon became a major project for the Supply Platoon of A Company.

In addition to the equipment shortages and NBC items, Authorized Stockage List (ASL) shortages were also filled. In early

December, in response to a request from 200th TAMMC, we were required to produce a special DS4 tape containing an image of our ASL. TAMMC scanned the tape for the shortages. USAREUR attempted to fill these items from Theater stocks, regardless of the supply status of requisitions open against the short ges. The "hits" were to be containerized and shipped to us in Saudi Arabia. In our case, this amounted to eight 20-foot ISO containers of repair parts. Since we knew to look for this shipment, we actually found them in Saudi Arabia and took delivery. These parts supported our reconstitution effort after the cease-fire. Without them, the Brigade would have experienced a significant drop in equipment readiness.

I must emphasize the farsightedness of this initiative. To the best of my knowledge, except for the eight USAREUR containers, we received no repair parts in Saudi Arabia that we had not requisitioned in Europe, except those we got by sending teams door-to-door. The normal supply system simply didn't work.

Lesson: (a) Large commands like USAREUR, which have lots of assets, can significantly improve the readiness of a force in a short time once the peacetime restrictions come off. Many of the programs from which we benefitted were very progressive and totally unexpected. Logisticians in commands providing forces must look for ways to help. USAREUR was a great example.

(b) Each of these transactions caused a flurry of work among supply sergeants, S-4s, the 498th's Property Book Office, and the G-4. As often as not, the 498th sent trucks down south to pick up the items. Typically, suspenses were very short. Once we had the items in our hands, they had to be integrated. Vehicles had to be inspected, serviced and repaired; installation kits for radios had to be installed; property records had to be updated. Things as simple as painting bumper numbers became difficult because of the press of time. In the 498th, we were balancing the need to get our own equipment and supplies ready to move against the legitimate support requirements of our customers. Intellectually, I knew this would happen and we tried to plan ahead and manage it. In reality, the lieutenants and sergeants, often acting on their own, made this process work. There were too many transactions to "manage" at battalion level. Centralized planning and decentralized execution, with everyone understanding the mission (commander's intent?), are critical in the logistical business, too.

The Stuff We Thought We Needed

Mission analysis indicated that we would need some additional housekeeping items prior to departure. For example, the maneuver units had few tents. Our original instructions were to be prepared to sit in the desert for a few months, as the XVIII Airborne Corps units had. So, we determined a conservative but adequate number of

tents and ordered them. We ordered desert uniforms, 2-quart canteens and carriers, extra 1-qt. canteens, Australian showers, water cans for each vehicle, extra fuel cans, tent stoves, desert camouflage nets to go over all the new stuff, lensatic compasses for each vehicle, maps ... everything we could think of that we would need to care for our soldiers. While the battalion staffs determined many of the items, some of which were based on "good ideas", every requirement was eventually funneled through the G-4 who did an excellent job of keeping everyone informed and getting everyone a piece of each new, approved requirement. The unnecessary was also weeded out at G-4. In the interest of time, many of the requirements were consolidated and requisitioned centrally by the 498th's MMC, usually against a memorandum from the G-4 which approved a distribution scheme. With only a few exceptions, we followed our own local purchase procedures, which were solid. I know from subsequent experience that, in the environment that prevailed at the time, many units liberalized their local purchase rules. Relaxed controls led to abuses, loss of accountability and, ultimately, criticism of the units. 2AD(FWD) avoided that.

Procurement of Special, Desert Items

Like most units of the VII Corps contingent, we quickly identified requirements for desert-unique equipment. Desert BDUs, desert boots, desert camouflage nets, water cans, etc., were all

requested. Many other units spent a lot of time canvassing their soldiers for uniform sizes, in order to get precisely what they needed. In our case, we used the quicker approach. We ordered a selection of sizes, mirroring the standard tariff, as though for ASL stockage. Our hope was to get the requisitions going quickly, ahead of the other units. Since, by comparison, our requirement was small, we hoped to get some of the items prior to deployment.

We received a few items, like sand-colored water cans, prior to deployment. Some - desert camouflage nets, for example - simply were not available. The majority of the items were placed under central management above our level. Uniforms, in particular, were all shipped from procurement to SWA, for distribution there. This was probably, from a higher level standpoint, the most equitable way to manage these items. Failure to decide this early and publicize the decision caused us a lot of wasted effort in the MMC. Had we known the rules, we would have put some very talented people onto more productive work. As will be shown later, the desert BDU saga got even more confused in Saudi Arabia.

Lessons Learned and Their Value

From early September on, we had gathered items of interest regarding desert operations - everything from our desert operations

FM to news articles to medical intelligence to historical data from WW II. Additionally, we soon began to receive everyone's Lessons Learned publications. We were well fixed with ideas about desert life.

After we were notified of deployment, the flow became a flash flood. Every day brought more good ideas. We began to receive visitors, only some of whom had been to Saudi Arabia, but all of whom professed to know what it would take to live and fight in the Saudi desert. We were deluged by good ideas.

During all this, we began to find out that the supply system would not be able to provide, in time, many of the MILSPEC items we had ordered.

We were confronted with substantial pressure to buy commercial equivalents of many items and a host of new items recommended by the various purveyors of lessons learned. In the interest of fiscal responsibility, the G-4 and my Property Book Officer, CW3 Willie George, tightened the reins on local purchases. This included determining requirements, deciding the accountability required for each item, validating the lack of timely availability through the supply system, working with contracting to find prospective sources, examining sample items, obtaining cost estimates and obtaining approval for the expenditures. All items delivered to the Brigade passed through my Supply Platoon's warehouse (our normal

procedure, except that we were open almost around the clock). The PBO helped with distribution and got the unit receipt acknowledgements he needed, using normal supply procedures. In this way, we maintained very good accountability and avoided many of the frivolous requests which subsequently exposed many units to criticism. Battalion and company commanders did not have authority to make purchases outside this system. This policy was both fiscally responsible and logistically sound, as it tended to minimize the bulk of unnecessary items we had to handle.

Lesson: (a) Beware the purveyors of lessons learned. It is my opinion that less than half of those we received prior to deployment had any merit. Those that did were supported by common sense - a rational man, with just a little thought, could see the merit of the idea. "Lessons" without merit were usually equally obvious.

(b) In my opinion, most of the visits we had were unhelpful and disruptive. They tended to be DA-staffers and AMC people who had made short tours of many units and did not spend enough time in a foxhole to find out what life was really like for the soldiers. If an XVIII Airborne Corps CSM had visited us, he would have had tremendous credibility and our rapt attention.

(c) One personal experience: Following one of the itinerant briefings, a DA staff colonel, I think a Quartermaster, came up to me and very excitedly told me he thought I was the luckiest guy in the Army and he sure wished he could trade places with me. I tried to be polite because the man was obviously sincere, but it struck me as a completely inappropriate remark. For more than twenty years I had devoted myself to the military art, fully expecting, one day, to be called upon in crisis. I was confident in my own ability and that of my unit. If my unit was to go, I was content to go with it. Who better to support our Brigade than us? But I was not jubilant and could find no enthusiasm for the prospect of war. The experience was not something for which a prudent man hungers. Those who did not have to go were the lucky ones.

Packing and Moving Everything

As units began to tally their equipment lists and think about movement requirements - STONs, volume, packing material - it became obvious that we would need a large number of commercial ISO containers. Since we were near the port of Bremerhaven where containers were plentiful, and we had some influence with the local MCT (they were a Nord-Deutschland Community tenant and, therefore, responsive to our CG), and because the health of the system for handling containers in Saudi Arabia was suspect, I prevailed upon BG Rutherford to establish as policy our desire to use only 20'

containers unless there were none available. My rationale was selfish - if we got stuck, the 498th had enough 5 ton tractors and 30' trailers to move the containers over a period of time. A 40' ISO container was beyond our capability. This scheme was also predicated upon using M88s to lift the containers in an emergency, a bad solution for 20' containers at best. M88s cannot safely lift 40' containers.

2AD(FWD) ended up with about 280 containers, only about a half dozen of which were 40 footers. The 498th owned 85 of the containers. As will be shown later, the 20' container policy saved us from an impossible situation later.

The Difference Between What You Can Haul and What You Own

When we were first told to deploy, I proposed to BG Rutherford that we (the 498th) only take with us the supplies we could carry in our own trucks - just as if we were going to war to fight the Russians. He rejected this idea, citing the uncertainty of the situation, the fact that we might have to sit in the desert for a long time - while maintaining readiness - and the fact that his brief visit had convinced him that the logistical system wasn't working very well. We'd need everything we could take, either for ourselves or to help someone else. So, we charged ahead to take it all.

The biggest problem for the 498th was the Class IX ASL. Although we had pared it from 5500 lines to about 3800 during the prior year, the 3800 lines filled a warehouse! After we executed our wartime load plans and crammed extra items into every available location in our parts vans, we still needed 58 (of our 85 total) containers to pack out the rest.

Our customers were similarly perplexed. They owned too few tents, stoves, generators, and cots to house their soldiers. Things they routinely hauled on ammunition HEMTTs now had to ride elsewhere with the expectation that ammunition would soon fill the HEMTTs. The infantry and armor soldiers were affected most. They were forced to figure out how to carry at least their ruck sacks on their vehicles, with the expectation that they would have to live out of them for an unforeseeable time. The trucks and trailers that normally carried their rucks and their duffelbags were busy hauling other things. The immediate solution was more containers.

Lesson: Whatever process authorizes US Army units cargo vehicles is too restrictive. Motor pools have a legitimate need for things like tire machines, tool and parts cabinets, protective cases for ULLS computers, a place for the ULLS clerk to work - the equipment which many units put in containers for want of a truck. Maneuver units are the worst off. Many secured their soldiers' duffelbags in unit containers during the war, because they couldn't haul them.

Surely a soldier is entitled to have his personal gear nearby! Units ought to be allowed tentage and space heaters for all hands, as well. More importantly, they must have a way to haul them.

The problems of supply units are more complicated, encompassing philosophical arguments about what they ought to stock and what not. Whatever an FSB stocks it should be able to move in organic vehicles. We desperately need a modern, durable, semitrailer supply van. The M149-series are in terrible shape and they number too few.

Shipping the Class IX Stocks

I had few rules about officer assignments in the battalion. One of them was that the best QM or OD lieutenant would be the Class IX Platoon Leader. I believe in this rule more today than I did then. 1LT Monte Yoder, assisted by CW2 Sinclair Rowe, having been told to develop a movement plan that maximized organic vehicles first, then used 20-foot ISO containers, all without loss of location control, did a masterful job. The plan was so well designed and inculcated in his people, that I felt able to send 1LT Yoder on the advanced party in the middle of loading.

Under 1LT Yoder's plan, trailer bumper numbers became locations and all containers were given location placards. As an

item was moved from the warehouse to a trailer or container, its new location was recorded and the SARSS data base corrected. By careful supervision, we managed to maintain location control. The amount of detailed work and constant supervision required to get this done was tremendous. The Class IX Platoon exceeded even their own normally high standards in getting this done so well.

Many supply units lost inventory control when things went into containers. This materially decreased their ability to support their customers. They simply couldn't find things. The only way to regain control is to pull everything out of the containers and inventory it - a time consuming process, and quite pointless if the supplies are to be packed back into the containers and moved frequently. The 498th was blessed with the time to make a workable plan and execute it; but we also had the good sense to recognize the problem and act.

Shipping Ammo

Near Garlstedt, at a place named Luebberstedt, there is a NATO ammunition storage facility that was, in 1991, shared by the German, Dutch and US forces. The go-to-war ammunition for 2AD(FWD) was stored there under the care of the 498th Support Battalion's Brigade Ammunition Office. CW3 Bob Woodham, a handful of ammunition NCOs and the ATP Section from A Company did most of the warehousing and administrative work. All the units practiced emergency outload

procedures at least twice each year, so we were well familiar with getting our ammo out in a hurry. As we got ready for the desert, we found ourselves thrust into a curious new situation - uncertainty.

VII Corps wanted all the vehicles to be shipped combat loaded. This was not a problem, really, as the only issues were when the vehicles would be loaded with ammunition and the security requirements. The Brigade decided to do the loading by unit. As all the vehicles in a unit were pronounced ready to move, the unit's ammunition section drew from Chief Woodham whatever was required to load them.

Since only the combat vehicles were combat loaded, we had a lot of ammunition left over. We went through at least three iterations of shipping plans. Since 2AD(FWD) had many of the newest 120mm antitank rounds, we were interested in keeping them. Therefore, we proposed to containerize the rest of our basic load ammunition and ship it to Saudi Arabia ourselves. For reasons unknown to us, this plan was rejected by USAREUR. We were then told to get ready to containerize the ammunition for turn-in to USAREUR. The plan was to consolidate it somewhere and ship USAREUR ammunition stocks to Saudi Arabia *en mass*. This decision came so late that we were afraid we couldn't get it done in the time allowed. Just as we were beginning to figure out what lumber to buy for blocking and bracing, the plan was changed again. We were told to ship all our ammunition to USAREUR's ammo port, Nordenham, by

truck. A few items, mostly small arms and missiles, would be containerized. The bulky stuff would be shipped break-bulk. The plan, however, continued to evolve. As things ended up, we shipped some items by truck, some in containers, and the bulky items (artillery ammunition) by rail.

To get all this done, CW3 Woodham had to have operational control of all the ammunition people in the Brigade. This was not a problem for 2AD(FWD) because that is exactly the way we had done training ammunition draws and turn-ins for major training densities. It worked like a charm as we cleared Luebberstedt. All the ammunition people were used to working together and pulled as a team. We didn't see them in Garlstedt for a couple weeks and the dining facilities set a lot of soup and coffee to Luebberstedt, but they finished on time, with everything accounted.

Status of the Wheeled Vehicle Fleet

The 498th owned about 350 trucks of various sorts and almost as many trailers. We had a hodge-podge of makes and models, all vintages from the very old to the very new. Of particular concern to me was the status of the 2 1/2 and 5 ton fleets, which did most of our hauling, and our trailers, which were often neglected.

For a host of reasons, we had not done well keeping up with services. We had tried several approaches, with temporary success, but had not solved the problem. I felt that something drastic was required to correct this problem prior to deployment.

Marshman's Jiffy Lube

We did something we probably should have done months earlier. We borrowed some DS mechanics from the maintenance company to help the organizational mechanics and set up a multi-step service program. It went something like this:

Companies were allocated blocks of time in which to run through the process as many vehicles of the same type as possible. That is, all 5 tons went through as a group, company after company; then all the battalion's HMMWVs, then all CUCVs, etc. This made it easier to train and certify the mechanics on the rapid service procedures and ensured they worked on only one type of vehicle at a time. The company commanders were instructed to maintain section or platoon integrity insofar as possible. A make-up period was scheduled for each type of vehicle, at the end.

Step 1 was a supervised PMCS. Platoon Leaders and Platoon Sergeants reviewed results and verified deadlining faults. Deadlined vehicles and trailers were reported to a repair team - most of the organizational mechanics - who went to work on repairs

immediately. Operational vehicles went into the "Jiffy Lube" line with their assigned trailer.

Step 2 was a Jiffy Lube-style quick service with some extras. Using two outdoor lubrication racks and four service teams at a time, we ran vehicles through the process non-stop. The service teams had been trained prior to beginning, with each member working on certain items, assembly line-style. The first few vehicles of each type were handled slowly, to insure good results, then the line picked up speed. A Maintenance Technician headed a Quality Assurance (QA) team that checked quality as each vehicle came off the rack. If quality went down, the vehicle was recycled, the lube team critiqued and the process restarted. When it looked like we would finish a type of vehicle soon, the BMO so advised the Bn XO, who called the companies to roll the next vehicle type.

The Jiffy Lube changed oil and filters, lubricated all grease fittings, topped up transmissions, master cylinders, axles and final drives, lubricated trunnions, tested and corrected antifreeze protection, tightened nuts and bolts, made minor adjustments and picked up faults that drivers had missed. While the service team worked, drivers lubricated hinges and pivot points, checked lug nut torque and performed minor maintenance chores under the supervision of a maintenance sergeant specially chosen for this role. A record was kept for each vehicle. Vehicles needing further maintenance joined the repair queue.

Step 3 was a joint inspection of the vehicle by platoon or section leaders and the QA team. This check included a test drive and a trip to the brake test machine. As vehicles passed this QA check, they became available to load for deployment.

We ran our tracked vehicles through a modified process. Instead of the lube rack, they were serviced in a central area of the motor pool. Heavy vehicles (M88s, HET tractors and HET trailers) were serviced by another team, in their parking slots. ORF wheeled vehicles were included with the maintenance company's vehicles. ORF tracks were jobbed out to the maneuver units for service and inspection, assisted by our support team (now there's a switch!). We also had another small team that worked on nothing but trailer air and lighting systems.

Over a 10 day period, virtually all our vehicles and trailers were certified ready to deploy. We struggled with the deadlined stuff right up to the day prior to taking everything to the port, but when that day came, every single 498th Support Battalion vehicle was mission capable and made it to the port of Bremerhaven under its own power. We had come a long way indeed.

Lesson: This procedure would have worked just as well without the urgency of the deployment. It would have accomplished a significant

piece of our service workload in one, concentrated, tolerable burst. I should have done it sooner.

Training Certifications

Early in our preparatory period, after it had become apparent that we were looking at a few weeks before deployment, CG, 2AD(FWD), set some common sense standards for training certifications. All deploying soldiers would qualify with their assigned weapon within 90 days of deployment and all soldiers would be trained, tested and certified by our NBC staff on the individual NBC defense tasks in the Soldier's Manual. This included masking procedure, maintaining the protective mask, donning the NBC ensemble, MOPP gear exchange, individual decontamination, and First Aid, etc. Additionally, all individual protective gear was inspected by NBC Officers or NCOs and replaced if in any way doubtful. There were other certifications for the various NBC Teams. We also wanted to train as many Combat Life Savers as possible.

For the 498th, fitting all this in with the maintenance and supply business we had to do, the preparation of our own equipment and all the housekeeping tasks was a real challenge. All these tasks required the company commanders to manage certifications by name.

The Brigade assigned range responsibility to the units on a rotating basis. That spread the burden and allowed us to send people to the range nearly any day we wanted, so long as the S-3s coordinated prior. We fired all our weapons - M16A2s, machine guns, grenade launchers, AT-4 trainers - and even fired a few claymore mines. The small caliber weapons were done at the Local Training Area (LTA), which was right out the kasern's back gate; the larger stuff was done at Bergen, an hour or so away. The Germans who ran the Bergen Major Training Area (MTA) were very supportive in scheduling us, often on short notice. They were also juggling the requirements of the British brigade stationed at Fallingbommel, which was also deploying. Since one can't run a range without radios and phones, and it's tough to get there without trucks, in the Battalion, we decided to finish range activity before any other training requirements. The other training could be done with equipment to be carried by individual soldiers or left behind. Weapon firing went pretty routinely and we finished slightly after the maneuver units.

The NBC certifications did not go so well. Despite excellent preliminary training and motivated soldiers studying on their own, daily requirements for moving supplies, packing, hauling, and fixing - all the things support battalions do - drew away too many people. We were already working long days and weekends, so extending the business day to accomplish the training was not a practical option. As the date for movement of our equipment to port

became more and more firm, and it became more and more obvious that we would not finish certifications by that time, we were forced into a tiered strategy. The advanced party would be certified first, as a group. NBC teams would be trained and certified next, by company. Companies would do as many individual certifications as they could push through the process while still covering the mission bases - and the NBC Officer set up a flexible schedule to help. Finally, those left - the majority of the Battalion - would be certified after the equipment went to port, but prior to deployment by air.

When I briefed this plan to the Brigade Commander and the CG, they were uncomfortable because the length of the window between shipping our equipment and air movement was unknown. They were inclined to set a suspense much sooner than we could meet without relaxing the requirement to have NBC personnel do the certifications. After a brief discussion, the CG decided not to relax the standard and asked how I felt about asking for help from the other battalions. I had not considered asking for it, perhaps out of pride, but we were now close enough to deployment that it seemed important to finish preparations and let soldiers have whatever free time we could give them. We accepted the help. The next day, my S-3 met with the other S-3s and they worked out a plan which so improved our "throughput" that we finished NBC certification in just a few days, to the standard, every soldier.

This is a small example of the kind of teamwork that can develop within a brigade that owns all its parts. The other battalion commanders knew that the 498th had worked hard and done a good job preparing them to move. They also knew that the last minute surge of logistical activity did not allow us to begin packing until they were pretty much ready to go. They saw us finish weapons training with them, while we were all working hard, and knew from our meetings that I was expecting a struggle to meet the NBC certifications. When the call went out, there was no detectable rancor, parochialism, or argument. The right guys (the S-3s) were put in a room, they made a plan and everyone did their part to execute it, for the good of the whole Brigade. This kind of thing - extending oneself, doing something beyond normal, for another unit in the Brigade - was normal in 2AD(FWD). It was a direct outgrowth of teamwork among the senior leaders and lots of practice during training. Everyone working for the same boss made it a lot easier to organize this kind of thing.

We had been working on the training of Combat Life Savers for more than a year, toward a goal of one per squad or section. As part of this final train-up, the 498th ran one last course and issued all those certified the appropriate medical aid bag.

Unplugging from USAREUR

In Garlstedt, our normal higher source of supply was 21st TAACOM's 9th MMC. When we were told we were going to the desert with VII Corps, one of our major concerns was making a clean break from 9th MMC and getting picked up by VII Corps' 800th MMC. We had to find a way to get it done without losing requisitions.

We had some experience in the process. In 1989, just prior to my arrival, the 498th had been transferred from 9th MMC to a provisional MMC located in Rhineberg. At the time, substantial War Reserve Stocks were being moved into the Rhineberg facility and it was hoped the change would give us better support. The transfer had not been done well. Some 5000 outstanding requisitions dropped out in the process. They were still valid in someone's system, but not everyone's, creating confusion and a lot of unnecessary follow-up effort.

Less than a year later, budgetary reversals led to a decision to close Rhineberg. This meant we had to transfer back to 9th MMC. Having learned from the previous disaster, we coordinated the process aggressively and in detail. We even coerced the 9th MMC's ADP Technician to come to Garlstedt, where he agreed to both a procedure and a timetable. Attention to detail on our part, some creative special programming on 9th's part, and a lot of close coordination resulted in a smooth transfer. Our initial

reconciliation was in the 90% range. We worked off the problems and ran a second reconciliation the next week which was in the upper 90's, consistent with 9th MMC's internal performance standards.

As we got ready to unplug from 9th MMC, we went through a similar process, with both parties knowing how to get the job done and cooperating.

We went to 800th MMC shortly after notification and found them in complete confusion. They did not appear to be well organized to accept us and inspired little confidence. They were considerably distracted by the possibility that they would deploy soon. (They did - only a few days after our visit!) When my ADP Technician and Accountable Officer briefed me, I got that sinking feeling.

As it turned out, we deployed nearly last of the USAREUR units and 800th MMC deployed nearly first. They were gone well before we were ready to unplug from 9th MMC. We got the tapes and other products we needed from 9th and hand carried them to the desert with us.

Even before our equipment arrived, we sent our MMC people to Al-Qaysumah, to 800th MMC. They delivered the tapes and tried to coordinate a special reconciliation. Despite several attempts by officers of increasing rank, we were not able to get them to run a reconciliation after they loaded us. It took BG Rutherford's

intervention, at my request, to get a reconciliation. We didn't receive it until weeks after we had joined 1ID. It was about 85%, well below desired standards. We did the corrections but never got another reconciliation to prove they had been processed. The first time 800th MMC refused us the reconciliation, I knew we were in trouble, especially in Class IX.

What to do About C Company

Perhaps the biggest operational void in the Battalion, as we prepared for deployment, was in C Company, our Medical Company. The void was the absence of physicians. Like most support battalions of the time, we had a PROFIS list with the names of four or five doctors who were supposed to join us when we mobilized. We called 7th MEDCOM, USAREUR's medical command, looking for them. We weren't surprised to hear that the PROFIS program had been abandoned and we would, shortly, be given doctors from USAREUR assets.

A few days later, the doctor (COL) in charge of the Bremerhaven Hospital called me. He told me he was giving three of his staff to me for the duration of the deployment - a family practitioner, MAJ Charles Miller; a former director of the Garlstedt Health Clinic, CPT Amy Ekstrom; and the current director of the Garlstedt Health Clinic, CPT Michael Tuggy. He sang Charles Miller's praises, saying that he was smart, conscientious, dedicated and a teambuilder. He offered Miller as his best

recommendation to assume command of C Company. I arranged an interview with Dr. Miller.

CPT Bryant Harp, MSC, had commanded C Company with distinction for over a year. It was my best company and Bryant was my best commander. To displace Bryant, no matter that our doctrine places physicians in command of medical units in wartime, seemed unconscionable. The only thing that argued in favor of it was the fact that any of the doctors might outrank Bryant. It seemed desirable to have the senior doctor in charge of the other doctors.

I called Bryant to me and laid all this out for him. We called his First Sergeant over and went through the whole thing again. I finally decided to wait until I could speak to Dr. Miller.

To my surprise, Charles Miller impressed me from the very first. He was everything the hospital commander had told me. He had no field experience, though it was that which had attracted him into the Army. He was a family practitioner, not a surgeon. And, while he had already made his decision to leave the Army, he was willing to do whatever we needed done. I had Bryant and First Sergeant Denman join us.

I decided to honor the doctrinal requirement, though Charles felt it was unnecessary, with certain "up front" understandings. I told them that MAJ Miller would command, but that I withdrew Field

Grade UCMJ authority from him. CPT Harp would retain control of the property and run day-to-day operations. CPT Harp would be the planner, the manager, and supervisor. Dr. Miller would point him in the right direction to insure we could give the best possible medical care. This was to be a cooperative effort. The personalities involved were natural team players. I never regretted this decision. I know that all of the other support battalion commanders in 1ID put a doctor in charge of their medical companies. All regretted the decision. Two of the three felt the change destroyed the discipline of their medical companies.

The next challenge was to integrate the doctors. Dr. Miller joined us right away. He was a big help getting our medical supplies straight before we shipped out. Tuggy and Ekstrom came aboard a couple weeks before we left. It was enough time for them to begin training their Treatment Sections. We also picked up Dr. (CPT) Wallace from the Berlin MEDDAC, an optometrist from Landstuhl, and our own dentist, CPT Tom Kraklow.

I anticipated at least some of these people bringing large egos to the party. I knew Amy Ekstrom could be difficult to handle. I was tempted to call them all together and lay down the law, to let them know that I thought I was in charge and that they ought to get used to working for me. I thought better of this. It is inconsistent with teambuilding. We welcomed them as we did any new officers. This, too, was a wise decision. While Dr. Ekstrom was her

usual, cantankerous self, the others all made an effort to fit in. They were rapidly integrated into C Company and they made us better.

Planning

I have long believed in two operational principles for logistical operations: detailed planning and the reduction of leadership burden through SOPs. We had applied these principles during our 1990 CMTC rotation and found them useful. We redoubled our thoroughness as we planned for deployment.

In the supply business, the process starts with a requirement. There are two general types of requirements: customer requests and estimates. Responsiveness demands that logistical units analyze the maneuver plan and estimate what will be needed and when it must be delivered. Once these requirements are identified, it is possible to backward plan everything necessary to deliver the goods to the right place, on time. In effect, one can choreograph resupply - make a schedule, day by day. If one waits for unit requests, the best one can do is untimely support. In an FSB, the Support Operations people learn quickly, by experience, how many pallets of MREs the Brigade requires per day, how many gallons of fuel, etc.

In the 498th, we attempted to reduce all supply requirements to truck loads. The A Company (Supply and Transport) commander then

identified the truck and driver to haul the load, as a part of his internal planning. We used an execution matrix to control timing. This process reduced routine resupply to a matter of SOP - what had to be delivered was fairly constant, timing varied "somewhat". We practiced this in the field and found that the process allowed us to hand supervision of routine missions almost entirely to our NCOs. The officers only had to intervene when something changed. Maintenance and medical requirements are a bit more difficult to quantify, but timing and expertise issues can still be worked out in this way. Done correctly, this process simplifies daily life, making the routine the responsibility of NCOs. The officers can then concentrate on more complex problems.

Deployment is a complex problem. We could not afford to leave equipment behind, we had to be able to find things when we needed them, and we had to optimize our vehicle loads. We had the traditional problem of too many forklifts and no way to move them. (Asking the engineers to do it is a laugher. They have more stuff to move than we have.) We had more Class IX than we could lift. We were building up our rudimentary Class III(pkg) ASL to something that would be useful in the desert. All these things and more required detailed planning, right down to the bumper number of the truck designated to carry each load. We worked through this process in significant detail, often test-loading vehicles. Since we had to block and brace loads, then reduce vehicles insofar as possible, I

used the Field Grade officers of the Battalion to inspect loaded vehicles and their documentation.

This process caused us to identify, in terms of truck loads, everything we had to move, and prioritize the loads. When it came time to move the Battalion, there was never any hesitation in the Truck Platoon over which load to hook up. Similarly, we always knew ahead of time which loads would move in our second lift. We were not spending energy replanning.

Heavy Lift

We had six M911 Heavy Equipment Transporters (HETs) and, thanks to an MTOE error, seven M747 semitrailers in the 498th Support Battalion. Aboard ship, they carried loads in order to maximize what would go into the vessel, but we could only put smaller trucks on them because of height restrictions. In SWA, we made full use of their size and capacity every time we moved. They helped haul broken tracks and our large forklifts.

A boon befell us as we prepared for deployment. During the Summer of 1990, our engineer company had received the new, drop-neck, heavy lift trailer they needed for their D7F bulldozers. They were directed to transfer their old, lowbed trailers to 2-66 Armor, in anticipation of mine roller fielding later in the year. 2-66 Armor also received three almost new M931 tractors. After

notification of deployment, the Brigade asked about mine rollers, thinking we'd need them in the desert (we did!). We were told we would receive the rollers with all support items in Saudi Arabia. The next day, the 498th signed for the three tractors and three lowbed trailers. They were excess to MTOE but, along with the HETs, they gave us the means to move all our forklifts and cranes. A tractor and lowbed trailer should be issued with every forklift, in my opinion. They saved us serious mobility problems.

Deployment

Near the end of December, about 6 weeks after notification, it was time to roll everything to the port of Bremerhaven.

Tracked vehicles were rail loaded at the Garlstedt railhead using procedures practiced several times each year, even by the support battalion. Loading, tie down and inspection by the train master were safe and uneventful. We did this once each quarter in order to get equipment out to MTAs, so were well trained. It took about nine trains to haul everything out. That was only a day's work. Our tracked ambulances, ORF tracks, M88s and support team M113A3s all went with this package. We sent guards with the trains. It was a short trip to the port - just a few hours. We bused drivers to the port to unloaded everything, then turned the vehicles over to a Port Support Activity (PSA) provided by 3ID. We also put some guards and unit key custodians in the PSA. Their job

was to augment port security (combat vehicles were shipped combat loaded with ammunition and crew-served weapons) and ensure that access to the vehicles stayed in our hands.

In retrospect, the key custodians were a waste of manpower. Even though they never left Karl Shurz Kaserne, the key custodians were frequently not available in time to suit those loading the ships. Locks were routinely cut, whether due to loading time constraints or laziness on the part of the PSA. I don't know if the security guards prevented any problems or not; but we all felt better about the security arrangements knowing that some of our people were involved.

The wheeled vehicles moved by convoy to Bremerhaven. Over a two or three day period, 2AD(FWD)'s whole fleet drove the 40 miles to the port and staged for loading. The last day's convoys were 498th trucks. In typical north German weather - 33 degrees with horizontal rain - we started before daylight and finished after dark. Every 498th truck made the trip under its own power. We were the only unit in the Brigade to accomplish this. The last serial was from A Company. When they pulled in, then-MG Laposata, DCSLOG, USAREUR, was present with a PAO team. Ours was the last unit to move to Bremerhaven. He gave the driver of the last truck a coin and took photos. Then we put everyone on a bus and rode back to Garlstedt. We still had more to do.

Movement by Sea

After everything was documented and staged at the port of Bremerhaven, our responsibility for it, technically, was over. Pride of ownership is tough to overcome, however, so we participated willingly in the guard described above. We also asked for volunteers to travel with the equipment aboard ship, as "supercargoes". We hoped for mechanics but would not take less than drivers licensed on more than one type of vehicle. One of the lot had to be SSG or higher in rank. The idea was for the SSG to be NCOIC of the supercargo detail on a given vessel. The supercargoes were promised a relaxing 10-day cruise to the Persian Gulf, via the Mediterranean Sea, and good treatment enroute. In exchange, they had to leave with the vessel, perhaps two weeks before the rest of us. We had no problem getting enough qualified volunteers.

Aboard ship, supercargo duties included daily inspection of vehicles and cargo, logging of discrepancies, and minor maintenance. We hoped this would prevent pilferage aboard ship. I recall a big discussion about the pros and cons of sending these soldiers with or without weapons. My personal opinion was that this was a military deployment to a hostile area and they should go with weapons. The NCOIC had enough people to arrange security. Besides, on the other end, they would be carrying these weapons for a long time; just as well they get used to keeping track of them.

Ultimately, that view became Brigade policy. The super-cargoes went armed.

The Brigade's original movement plan, which I advocated, was for the 498th's equipment to be shipped first. We would also be first out by air. This would allow us a day or two to get organized and help receive the rest of the Brigade. It didn't work out that way.

At the end of December, when the equipment was being shipped, there was a lot of confusion over shipping schedules and which vessels would take which cargo. I gathered that this stemmed from the availability of some foreign flag vessels of uncertain capacity, vessel breakdowns and changes in priority. The impact was not significant, except that we found ourselves in a disagreeably uncertain situation that was entirely beyond our control. At some point it seemed likely that USNS *Capella*, one of the fast sealift ships, would call at Bremerhaven and take most or all of the 498th's equipment to Saudi Arabia. This was fortuitous because *Capella* could make the trip in a week, which would give us a cushion of one or two days, we thought, in preparing to receive the Brigade. Something happened to *Capella* and she was delayed. The *Saudi Makkah* arrived instead. *Saudi Makkah* was a fair sized Roll On-Roll Off (RORO) ship of Saudi Arabian registry. She took about two-thirds of the Battalion's equipment. We were lucky enough to be able to watch the loading. A day or so behind *Saudi Makkah*, *Capella*

arrived. The rest of our stuff and most of 2-66 Armor was loaded aboard *Capella*. A bunch of trailers from both units were separated from prime movers in the port in order to fit things into the ship better. These trailers arrived on the last vessel, having been put aboard as part of "port clean-up".

As one can deduce, *Capella* passed *Saudi Makkah* and arrived in Jubayl several days ahead of her. Our most needed equipment (fuel and ration trucks) was, of course, aboard *Saudi Makkah*. You just can't plan movements of this type at battalion level! In retrospect, we were extremely thankful that everything arrived in good shape, ready to roll. We had a few flat tires, dead batteries and one CUCV that was parked too long behind an idling M1A1 tank (the CUCV was a total loss - the heat from the tank burned or melted the wiring harness, paint and all plastic parts from the front bumper to the driver's seat).

We were fortunate that we did not have to load our own equipment in Bremerhaven. A PSA from 3ID's DISCOM (mostly their MSB) did it. To be sure, they were not as careful with our stuff as we would have been, but having them available was the difference between some family time during those last few days and more work. By the time we deployed, the PSA was experienced in loading ships and things ran quite smoothly, the lock cutting excepted. Had we done it ourselves, it would have gone slower while we learned the ropes.

Movement by Air

A couple weeks before the air movement began, LTC Chuck Munson, the commander of one of V Corps' maintenance battalions, came to Garlstedt. He had been assigned the Departure Airfield Control Group (DACG) mission for the Brigade's departure from Hamburg International Airport. He briefed us on tentative plans, went to Hamburg for several days to finalize things, then returned with a more complete briefing. Our CG asked for a walk-through (a rehearsal) of the process. The rehearsal was held a few days before we departed. All the Brigade's senior leaders participated.

We were told to plan for 120 seat C-141s for the aerial deployment. Within the 498th, I directed that aircraft would not be filled by company - we'd have a mixture on each flight - and that unit leadership would be spread across our flights. This made manifesting a bit more complex, but, I felt, reduced risk if something happened to one of the aircraft. We used company commanders and staff captains as "chalk" commanders, responsible to account for their 120 soldiers from weigh-in in Garlstedt, until delivery to the company commander in Saudi Arabia. Each chalk commander had a predeployment meeting with his/her people to lay down the rules and explain procedures. We had no accountability problems using this procedure.

Early in the morning on 7 January 1991, the first planeload of us gathered with our baggage at the Garlstedt gymnasium. We weighed in, accounted for everyone, did last minute POM checks, then loaded on commercial buses for the 2 hour ride to Hamburg. Like the sealift plan, 498th was to be the first unit to move. We processed into the DACG, helped build baggage pallets, then settled down to wait for the airplane. The DACG was set up in half of a rented commercial hanger. There was administrative space, a big television and VCR, plenty of chairs, bunks for about one plane load, and beverages. A good set-up.

It wasn't long before we were told that our plane had been delayed due to mechanical problems. Somewhat later, our next chalk arrived to process for their flight. I asked LTC Munson who had to approve the first chalk using the second chalk's plane. He was unsure and everyone to whom we spoke was unsure. Finally, I went to CPT Thomason, commander of the second chalk, and told him we were taking his airplane so that we would arrive in Saudi Arabia in the sequence we had planned. What choice did he have? He waited for our broken plane to arrive and we left on his.

The flight was relatively uneventful. We were packed in tight. Those in front were too hot, those in the rear too cold. The crew went out of their way to take care of us. Eight hours after boarding, the tail ramp went down at King Fahd Airbase and a guy on a motorbike welcomed us to Saudi Arabia. We fell everyone in and

accounted for them, then followed the instructions we had been given - "Walk toward those lights over there, in the distance".

In the lighted area, I found my S-3, who met us with part of the advanced party. While the other advanced party folks put the chalk aboard buses, we got into the S-3's CUCV and headed north. We barely beat the buses to the dock area at Jubayl. The troops must have had an exciting ride. Over the next 36 hours, the rest of the 498th arrived.

Chapter 3

Reception and Preparation for Combat

The Advanced Party

Early in December, it became apparent that we would have the opportunity to send a Brigade advanced party to Saudi Arabia. The party would be composed of very small contingents from each unit, just enough folks to make initial coordination for reception and to stake out our first desert assembly area. The initial space allocation allowed each battalion to send an equal number of people. Since the 498th supported the whole brigade, we requested and were granted a few extra spaces for some MMC people. They would be the "getters" for the advanced party. Each unit was allowed to take one vehicle, CUCV or HMMWV. We volunteered a 2 1/2 Ton cargo truck as an additional vehicle, because we felt the party could not haul enough rations, tentage, water and supplies to sustain itself in the desert. The "deuce" was also approved.

All the participants carefully decided what equipment to take, inspected it prior to loading, and made sure it stayed put throughout the shipping process. This was the beginning of the development of good habits. Soldiers in general realized they had to safeguard their life support equipment.

The advanced party departed on Christmas Eve. This became known only a day or two beforehand and was absolutely incontestable. So, the battalion commanders had the pleasure of telling our advanced party soldiers that they would miss Christmas at home just when it was looking as though the rest of us would likely be home for New Years as well.

Like the other units, we hand picked our advanced party. In the 498th, however, knowledge and experience were not the only criteria for selection. We only sent "go getters" who would find a way to get things done. Included were Mike Leatherwood, the S-3, who always seems to find a way to get things done, Vinny Boles, the MMC Chief, who is one of the most enthusiastic, persuasive officers I know, CW3 Willie George, the PBO, because he has the rank, stature and disposition to get things done, and WO1 Joe Reepe, an ADP Technician who understood our operational needs and had the energy and facilitative personality to make things go. We also sent a senior lieutenant from each company and a few of our best NCOs. Everyone got a driver's license for every type of vehicle in the party before they left.

The personnel choices turned out to be good ones. After landing at King Fahd airport, the party drove to Jubayl and checked out our accommodations, went out to the desert, to IID's area, at a time when there wasn't much out there, made all the logistical contacts we needed, and got back in time to receive the main body.

From their accounts, the difference between getting something done and not, between coordinating something and not, was often the willingness to hitch a ride. The group had only a few vehicles. When the vehicles were busy, the people not in them were on their own and had to get around as best they could. Many, in this situation, chose to kill time. Our group found ways to get around. They influenced the action positively for us. Thus, when we arrived, they were able to give us a warehouse in which to sleep (standard fare), enough cots for the Battalion, and a description of the daily routine, so that company commanders could tell their soldiers. Because they had already coordinated with every organization we had identified for them to contact and more, we also knew something of the greater logistical situation. They already knew that the repair parts system was terminally ill and had found the yard where ALOC shipments were held. They knew how many pallets had arrived for us, where they were located and which ones had been pilfered. Not many advanced parties accomplished so much.

Reception of A/C

As I indicated earlier, Mike Leatherwood picked me up at King Fahd in the early morning hours of 8 January 1990. Some of the others from the advanced party were there as well. Just glad to see us, I guess. In any event, Mike had worked out a schedule so that every plane would be met and had checked on the buses that picked

up each group. He had already laid out the floorspace in Warehouse 8, which was to house us. There was little to do except sign out the cots and bed people down as they arrived.

Life in Jubayl

In Jubayl, there were two places to live: the warehouses and the tent city. The warehouses were on the pier, in the port. They were big, sheet metal buildings with a concrete floor, six large doors, and a "dog house" at each end. Each "doghouse" had a small room and a large room in it. The "doghouse" was up a flight of stairs, so that it overlooked the warehouse floor, and had a balcony, obviously to let supervisors watch the floor. I took the small room for myself and my CSM, partly because it would allow us to keep an eye on things, partly because it would make us more visible to our soldiers. The large room we used as a meeting room.

Beneath each "doghouse", on the main warehouse floor, was a fenced security area. We controlled the keys for one area. Another unit, which had occupied the warehouse ahead of us, had some gear stored in the other. There was also a collection of people living in the other "doghouse", 1AD guys, I recollect.

There were no sanitation facilities in the warehouses. Instead, there were several home-built latrines, showers and washstands outside, between the buildings. I don't know what the

basis of issue was, but there weren't half enough latrines. They were emptied by a contractor once each day. Initially, this seemed to be working okay. But as the warehouse filled - we ended up with over 1200 soldiers in it - the situation became critical. The CSMs divided the latrines among the units and we kept them as clean as we could, but there were times when the urine overflowed into the streets. We tried to get two pumpings per day, which would have solved the problem, but couldn't. Everyone blamed the Marines, who owned the port and controlled the contracts, but it may be that there was more work than the one contractor could do. I am amazed that more of us didn't get sick!

The showers were wooden affairs with metal tanks on top. They would have been adequate, had it been summer. In January, even in Saudi Arabia, the shower water stayed cold. At the time, there was nothing we could do about it. We had no immersion heaters. I don't know where the water came from, but, from time to time, we provided drivers to haul it.

We had two contract meals per day, breakfast and supper. They were fed centrally, initially in front of Warehouse #6; later, inside it. The breakfast menu was unvarying but adequate. Supper was one of a half dozen menus. None of it was wonderful, but it was better than B or T-Rations. I am aware that there were some problems with the contractors, but these were apparently fixed with minimal interruption, as I don't recollect going hungry.

The alternative to the warehouse area was the tent city. A mile or two outside of town, it was near the Jubayl oil refinery. The tent city was a collection of tents aptly named "The Dew Drop Inn" - their motto "Always Room For One More". Some of the tents were on concrete pads, most were not; some had electricity, most did not. Someone was building pads for more tents.

The tent city had the same latrine and shower arrangements as the warehouse area, and had the same problems. Messing was conducted in a big tent, of the German Fest Tent variety. Troops were fed the same sort of contract meals we had at the warehouse area.

In both locations, bottled water and lunch MREs were issued to units in bulk. We put ours inside the cage in the warehouse and issued them to the company mess sergeants daily. In retrospect, this scrupulous concern for ration accountability was misplaced, a throwback to the days of training exercises in Germany. We quickly gave it up when we left the port.

In my opinion, there were no advantages to living in the tent city. I felt we had more autonomy in the warehouse area - perhaps because the Brigade headquarters was in the tent area. The warehouses were certainly cleaner than the tents. Mike had made a choice. He could have gotten us into the tents if he had wanted. I was content with his decision.

Training in Jubayl

We spent a couple of weeks in the port. We had with us only what we had carried onto the plane. Since we had no vehicles except the two advanced party trucks, we were severely restricted as to what training we could do. We did some individual soldier skills training, more for something to do than any other reason. We were pretty well peaked by our training certifications. We didn't put much pressure on the NCOs about this. It was just a useful way to fill time and that was obvious to all. The Brigade made arrangements to get some folks to a rifle range, but the numbers were so few and the arrangements so difficult that I let that pass. In a big sandlot, adjacent to the tent city, an area was set up for the maneuver soldiers to practice dismounted drills. This didn't pertain to us, so we did not participate.

For my own benefit, I got to go to Dahran, to 22d Support Command's headquarters. I was curious to get a feel for what was going on. As it turned out, MAJ Dan Matthews, an alumni of the Battalion, was doing transportation planning down there. Dan talked me through the reception and onward movement process and got us an update on our ships - more than I had hoped to find out. I left when MG Pagonis came in for a meeting. He seemed in an unfriendly mood. Had a lot on his mind, I guess.

TAA Reconnaissance

Shortly after the Brigade closed in Jubayl, COL Weisman sent the G-3 and our advanced parties to TAA Roosevelt. Their mission was to move in with 1ID, to whom we would be attached, and establish unit areas for us. A few days after they left us, he rounded up the battalion commanders and took us out there. We went by a devious route - down to Dammam, where we spent the night, then a C-12 ride from Dharan to KKMC, where a 1ID Blackhawk picked us up and flew us to the TAA. After the usual welcomes and briefings, we were picked up by our own guys and hauled to their tents in Durable Base, the DISCOM's base camp. It drizzled the whole time.

We spent the night jammed into tents with our guys, then went out into the desert the next morning. Each unit had drawn a Magellan GPS. We had been shown one in Garlstadt and understood its potential, but this was our first practical experience. We used them to lay out the corners of our unit areas in the TAA. They were very useful as the TAA was a flat, featureless gravel plain. Only bedouin fire barrels provided any relief.

After we got back to Jubayl, I resolved to send my company commanders to the TAA. We made a second trip, by road, after our vehicles arrived. I think the experience was useful in that they were finally able to see the immensity of the open desert. They also got to drive Tapline Road, our convoy route, and experience

the danger there. It helped them prepare our soldiers for the convoy.

Reception of Equipment

During the couple of weeks in Jubayl we got to see all kinds of cargo come and go, and all kinds of ships. The Brits unloaded an entire cargo of ammunition at our back door. Several other vessels from Europe came and went, including a brigade from 3AD. We got to see the port work. Our ammo guys even helped with one vessel of US ammunition - they segregated things into compatible loads so the trucks could clear port safely. We were pretty well prepared when our equipment arrived.

The Brigade Commander picked Mike Leatherwood, my S-3, to head up our reception effort. Mike's job was to match unit drivers with vehicles once they were staged in the port, get them through the final LOGMARS check, into convoy serials and on to our own, unit staging lines at the tent city. Another unit did the actual off-loading.

Capella arrived first, of course, which meant that most of 2-66 Armor was on the ground before us. We got about a third of our stuff, but most of it was from the maintenance company. What we needed most were the supply trucks. There was a fuel point at the tent city, so we arranged for them to help us top everything off.

I suspect their fuel came from the local refinery. In any event, it wasn't a big problem. Audi Makkah came next. We had all but a few cargo trailers by the time she discharged. As our equipment was unloaded, we moved into the tent city. We wanted to be with our equipment and ready to move as soon as we were told. Sadly, anything that wasn't nailed down or guarded was stolen. This was one of my biggest disappointments.

Some of our soldiers were detailed to the unit doing the unloading. They were mostly truck drivers from A Company's truck platoon. They worked shifts and lived in Warehouse 6, where the PSA headquarters was located. A day or two into unloading, the drivers picked up one of their own 5 ton cargo trucks, A315, and began to use it to shuttle their people to and from work. One night, the truck was parked in front of the warehouse and secured with the usual steering column lock. The area was under guard, though the guards' instructions did not specifically include vehicle security. During the night, the vehicle was stolen. In all likelihood, it was taken by Marines. Even our CID agents couldn't find it. Sadly, one of my company commanders took some heat for this. The Brigade policy, which we had disseminated within the Battalion, was that all vehicles would be secured and guarded by the unit that owned them. Since the company commander knew of the policy but had approved the deviation without consulting anyone else, his judgement was questioned. While I was sympathetic and might even have okayed an alternate security arrangement if I'd been asked, I

could not battle hard in this case. He knew the rules and consciously made an exception without consulting anyone. While I applauded the initiative, I had to deplore the lack of consultation. Despite the best intentions, this young captain found a way to get himself in trouble.

Lesson: (a) We were absolutely unprepared for the larceny of equipment that went on in SWA - U.S. units stealing from other U.S. units. Even in the desert, when we were near units outside our Brigade, we had to guard our equipment closely. In those early days, several vehicles were stolen from 2AD(FWD), including an engineer company bulldozer. Our CID team recovered them all except the 498th's truck.

(b) The second lesson is for young officers. When one is given specific instructions, absent an emergency, talk to the boss before deviating from them. If you honestly try but cannot reach your boss, you may exercise whatever option your judgement dictates. You then have the right to expect some support for any reasonable action. Changing things on your own, without attempting contact, can be risky. In the case above, there was no consultation, though it could have been easily arranged. Note: This was not a career-ending problem, given the circumstances, but it certainly lowered the company commander's stock in his senior rater's eyes.

Scud Alert!

The air campaign began while we were still in Jubayl. One of the things we had been caused to practice to prepare for it was a SCUD Drill. When the warning was passed, everyone: donned their MOPP suit, masked and took shelter against the outer wall of the warehouse (the lower 3 or 4 feet was concrete). At about 2 am, one morning, the phone rang and we did a real one - no drill. It was great fun. We passed the word quietly. There was no panic. Unit commanders accounted for their people and reported back. The NBC Officer, CPT David Velasquez, manned the phone with CPT Mark Peay, the Communications Officer. CSM and I circulated. After 30 minutes or so, we got an "all clear" and everyone went back to bed.

I'm not sure whether the port of Jubayl was ever a SCUD target or not - I think not - but the SCUD drill described above became a nightly ritual. Sometimes we executed it two or three times. Sometimes we stayed masked for over an hour. Most of us slept in our MOPP suits. We began to question, through our Chain of Command, whether we were a target and why we were being caused to react as though we were. Our Brigade Commander, COL Dave Weisman, was the one who - correctly - questioned this practice most vociferously. Pursuant to these questions, we were offered an explanation that went something like this:

SCUD launches were first picked up by AWACs, which alerted someone way higher in the Chain-of-Command than us by radio. A few seconds into flight, either AWACS or Patriot radar operators could determine a probable target area. This was also passed down by radio. The system in place alerted everyone based on the initial report of launch. Since we were already alerted and at high MOPP, there was no need to pass the second alert message. It had been decided to alert us based on the first message in order to give us more reaction time. Time of flight was so short, it was tough to get the word out if the alerting headquarters waited for the second, more specific, warning message. Word was passed to us by the Post Support Activity, a battalion from 1ID(FWD). Their parent headquarters was in Dammam, which probably was a target. So when Dammam alerted, so did we.

I suspect that COL Weisman took some heat for this, but he decided not to alert unless we were in the anticipated target area. This required a reworking of the notification system, as the PSA had called us in the warehouses direct. After the change, we only took the alert call from our Brigade. It was a problem for the PSA because units were intermingled in the warehouses. They were still trying to alert non-2AD(FWD) units, in the same buildings with us, even though we had decided not to respond. An awkward situation. I'm sure they were as glad to see us leave as we were to leave.

Lesson: This was probably the most valuable lesson I learned in this whole experience. For the entire Cold War period, our NBC training has been totally psychotic. It is based on irrational fear. "Learn to do this like I tell you or you'll die a horrible death." There wasn't enough explanation of what it takes to build a toxic vapor cloud, how long liquid agents stay active, etc. The SCUD alert episode taught me that everything must be questioned. The actions we were taking were reasonable only if we were a target. They were disruptive and demoralizing, otherwise. We all felt that something was wrong with our situation; that what we were doing didn't seem to make sense. COL Weisman recognized that something could be done. It was a good thing, too. After several nights of interrupted sleep, with tensions already running high, one could almost feel morale sagging. We were glad to leave Jubayl because we knew we were leaving the SCUD bullseye behind.

Weapon Safety

The Brits, US Marines and Saudis provided port security in Jubayl, with minor help from Army MPs. We, the tenant units, helped by controlling access to the warehouse buildings. Normally, only two of the six doors were open, one each on the front and the back of the building, and these were open just enough to allow the passage of only one person at a time. A guard, drawn from the tenant units, checked identity at the door and controlled access.

On the eve of the Air War, it was determined that the threat to the force was likely to increase and that additional security measures would be prudent. Partially filled ISO containers were placed in front of each door to the warehouses, so close to the front of the building that a vehicle could not penetrate the doors. The door guard was doubled, outside activity was minimized and additional guards were positioned outside, some on rooftops, and some roving, all with radios. Throughout, all the guards were armed.

During the period of heightened security, some ammunition was issued to all the soldiers, to be used if required for self-defense or reaction missions. In fact, we rehearsed reaction plans. Soldiers were instructed to keep their weapon and ammunition with them at all times, but not to load their weapons unless they were ordered to do so or they were on guard duty. In anticipation of problems with the handling of the ammunition, a clearing station was set up at each door guard post and the guards were required to ensure that all personnel cleared their weapon prior to entering the building.

In the few days during which these rules were in force, we had at least two accidental discharges at Warehouse 8. One weapon fired into the clearing barrel, as intended. The other fired through the metal side of the building. No one was injured in either case.

Both cases were caused by lack of familiarity with the M16A2 rifle and correct clearing procedures. Neither perpetrator dropped the magazine prior to charging the weapon and pulling the trigger. The clearing barrel "miss" was even more egregious because the soldier did not even take the care to point the weapon into the barrel!

I chose to approach the first incident as a training issue. The soldier was reprimanded, but no other action was taken against her at that time. We instituted mandatory weapon training for all tenants, intending to train the clearing drill and add emphasis. After the second discharge, the classes were repeated with a more draconian compliance certification required by the Chain-of-Command.

Lesson: My CSM wanted me to discipline the two soldiers - to administer Field Grade Article 15s. I did not do it then because of the stress everyone was under and because I believed we had not done a good job in training. We were not expert in handling loaded weapons. In retrospect, I believe CSM Gallardo was right. I should have dealt sternly with both soldiers. I believe this now, because I saw no improvement in the handling of weapons after the training. I did not detect what I felt was an appropriate urgency among soldiers or leaders over this issue. Had we pushed harder, we might have prevented the third and final incident, an actual shooting.

On the morning of the attack into Iraq, at a prearranged signal, company commanders directed their soldiers to "load but do not lock weapons". This meant that soldiers should clear their weapon, put it on "SAFE", and insert a loaded magazine into the magazine well. They were not to chamber a round. First line leaders were to verify this prior to movement. In the maintenance company, a sergeant, riding shotgun in a truck, violated the procedure. After loading his weapon, he laid it across his lap. To ensure the weapon was on safe, rather than turn it over and look at the selector lever, he elected to pull the trigger. It was not on safe and he had chambered a round. The weapon discharged and the bullet struck the driver in the right side of the pelvis, exiting his body near his front midline. The soldier was evacuated and recovered nicely, but the whole incident was unnecessary and derived from carelessness.

In this case, I did discipline the sergeant. In fact, I reduced him one grade. It is my belief that he reacted negligently and wounded one of his own soldiers as a result. In so doing he violated one of the fundamental trusts of leadership - he failed to act responsibly to safeguard his people. In reaching a decision about the sergeant, I wrestled with the weapon training argument offered above. Was this young sergeant a victim of that same problem? I finally decided that there are differences between the Private and Specialist who committed the warehouse discharges and a Sergeant. A Sergeant has considerably more experience and has

accepted, by virtue of his rank, the responsibility for training and caring for soldiers. In so doing, he has accepted responsibility for himself, to see that his own basic skills measure up, so that he can teach and lead. I felt then and still feel that this higher standard is justified as is our expectation that leaders will, in general, meet higher standards. This sergeant needed to back up professionally, get his house in order and try again to become a leader, having thought a bit more about the responsibility.

In retrospect, I should have tolerated no sloppiness whatsoever in the handling of weapons. Had I disciplined the first offender, I could have made weapon safety instantly paramount in everyone's mind. This receptiveness would have made the training more effective and might have prevented recurrence.

Painting Vehicles

All our vehicles went to Saudi Arabia in NATO camouflage. We had discussed trying to paint them sand-colored in Garlstedt, but decided not to bother because the safety requirements were tough and we had enough else to do. Once we got there and saw the desert, however, it became more important to us. In flat, virtually featureless desert, NATO camouflaged vehicles really are obvious.

Even dug in they are visible for a long way. So, in Jubayl, near the tent city, we lined up to paint.

Combat vehicles went first, so the ORF tracks and our M113A3 ambulances went through with the tanks and Bradleys. The wheeled vehicle fleet was next in priority, with the maneuver unit's equipment going first, then the 498th's. By this time we knew we would likely run out of time, so we prioritized things within the Battalion, much as the Brigade had prioritized over all. Anything that routinely went forward of the BSA got painted ahead of everything else. This meant that leaders' vehicles, the fuel tankers, the truck platoon, the wheeled ambulances and the rest of the ORF fleet got paint. As it turned out, more than half the Battalion was painted.

The paint job was really weird. We taped lights, reflectors, mirrors, glass and plastic. They painted everything else. A HMMWV took about 20 minutes, complete with drips and runs. But it was CARC and it was the right color for the Saudi desert, so we didn't mind.

Clearing the Port

As previously stated, when our equipment came off a ship it was parked in long rows, pretty much for the convenience of the unloaders, so that they could get things out of the way quickly.

The units' task was to move those rows from the port to the tent city expeditiously. At the tent city we topped everything off with fuel, then parked in rows by unit. While driver teams were moving the equipment to the tent city, we used buses to carry the remaining people over. We ended up moving the whole Battalion over 2 or three days. By then, the tent city was thinning out; whoever had been there before having cleared out.

We stayed in the tent city just a few days, only long enough to receive all our equipment and get the combat vehicles painted. We were delayed because the HETs we needed to move the tanks were committed to units moving ahead of us. We saw units of 1AD and 3AD move through Jubayl ahead of us. Then the HETS began to show, our containers began to disappear and the Brigade HQs began to pass road clearances and timetables to the units. We were finally headed for the desert!

The Great and Mystical Convoy

In preparation for the move, we loaded everyone up with bottled water and MREs. It was Brigade policy that every vehicle carry five gallons of water. The bottled water was in addition to that. Every soldier drew a few bottles. We forced two days of MREs on them, over and above their USAREUR-prescribed three days. We had done this before, on exercises in Germany. The goal was to protect the prescribed load for use when we couldn't get rations. We tried

to do this everytime we moved in the desert, from then on. It prevented us from having to panic over MREs whenever we stopped.

The move to the desert was from a secure port area to a secure Tactical Assembly Area. No headquarters controlled the move. The distance was too great. Our Brigade controlled things at the starting point by keeping a radio up and requiring units to report the departure of serials. Departures were in turn reported by Brigade to the transportation system. A few miles north of Jubayl, as we ran out of radio range, serials were on there own.

We moved the Battalion in serials which maintained company integrity as much as we could. A and B Companies were too big and had to move in a couple of serials each. HHC went first, so that we could get the TOC in and a radio net on the air. I moved with HHC, leaving the XO to kick the other serials along. Each serial had medics, fuel, and a maintenance party in it. The Battalion Maintenance section moved last.

We had a long way to go! The convoy route went north from Jubayl, on a four lane divided highway, then northwest on a pretty good two lane road, and finally west on Tapline Road. Tapline was a narrow, crumbling two-lane carrying far more traffic than God ever intended, at much higher speed than a rational man would allow. The distance we covered, from Start Point to Release Point

was about 300 miles. After the release point, we drove about two and a half hours further, due north, into the desert.

The command and control plan for the convoy was, to say the least, loose. Brigade had good control of the start point. We had good enroute control of each serial because we had officers and redundant radios in each serial. There was a Convoy Support Center about half way. It was the one mandatory stop for the entire Battalion. It was also the only preplanned refueling opportunity and every vehicle required fuel. Due to the length of the column, there was no practical way for the Battalion or the Brigade to control things along the route of march, even by leap-frogging control stations. Worse still, we had no positive control at the terminus.

Our instructions were to go west on Tapline Road a certain number of kilometers past twin radio towers, then turn north into the desert. If we went too far west, we were told, 1st Infantry Division MPs would stop us and turn us around. We also had sent word to our advanced party to position themselves by the side of Tapline Road, to catch serials as they arrived and escort them to the TAA. We knew when we started that this plan was weak and that the advanced party was not large enough to catch every serial. We also knew the conditions on Tapline; that serial integrity would very likely be broken along the route. We had no Global Positioning Sysytem (GPS) devices at this time, so all navigation was done by

map and compass. The final complication was nightfall. We knew that the last serials would not reach the RP until after dark. We told all the drivers that if they got confused at the far end, to get well off the road but stay where they could be seen from the road. If they sat tight, we said, we'd find them the next morning. Each vehicle carried a case of MREs and at least one full water can. Most had more, including bottled water that was available to us in Jubayl. Obviously, convoy discipline and compliance with these instructions were essential if we were to get a good start on the far end.

The Convoy Support Center was swamped with vehicles when we arrived, so it took longer to refuel than we had planned. Since we were already far behind our march tables, due to slow traffic, it didn't matter. We refueled, ate lunch (an MRE), used the latrine (even less adequate in number than they had been in Jubayl), and moved on. The unit convoys on Tapline, for the most part, moved with good discipline, but at different rates of speed. 2AD(FWD) was used to moving in Germany, carefully in town and briskly on the Autobahn. Our convoy speed seemed to be faster than average, for we were constantly impeded by slower moving units in front of us. Sooner or later they would pull off to rest or head for their own areas and we would pick up speed for awhile. There was absolutely no way to pass safely and we had instructed our drivers not to do so. Often, single vehicles or small groups would pull around on the right, running in the desert, which was trafficable, at high speed.

These same bone heads would pass and became intermingled in our convoy serials. We had also told our drivers to expect this and to stay at wide interval so as to allow some safety distance. This seemed to work. We had only one accident - a B Company CUCV hit the back end of the B Company 5 ton in front of him. There were no injuries and minor damage.

At dusk, when I got to the area of the RP, I found confusion. There were hundreds of unit signs by the side of the road, most indicating turn-off points. The signs were difficult to read and did not include full unit designations. This was confusing because several units with the same numerical designation (721st Trans Co and 721st Engrs, for example) were using the route at the same time. There were seldom unit guides and the units' areas were out of sight of the road. In our case, our first elements went past the guides and had to turn around in order to make the desired turn to the north. Our advanced party did a good job guiding the groups they were able to flag down, but the serials were so broken up that there were too few guides to handle them all. Individual vehicles also leaked by. When my driver and I got there, we clearly identified the twin radio towers, we drove the requisite distance, but saw no sign and no guides. Consequently, we passed the turn-off. Down the road a couple of miles, we found some IID MPs, as promised. We told them who we were and were saddened to discover that they didn't know what to tell us. So, we turned around and went back up the road and tried to pick the right turn-off. We

found a north-bound track that seemed to follow the correct azimuth and turned onto it. A few miles north, we spotted 498th vehicles headed toward us - the guides returning to their position by the road. They told us to keep going and gave us some landmarks to guide on - a broken-down bus and a fork in the road. With this help, we found the area. When we got close enough, we could see the TOC's antenna and the dark shapes of NATO green vehicles.

The rest of that night was further confusion. We had the guides on the Battalion Command Net. Serial commanders would begin calling for us when they passed the twin radio towers, which helped us catch many of the serials at the correct turn-off, despite the darkness. Many of the smaller elements got past, however, because they either couldn't see the guides or were not recognized by the guides until they went past. That night, we managed to close about 3/4 of our vehicles. At first light, we rounded up more than half of the missing in a single sweep along a ten mile stretch of Tapline. The drivers had done exactly as instructed - they had stopped by the road and waited for us to come to them. Throughout the rest of the day we searched for the missing and eventually found them all. We had one or two breakdowns, reported by leaders as they arrived. We found we had to rest wrecker crews before sending them out to recover the broken vehicles. It was the evening of the second or third day before we got everyone into the position.

Convoy AAR

Lesson: If I had it to do over, I would have sent a jump TOC forward to join the advanced party. That would have allowed us to have a radio and a tall antenna set up and operating prior to the arrival of the first serials. I would also have sent more guides and materials for making a couple of big signs. We'd have had to shine headlights on them after dark, but the convoys weren't blacked out, so that wouldn't have been a problem. As things turned out, most of the drivers did what we told them! Obviously, we told them things that made sense and they were able to do what we wanted. Training probably did not prepare us well for this nebulous situation. Good discipline, practice following instructions, and good leadership at the junior-level (I'm talking E-4/E-5) got everyone to our new home.

Coordination for the "Merger" With 1ID

One of the things that concerned us from our mission perspective was the merger with *the Big Red One*. For the maneuver guys, it seemed pretty straight forward. But for the artillery battalion there was a relationship with the DIVARTY, for us a relationship with the DISCOM, and for the engineer company it was the engineer battalion.

I'm sure that each of the affected commanders on both sides voiced concerns about the merger to someone higher in the Chain-of-Command at one time or another. For the 498th's part, we had first contact with COL Shadley's DISCOM before we left Garlstedt. After our command relationship was announced (we were to be attached to 1ID), the affected 2AD(FWD) unit commanders called our counterparts. We also had a staff-level exchange of messages. 1ID's messages sought information from us about our structure, equipment and personnel levels, and readiness - all legitimate requests to facilitate planning. I must admit that I was concerned that 1ID, which, as a CONUS-based division, did not enjoy the same resource priority as the European units, would come to the fight resource poor. That would cause them to look at us as a resource for the whole division. The impact on us might be the disassembly of the 498th Support Battalion, with bits and pieces moving to other DISCOM units (POL tankers and truck platoon to the MSB, portions of our Class IX ASL to other units, etc.). This process would have fundamentally limited the capabilities of the 498th. It would have affected the entire Brigade, because it would have changed how we did business. Mostly, it would have made us less responsive. I raised this issue with COL Weisman and BG Rutherford before we contacted 1ID. I told them of my concern, the principle options and their impact, and asked them how I should approach this with COL Shadley. A few weeks later, BG Rutherford told me that he had spoken to MG Rhame (CG, 1ID) and we would go to war as we had trained, as a Brigade Combat Team, the 498th included. Like the

maneuver unit commanders in the Brigade, COL Weisman remained my rater, BG Rutherford would be the ADC(S) and my intermediate rater, and MG Rhame, the Division Commander, would be my senior rater. I was instructed to cooperate completely with COL Shadley and his staff, but directives to move assets could only come from the Brigade. This solved a lot of problems and allowed us (in the Battalion and 1ID's DISCOM) to determine how to arrange the merger.

Given the guidelines, COL Shadley told me (and I agreed with his assessment) that repair parts and transportation would be our problem areas. Therefore, the areas of tightest coordination and cooperation would have to be in these areas. I agreed to collocate our DAS3 system van with 1ID's, and load the 1ID units into DS4 as our customers, so that they could place demands upon our automated system. They did similarly for us. I also agreed to put a strong LNO and some Class IX managers from our MMC at the DISCOM to facilitate things.

In execution, this meant that about half of the 498th's MMC, including the MMC Chief, would collocate with 1ID's DISCOM. All our reports and requests for issue went to our MMC, at the DISCOM, where they could be reported, coordinated or released, as required.

Transportation was another topic of interest. I agreed to take our fair share of transportation taskings from the DISCOM Movement Control Office (MCO). It seemed logical because the 498th had a

truck platoon organic to A Company. Whatever those 12 cargo trucks and 12 tractor-trailer combinations could do, especially since they would often be supporting us anyway, seemed logical. A brief discussion revealed a philosophical gulf between COL Shadley and I in this area. The MCO naturally operated under the DISCOM Commander's philosophy, which caused endless friction.

My logic ran something like this: Logistical doctrine prescribes that certain commodities be pushed to FSBs on trucks found in the MSB (rations are a good example). Since the 498th had a truck platoon, it made no sense to send MSB trucks forward with those things the 498th could haul for itself. I fully expected we would pick up most supplies ourselves, at the MSB. Anything above the capability of the truck platoon, it seemed to me, ought to be hauled for us by the MSB, just as if we were a divisional FSB with excess requirements. I considered no other 498th trucks in this equation because they were organic to other mission elements of the Battalion and they all carried dedicated loads, by MTOE. Similarly, the organic assets of divisional FSBs are not normally figured into common-user transportation estimates.

COL Shadley's logic considered all tractor-trailer combinations in the 498th into the equation because he knew that we could, and would, use them if we got into a jam. To him, we must have looked as big as the MSB's truck company because we had 60 tractor-trailers in the Battalion. For whatever reason, he

apparently did not recognize most of these as dedicated vehicles, instead of taskable assets. The fact that the drivers were POL handlers, warehousemen and mechanics, all of whom had important jobs, was also a lesser consideration.

The impact of this logic was significant. From the DISCOM MCO's perspective, our truck platoon freed him of obligation to push any supplies to us - which was okay with me. However, the large number of trucks in the Battalion led him to send a disproportionate number of the common-user transportation missions to us. This was absolutely unsupportable. Needless to say we rebutted most of the taskings and put the MCO's nose out of joint. I had to discuss this with COL Shadley again. We reached a compromise under the terms of which I agreed to make available more than just our truck platoon when the Division "really needed the trucks" and to haul our own routine resupply. In return, I gave up any expectation of transportation help from DISCOM unless Corps assets were available, and they stopped trying to task assets beyond Truck Platoon. I even had my guys change the special vehicle status report we sent to MCO to reflect only the truck platoon equipment. We also made a couple of attempts to explain the organization of the Battalion to the two captains in the MCO shop; we even invited them to visit. We were never able to win them over. They gradually worked the 498th's share of the taskings down to our pain threshold. Our inability to achieve teamwork led us to be suspicious of the MCO and they of us. It got in the way several

times. I could not have acted otherwise, however, because acceptance of the taskings would have disrupted the operation of the Battalion and degraded the support we provided.

Despite these minor tribulations, one look at a map of Saudi Arabia, convinces me that we benefited more from the relationship with 11D's DISCOM than we suffered. *The Big Red One's* DISCOM brought rations, fuel and water within reasonable reach and they were well attuned to the needs of maneuver forces. Whatever the minor inconveniences to us, in that environment, we needed someone to support us. They got the job done for us. For our part, we helped with repair parts until everyone had pretty much run out of everything, and we were self-sufficient - always maintaining solid readiness without much management effort from them. We allowed them to focus on their organic customers.

Chapter 4

The Tactical Assembly Area

1ID's Assembly Area was a goose egg north of Tapline Road, several miles east of the Wadi Al Batin. The brigades were arrayed in a rough semicircle, oriented north. The division HQ, the DISCOM HQ and MSB were near the center. 2AD(FWD) moved into the easternmost position in the arc. Each brigade had its BSA behind it.

Durable Base, the DISCOM's compound, had been established before Christmas. It had grown and improved over the weeks that followed. In the open desert, it turned out that traffic control was a significant problem. People driving through tent areas and past guard posts, especially at night, was dangerous. More to control this than any other reason, engineers had been directed to construct earthen berms around unit positions in the division rear. Durable Base had 6 foot high walls of earth around it. There were only two entrances, each permitting the entry of only one vehicle at a time. The opening was protected by a mound of earth, which prevented high-speed entry and sheltered the guards when they stepped from cover to verify identification.

Lesson: In the open desert, with so many units driving around, the berms were a good idea. Many units used them, but few designed

them so thoughtfully. The Durable Base berm was high enough and thick enough to stop anything short of a tracked vehicle and even a track would have had to apply full power to get over it. The entry design was effective also. The berms were slightly easier to see, during daylight than units hiding under camouflage nets alone, but the interior of the base was shielded from observation, making it difficult for an observer to tell what kind of unit was there. These factors, it seems to me, offset. The only problem with this approach was that it frustrated attempts to have soldiers construct fighting positions. At Durable Base, a few positions, intended as guard posts, were dug into the berm. The act of digging in thinned the berm, however, negating whatever protection it offered from direct fire. Most soldiers had no covered fighting position.

While I liked the berm for many reasons, it did not appear to make good tactical sense. Our normal procedure prescribed two-man, dug-in fighting positions, and I saw no reason to change that in the TAA. Later, after the war, we used berms for traffic control; but not before or during.

Durable Base was the best part of an hour from our BSA. Tapline road was about two hours away. Log Base Alpha was across Tapline Road, almost directly south of us.

Within our brigade's piece of the TAA, the maneuver units were arranged in an arc from roughly north to east. They were 5 or 6 km from the BSA. The FA Battalion and Brigade TOC were inside the arc, several kilometers to our east. Because the BSA was so large - nearly 800 wheeled vehicles - and the terrain so open, we had decided to locate each units' Field Trains in a base cluster arrangement. We arrayed them in position on the ground corresponding to their parent unit's location. The exception was the artillery battalion's trains. 4-3 FA was so close, it made better sense for them to go into their battalion's base. All the Field Trains were a kilometer or so outside the 498th's perimeter, but within sight.

Our own perimeter was laid out by our advanced party, who tried to guide the units in as they arrived. HHC had the northwest quarter, from roughly 9 o'clock to 12 o'clock. B Company stretched from 12 o'clock to 5 o'clock. A Company had from 5 o'clock to 9 o'clock. C Company was in a cluster in the center and was instructed to prepare all-round defense, thickest on the north side, behind a chin area in B Company's perimeter. The ORF Platoon, with its 4 tanks, was our response force.

We chose this arrangement to protect C Company and to allow them the best chance of continuing their mission uninterrupted, should something happen. We immediately had trouble with customer vehicles running all through us. To fix the problem, we put three

entrances into effect and used concertina wire to funnel traffic toward them. B Company had one in the northeast corner which allowed them to bring customer equipment inside the perimeter for inspection, then shift it along the perimeter to the proper section for repair. There was enough room to disperse customer vehicles inside the perimeter, in B Company's area. In the south, A Company had an entrance which let in trucks picking Class IX. Between A Company and HHC was the third entrance. Turn right for fuel, turn left for MMC and the TOC, straight ahead for rations and other supplies.

We used the ORF Small Emplacement Excavator (SEE) to prepare most of the fighting positions. The mechanic responsible for the vehicle had been partially trained in Germany, by D Company, 17th Engineers, the Brigade's engineer company. He was able to dig fighting positions for HHC and B Company in the first afternoon. Another day completed the Battalion. We had not done this before. I don't know whose idea it was, but it worked great and the SEE became a standard part of our advanced party from that moment on. Note that we also had a bucket loader in the POL platoon and an ORF bulldozer. The bucket loader was unable to dig a steep-sided hole, so was less useful than the SEE for defensive purposes. We used the dozer to partially dig in the ORF tracks; but the operator was not well trained and the dozer was not mechanically, very reliable, so this didn't work out well.

Everyone had to have a hole. Everyone did "Stand To" in his/her own hole. Entrances and observation posts had to have field phones and were guarded at all times. We had all the company commanders in the BSA, Field Trains included, provide perimeter security sketches. We had them pick their critical guard posts, crew served weapon locations, OPs and LPs, and tell us what they proposed to man full time. We then took a look at the entire base cluster and adjusted to minimize guards, maximize warning and optimize crew served weapon fire. We also set traversing limits to prevent firing into one another. The S-3 plotted this plan, included a CSS overlay, and gave it to all the tenants.

In the 498th, we had brought with us enough 4'x 8' sheets of plywood, 6"x 6" lumber, plastic sheeting and sand bags to provide overhead cover for every crew-served weapon in the Battalion. In the TAA, we used it. We found that the soldiers, in their enthusiasm, built a lot of structurally unsound fighting positions. As CSM Gallardo was a former Special Forces NCO, he became our expert and went hole by hole, teaching soldiers and their sergeants how to build them correctly. After three or four days, we were looking pretty good.

In retrospect, the 498th's perimeter was too large. The B Company - HHC juncture was too thin and A Company was overextended on the south side. We had room to spare in the center, so could have collapsed inward and still had enough room. We were well

dispersed, but awfully thin on the perimeter. If we had gotten the bulldozer working right, we could have dug in the TOC and company CPs, and bermed the POL tankers. The general layout became our standard configuration. The occupation of the FAA, our second position, was much smoother because everyone knew where to go. By the third move, it was automatic.

Class I Operations

Once in the Tactical Assembly Area (TAA), rations were provided by the DISCOM, using doctrinal procedures insofar as possible. Personnel reports were used as the basis for ration issues except for MREs which we had to request.

Initially, 1ID tried to provide T-MRE-T as the Combat Field Feeding System required. From the very first day, transportation was a problem. There were no deliveries to the DSA by Corps trucks and most of the Division's assets were moving essential cargo from the port to the TAA. In order to build initial stockage, every available truck was pressed into service. On any given day, 10 or 12 of the 498th's medium trucks contributed to this effort by hauling rations from Log Base Alpha to the DSA. Four or five more trucks were needed, every other day, to pick up the Brigade's rations from the DSA and move them to the BSA. In our planning, we had anticipated a surge to pick up our initial stockage. We had not anticipated the constant requirement to pick up all rations. During

this time no rations were pushed to 2AD(FWD)'s BSA; very few (probably none) were pushed to 1ID's DISCOM.

While in the TAA, the DSA was only about 2 hours drive, cross country, from the Corps ration point at Log Base Alpha. However, trucks sent before dawn waited at the Corps ration point so long to be loaded that they seldom returned before dark. We attempted to trouble shoot this. The bottleneck was ration handling at the Corps supply point. Tremendous volumes of rations were delivered in ISO containers. The containers were spotted in a huge piece of real estate in no apparent order. The only way to tell what was in a container was to open it and pull things out. There were too few forklifts to unstuff containers, help set up item piles and load customer trucks all at the same time. The supply unit had to go to a nearby transportation company for help repositioning the containers. The personnel and equipment available simply could not keep up.

In an attempt to ease the burden on ourselves, we split the Class I section and sent 5 soldiers and 2 4000 lb RT forklifts to the Corps ration point to help load. This freed the Corps unit's forklifts to work the containers and, in exchange, gave us priority for loading. We abandoned this after a few days, however, as it required the diversion of MHE from other important missions. We needed our forklifts in the BSA.

The 11D DISCOM provided considerable relief when they began pulling containerized rations on 40 foot Corps trailers to the DSA and unstuffing the containers themselves. The FSBs began drawing a high percentage of rations as tailored containerloads which we pulled to the BSAs, then broke for our customers. The rest were issued to us palletized in the usual manner. This required augmentation of the Class I Sections of both the 701st MSB and the FSBs. In the 498th's case, ration breaks became a platoon mission, with most of the Supply Platoon lending a hand.

After several days of "just in time" ration delivery, we established 2 DOS in the BSA. The DISCOM probably had somewhat more in the DSA. The T-MRE-T cycle remained in effect long enough to become boring and repetitive. Rather abruptly, the supply of T-rations dried up. Initially we were told there weren't enough in Theater. Then we were told they were being withheld for combat operations. Later still, we were told there simply weren't any anywhere (this was probably true). We began to draw unitized B Rations without supplements and occasional issues of T Rations, the latter probably from an odd container or two. For several days, we fed T-MRE-B or B-MRE-T or B-MRE-B, depending upon what we were issued. We never knew until we showed up to draw what we would receive. It all depended on what was issued at the Corps ration point. After a few days, supplements were made available and things stabilized. Our customers were extremely flexible and cooperative.

The most notice we could give them of the ration cycle was one or two days.

During our time in TAA Roosevelt, MOREs first appeared. They were issued with no advanced warning. Instructions as to how they should be issued were sketchy and passed through the ration issue chain from sergeant to sergeant. The initial issue was three, small, main course containers per soldier. The three entree rule held from that time on and supplements were added for all subsequent issues - locally procured fruit, sodas, single serving cakes, etc. The initial reaction of the soldiers was interesting. At first, they seemed pleased with the change, the amount of food, and the convenience MOREs offered. They often saved one or more of the containers for snacks. In a matter of days, however, the novelty wore off.

Some soldiers refused MOREs altogether. Some drew only the items they liked. More and more soldiers began to save some of the containers for convenience meals. At the ration point, MOREs were difficult to handle. They were issued to us haphazardly which required the ration sergeant to assemble enough items of the same type to issue to each customer. The packaging was not as sturdy as military rations, resulting in waste from damage. From this time on, MOREs were issued intermittently. They were not preferred and they became less appealing to soldiers over time. Based upon our

rate of replenishment of MREs, it is likely that units permitted their consumption in preference to MOREs.

Class II, III(pkg), IV & VII Operations

When the containers were delivered to us in the TAA, we put them in three areas. All unit containers were put side-by-side, along a road inside the 498th's perimeter. Medical supply containers were put in C Company's area. Class IX containers were put in the Class IX Platoon's area, and supply containers were put into a designated area in the center of our perimeter.

Before we left Garlstedt, we had received supplies until the day we shipped the containers. We issued as much as we could, but reached a point where the units had to close their containers for shipment. We saved a few empty containers and filled them with all the things that arrived too late to issue. We also checked the transportation system and found several ALOC pallets waiting for us in Saudi Arabia. It was the Supply Platoon's job to haul all of this out, process and issue it.

The ration problem ended up requiring their full attention for several days. When they were finally able to begin issuing the supplies, we found a lot of the units inclined to refuse the less critical items. They wanted us to hang onto them. There was no way we could properly manage retained items (which would have become a

Class II ASL) and still do rations and water right, so I took the problem to the Brigade Commander and told him that I intended to make one further attempt to deliver the items, then I would turn them in. He agreed. I announced it at the Brigade's evening meeting. Most of the stuff was picked up in the next two days. The few items that were left we issued to any unit that wanted them or turned them in.

Lesson: While this is a minor incident, it illustrates a couple of things: (1) Priorities change. Our customers ordered these items before we left Garlstedt, in good faith, thinking they would need them. Apparently, they gave little thought about hauling the items. After all, that's what their container was for. When they got to the desert and the prospect of battle confronted, mobility was more important, so they had second thoughts. Ever seeking to have their cake and eat it too, they hoped we would carry the items. As a matter of discipline, their choices could only be two - either take the items or turn them in. (2) Hidden in the paragraph above is a small "cooperation". The commanders all accepted a reasonable explanation of the problem and the recommended solution. There was no argument or significant discussion. The next day, they had largely corrected the problem. This teamwork was typical in the Brigade. I was not an outsider and was never treated as one. This kind of behavior is rarer, I suspect, when the FSB commander is a DISCOM person.

Transportation

We had anticipated that A Company's Truck Platoon would be busy in the TAA. As things turned out, it was worse than that. We had two conflicting missions running concurrently in those early days.

We had a lot of 5 Ton tractors in the Battalion. The Truck Platoon, our main haulers, had 12 tractors and 24 trailers. The POL Platoon had 20 more, and the Class IX Platoon had another dozen or so. Scattered throughout the Battalion, there were maybe 20 more. We had preplanned loads for every trailer in the Battalion. The trailers were also prioritized for movement. Since we had nearly a third more trailers than tractors, we knew we could not move in one lift.

For the move from the port to the TAA, we were unable to get Corps or Theater trucks to pull our extra trailers. So we planned to lift the highest priority goods on the first lift, then send the Truck Platoon, augmented with some POL and Class IX tractors, back to the port for the rest. Truck Platoon arrived in the TAA with A Company, late in the afternoon of the movement day. They set up, dug in, got some sleep, then pulled out for Jubayl at first light the next morning. 1LT Tom Rivard was in charge.

While the truck platoon was enroute back to Jubayl, we began to draw the supplies we would need to build our doctrinal stockages. As we were pretty well self-sufficient for most things, at least in the short term, what we were really looking for was rations. The details of the ration problem are discussed above, but the effect was to place a greater than anticipated demand on us for transportation while we were still trying to complete our move. We ended up tasking tractors and trailers from throughout the Battalion to get enough to meet our needs. The DISCOM MCO was no help because IID was moving at the same time and all the DISCOM's trucks were doing the same thing ours were - making turns from port to TAA. There were, apparently, no Corps or Theater trucks to be had because of the number of units moving and the build-up of Log Base Echo.

Lesson: While our solution was non-doctrinal, it is an example of flexibility. As things turned out, it was a harbinger of things to come. Several times more, in the months that followed, we used every tractor and trailer in the Battalion to get things done. We had anticipated having to download certain trailers after each move to free them for daily business. We had tried to limit the requirement to the Truck Platoon assets. After this first move, we reconsidered the plan and unencumbered nearly twice as many trailers as originally planned, and scattered the requirement throughout the Battalion.

Maintenance

In the TAA, we began normal maintenance operations. We recovered from the convoy, repaired a 2-66 Armor tank that had rolled from a HET onto its roof (a photo made the Army Times), and supported training. Armament work was the most significant category as the tanks, howitzers and Bradleys went to the IID range for gunnery and calibration. We found ourselves living off our ASL and shop stock, which was a significant concern. It forced me to preach prudent limitations to all training at the Brigade meetings.

As time went on, COMMEL and M577s became an increasing problem, especially as we began to deplete parts stocks. Over all, we were able to keep the Brigade C-1 with comparative ease. Within *The Big Red One*, we were often the only bright spot in COL Shadley's day. 1st Brigade struggled for a few weeks, then improved steadily, but 2d Brigade was an endless maintenance battle. The difference in effort was, in my opinion, about 80% resource driven and 20% actual maintenance skill. Much of our equipment, though higher in mileage than theirs, was newer and we had more parts. We also had more DS mechanics in key commodity areas (armament, COMMEL, and missile in particular) and a higher density of senior NCOs and Warrant Officers. This meant better training for our mechanics and better capability to diagnose and repair the tough items.

We sent the ORF combat vehicles to the range, too. They were driven by the DS mechanics we had assigned to care for them but test fired by qualified crews. We also had some basic gunnery instruction for our mechanic crews. After a day or two, while not fully qualified, they could operate all weapons. This added a lot to the BSA's defensive potential. We had always wanted to do this in Germany but could never afford the time or the ammunition, or could never stabilize the ORF mechanics long enough to make it worthwhile. In the desert, there were no distractions and it worked easily.

Medical

C Company set up doctrinally except that the ambulance tracks stayed with us. As the unit Aid Stations all had physicians, we only saw a few injuries and the illnesses that needed bed rest. The BMSA did a steady business as everyone discovered what they had forgotten. For the most part, C Company spent its time teaching our Docs how to live in the field - many of them had never been - and training. We set up all the Treatment vans and drilled all three treatment sections extensively. Dr. Mike Tuggy emerged as particularly interested and adept. Dr. Charles Miller began to take his command responsibilities seriously. He had to wrestle with a couple of thorny personality conflicts and his first disciplinary issues. He asked advice a couple times, but I left him to solve the problems. I was gratified to find him willing to do it!

Tactical Considerations

We stayed in the TAA for two weeks or so. In that time, life reduced to a routine. The routine was an essential element of "pace" which allowed us to get things done efficiently, without the risk of emotional or physical exhaustion. The ease with which this happened surprised me. On field training exercises, my only related experience, so many events are typically crammed into such a short timeframe that pace is never achieved. Units tend to push as hard as they can to achieve the training benefit, then recover when they get out of the field. In the desert, we couldn't do that and knew it. I had thought we, the leaders, would have to talk about things and discover ways to set pace. In actuality, it happened at company and below, as soon as things settled down after the move. We deliberately reduced perimeter security to a guard force and picked those positions to be manned at night and those to be manned during daylight. We manned more at night. We went full-up on the perimeter 30 minutes prior to BMNT (Brigade policy) and reduced to daytime guard, on order, about 30 minutes after. All BSA tenants were required to account for their people, their weapons and sensitive items (by serial number) and report status to the 498th TOC or be held at Stand To until they did so. We also tested our communications lower and higher. Then we had clean-up time, breakfast and work. At dusk, the nighttime guard was set and people settled in for the night.

The Plan and Rehearsals

A few days after things settled, the Brigade's key leaders were called to the Division HQ for an orders briefing. The concept for our attack was revealed to us, we were given planning time and a rehearsal schedule. The planning moved along apace and after a few more days we were talking about rehearsals.

1ID was to move west and penetrate the western end of the Iraqi defense, west of the Kuwaiti border, in the area of the old neutral zone. The defense was fairly thin there, and not nearly as elaborate or as well established as the defenses in the east. The plan was as simple as a deliberate penetration could be. 1st and 2d Brigades, augmented by engineers, would attack following an artillery preparation, cut lanes through the mine fields and wire, and clear their sectors of enemy. 3d Brigade would pass through and attack to greater depth. The intent was to push any remaining Iraqis out of DS artillery range of the breach. Once the deeper line was established, we were to pass the British 1st Armoured Division through, then prepare to attack north and east.

For the 498th, the entire plan was a movement challenge. We could leave nothing behind in TAA Roosevelt. To do so would require us to leave guards behind with whom we would be unable to communicate. We could leave things at the DISCOM's forward location, DSA Junction City, but that meant moving the Brigade's

containers - a formidable challenge. We could only cross the line with what we could carry in one lift.

There really wasn't much of a choice. We decided to set up our own area in DSA Junction City and locate our stay-behind people close enough to the DISCOM's stay-behinds to permit mutual defense and sharing of facilities, especially communications and mess. The people selected to remain were part of the Class IX Platoon, to keep parts flow moving, and the "getters" from the MMC. CPT Dane Thomason, a solid officer from the MMC, was selected to be in charge. Altogether, the stay-behinds numbered about thirty.

Rehearsals

The rehearsals were of two types: commanders sitting around a map, plan in hand, talking through actions, timing and contingencies; and rock drills. The latter were the most interesting. We did them at Division, at DISCOM and at Brigade. The host laid out, on the ground, a scale replica of the area of the attack. With commanders representing their units, we walked through the entire plan. The British 1st Armoured Division participated in both rehearsals. At the Brigade rehearsal, their guides met our soldiers who would actually lead them forward and pass them through our positions. It was most worthwhile.

The maneuver units had to rehearse their attack at a training area in which 1ID's engineers had constructed an Iraqi defense line. Log units had no access to the area, so I had my S-3 lay out a replica of the breach lanes our drivers would have to traverse. We had every driver in the BSA actually drive their assigned vehicle through this mock-up. This experience, coupled with the briefings we gave our soldiers and strict convoy discipline, made the actual lane passage easy.

Lesson: The rehearsals did a great job covering the initial attack. They did not address subsequent operations, which amounted to an exploitation, very well. The DISCOM's rehearsal would have been particularly valuable because it could have saved us from sending ambulance and POL drivers so far to the rear. I guess we didn't think we'd have to catch up to VII Corps. The lesson is to rehearse the plan all the way through, in complete detail.

Those Damn Containers

We (1ID) tried to get help moving the containers from the TAA to the FAA. We needed Rough Terrain Container Handlers (RTCH) or cranes to lift them. To move them quickly, we needed trucks with 40' semitrailers. No help was available, so we geared up to do it ourselves. Prior to deployment, the DISCOM had purchased a fleet of

commercial container chassis - 300, in fact. They were old and beat up, and brakes and lights often didn't work, but they were something that could haul containers. They saved us now. Without them, we could not have moved in time.

For OPSEC reasons, 1ID was not allowed to move into the new DSA until a few days prior to the movement of the entire force. This really put the pressure on us and it forced us to move all the containers in just a few days. We began by ourselves, using some of our own 30' trailers and a 40-footer borrowed from a Corps unit. We used M88s - one of our own and two others borrowed from the tank battalions - to lift the containers. This solution was barely adequate. Because the M88s could not move with a container in the air, loading was very slow. Some of the containers were too heavy for the M88s and all placed such stress on the lifting chains that they broke after only a half dozen lifts. We were soon nearing the end of our supply of chains and still hadn't made much progress. Apparently, the whole division's efforts weren't much better because MG Rhame gave COL Shadley a deadline.

This caused the DISCOM to push harder for help and plan on using many more trucks. They came to us with a tasking for most of our 5 Ton tractors. The tractors were to be pooled with theirs and use the container chassis to move the Division's containers. They had also gotter a single RTCH to load them. There were problems from the start. Drivers showed up and found no chassis available;

or containers weren't ready to load; or convoys were delayed waiting on more trucks. Often, they had trouble unloading at the far end. We fell substantially behind schedule. We also had trucks scattered all along the route of movement. At night, it was impossible to navigate reliably, so drivers had to stop.

One night, about 2330 hours, MCO called 498th Support Operations and ordered us to have virtually all our operational tractors at the MSB base, ready to load, by first light the next morning. They would remain under DISCOM control until the mission was completed. I called them back and told them that it was impossible to comply. I needed a few tractors to move POL tankers the next day and about half our fleet was at the new DSA. I had no way to recall them and didn't expect to see them until mid-morning the next day. I was told that this was COL Shadley's direct order and they could do nothing to change it. So I called COL Shadley. My intention was to tell him we'd get him every tractor we could muster, save one or two for POL missions, as early as we could get them there, and point out that a significant number were already on the road. What I got was a confrontation with a man, obviously under extreme pressure, who was not willing to listen to reason. I had trucks and he wanted them. As I began my explanation, he cut me off and said "Lieutenant Colonel Marshman, there comes a time in every soldier's career when he has to salute and follow orders. You have your orders, now do it.", or words to that effect. Then he hung up. I tried to call him back but he would not speak to me

again. Finally, I called COL Weisman, told him what had happened and what the problem was. There was nothing for him to do. The solution was already in place but full compliance with the order was physically impossible.

Lesson: I was significantly embittered toward COL Shadley by this episode because he didn't even give me a chance to speak. I'm sure he was in an almost desperate situation and under extreme pressure. Time was short and there was no help from outside the Division, but he apparently did not grasp the situation. His solution was to try to move us forward by brute force. Arbitrary, unreasoned orders are dangerous. They place subordinates in intolerable situations, stifle creativity and initiative and deprive the issuer of good advice. This single episode affected me so profoundly that I avoided personal contact with the DISCOM Commander thereafter. This was probably a disservice to us both. To me, this is a acute example of how not to act, no matter the pressure.

The next day came to pass pretty much as I knew it would. We sent all the trucks we could muster down to the MSB at dawn. There they sat until mid-morning waiting to be loaded. My other trucks trickled in during the day and we sent them back down to the MSB as soon as we could refuel them and do a little maintenance. Over the next couple of days, however, the extra trucks began to make a difference. The IID containers actually began to disappear.

Finally, it was our turn. A HET brought a RTCH to us and a mixture of 498th and DISCOM trucks began to pull our containers out. I suspect we were behind schedule, but we finished in time to get the drivers back and rested before they had to relocate the Battalion.

Lesson: When you borrow a RTCH from a transportation unit, you had better have a HET and a 40' S&P trailer available. The RTCH is not roadworthy and so huge that only a HET can move it. The S&P has to haul the 40' spreader needed by the RTCH to lift 40' containers.

In retrospect, this was a very dangerous time for the soldiers hauling the containers. They were pushed to the limit of physical exhaustion. They existed on MREs and bottled water. They often hauled heavily loaded trailers without brakes or lights. They had little or no time to maintain their vehicles. The only thing which mitigated the risk was the fact that they were required to move in convoy. We completed a tough mission that needn't have been so tough. All we needed was some help, earlier, or a bit more time. The real shame is that we weren't equipped to meet our own needs. Any unit that has to work with containers ought to have the means to lift and move them. Currently, this means they need a crane or a RTCH, with a HET to haul it.

The Joy of Being Container "Guru"

When we went to the desert, I had hoped to avoid becoming the container "guru" for all the reasons the move revealed so graphically. When the containers were put in the BSA, I suspected I was hooked. The move to DSA Junction City confirmed it. From then on, the 498th, not the Brigade Transportation Officer, had to plan for the containers. One of life's little inequities.

TOC Configuration

We had a good TOC setup, which is worth mentioning. Someone long before me established the arrangement, which worked exceedingly well. The TOC was composed of three 5 Ton expando-vans, placed side by side. Looking at the backs of the vans, the right-most van held the 498th's S-2 and S-3, the center van held Support Operations, and the lefthand van held the Brigade G-4. My S-3 had three FM radios and monitored Brigade Command, Battalion Command (for which he was NCS) and Brigade Admin/Log nets. Support Ops had two FM radios and monitored Battalion Command and DISCOM Command. The G-4 had two FM radios in the Brigade Command and Brigade Admin/Log nets. G-4 was the NCS for Brigade Admin/Log. S-3 and Spt Ops had IHFRs, but 1ID did not permit us to use them. We could not secure them and they are easily interceptible, so they were not used for OPSEC reasons.

This arrangement was nearly perfect. The vans were set up with the side doors connected. This facilitated movement from van to van to share information and coordinate. When a radio went down, we helped one another cover the nets. We shared generator power. And most of all, we planned together. The G-4 always knew what Spt Ops wanted to do and could help work out timing and coordination. Spt Ops and the S-3 always knew the next mission. When reports were late, the G-4 chased them. When a crisis occurred, G-4 could coordinate a response because Spt Ops and the S-3 were right there. It allowed me to influence the G-4s planning in the early stages, when folks were most flexible and inclined to accept advice. It also put us together on concepts and issues. It was the best possible arrangement.

When we moved the BSA, we usually sent the G-4 and Support Operations vans forward, either with the advanced party or as soon as they had selected a location and called it back to us. This allowed us to set up good FM communications in the new area while the S-3 van covered our four normal radio nets (Brigade Command and Admin/Log, Battalion Command, DISCOM Command). We always had the MMC van nearby, ready to pick up a net if one of the S-3's radios went down.

The Move to the FAA

After a couple weeks in the TAA and careful preparation, we moved west to Forward Assembly Area (FAA) Manhattan. We were prohibited from using Tapline Road (we had asked), so everything had to move cross country. The maneuver units left first, early in the morning, in column. We were last and didn't start until mid-morning. I sent the XO with the advanced party, our normal practice in the field, and had the S-3 lead the column. I stayed back with the CSM because I was concerned about clearing the TAA. We had holes to fill, trash to burn and bury, and we had found that our companies had begun to discard property they felt they didn't need.

In the course of daily business, several of us had driven through or flown over areas vacated by other units. We had seen the discarded equipment they had left behind and were appalled. In addition to the thefts, this was the second trend we discovered that indicated a disappointing breakdown in unit discipline. Most of the discarding must have been permitted by junior leaders (sergeants) and condoned by the officers. Having seen this, I warned my company commanders and told them to tell their people to expect no mercy if they were caught throwing serviceable equipment away. I also told them I'd be checking areas as they moved out to insure they cleared properly.

In Germany, we had always striven to leave field sites in better shape than we found them. We were in danger of losing that discipline after so long in the TAA. I suspect that the ease of disposal of trash was the main reason. After weeks of burying it, it was easy to get casual about disposal in general. CSM Gallardo and I set out to correct that. Each company was instructed to leave a senior NCO and a clearing detail which would not be released until CSM or I approved their area. A Company's bucket loader stayed to fill holes and bury trash.

In the 498th area, things went pretty well with one exception. We made some HHC folks uncover a few holes and recover some minor items, but the ration point was a significant problem. We had a large quantity of produce left over and no way to refrigerate it. There were no veterinary inspectors available to certify it for turn-in or tell us what to keep and what to discard. I was unwilling to take a chance on the Brigade's health and approved the destruction of the lot. Of necessity, we dug a hole and burned as much as we could, then filled the hole.

CSM Gallardo and I also inspected the Field Trains areas. We had anticipated the worst, since the commanders were normally on their own and weren't used to having us check on them. To our surprise, everyone left in good shape except the infantry battalion's trains. They left behind ammunition packaging, concertina wire and a 2 1/2 ton truck, which had been wrecked. We

hauled the truck away for them but sent them back to clean up the rest.

As B Company started to move - they moved last in our column - I turned things over to CSM and headed out. My driver tried to work along the flank of the column, hoping to reach the front of B Company, at least. Initially, we moved with the ORF Section, which was strung out pretty far behind. They were trying to catch up. This was my first experience with M1A1s at speed. They were going about 50 mph and running away from everything behind them. We had to slow them down.

The route of march took us west, through the area of one of the other brigades of 1ID. They had left a lot of stuff behind. We spotted a lot of unserviceable repair parts and recorded the locations. Later, we sent the locations to DISCOM so they could recover the goods. We had to cross an MSR a few miles west of our position. There was an embankment beside it. When we got there, we found that a couple of 1 1/2 ton cargo trailers had spilled going over it. We had to stop and orchestrate clean-up. Nearby, we encountered B Company's 7 1/2 ton crane, which we had thought to drive to the FAA despite its limited mobility. It could not hold a reasonable pace and, without a suspension, it was bouncing wildly. I turned the driver around and sent him back to the old BSA with instructions to wait for a HET to come back for him.

As darkness fell, we neared the road that runs north from Hafr Al-Batin to the Kuwaiti border. We had to cross it at certain points. We reached the road too far to the south, so had to turn north along the road for a couple of miles. As we neared the crossing points, it grew dark. We also found British units moving up the road. Crossing was shaping up to be an adventure. By then I had worked my way to the front of B Company's serial. I was looking for 1LT Wallace, who was leading the serial and couldn't call her on the radio because we were under radio listening silence. While I was doing this, BG Rutherford called me from his helicopter. He had been flying over the column and knew we were about to get tangled with the Brits. After a brief situation report, he instructed me to stop the column east of the road and spend the night. I found Ann Wallace and we pulled everyone off behind a mound of earth a few hundred meters from the road.

The next day, we finished the move. My driver and I went ahead of 1LT Wallace and her charges. The only event of note was finding some British motorcycle riders out of gas in the Wadi Al-Batin. Luckily for them, we used a Yukon stove and had a can of gas in the truck. By early afternoon, we reached the FAA.

Chapter 5

Forward Assembly Area Manhattan

In FAA Manhattan, we were located on the reverse slope of a gently sloping ridge of sand, perhaps 10 km from the Saudi-Iraqi border. We set up in generally the same layout we had used at TAA Roosevelt, except that the Field Trains all rejoined their parent units. Everything but the ration point moved in one lift and we were shed of the containers temporarily, so it was an easy move. We brought the Class I Section forward - less the produce - the next day. The DSA shifted to DSA Junction City, just north of Log Base Echo, the Corps support base. Log Base Alpha was drawn down and closed as units shifted to Log Base Echo.

Class I & Water

2AD(FWD) units in FAA Manhattan, continued to draw B-MRE-B, at the BSA. Occasionally, MRE-MRE-B was necessary because of the lack of breakfast items. The few T Rations we received were often husbanded by Mess Sergeants for emergencies. While in the FAA, we prepared for the ground attack by replenishing MREs up to 5 DOS in unit hands. In addition, the 498th carried 1 DOS for the brigade of MREs and 1 DOS of B Rations on trucks from the Truck Platoon. We drew all rations from the DSA which was receiving intermittent pushes of containerized rations from Corps. DSA Junction City was

some three hours drive, cross country, from the BSA. The extreme difficulty of navigating in the desert at night, under blackout conditions, made ration resupply a daylight only operation.

We drew bulk water at the DSA. At the time, there was great concern that we wouldn't have enough bottled water to get us through the attack. Since we couldn't resupply bulk water as rapidly as bottles, we were told to conserve bottled water. We figured that if we issued the bottles to the units too early, the water would be consumed. Therefore, we held a quantity in the BSA until just before the attack. We force issued it, as much as our units would take, a couple days prior to kicking off. It must be noted that they all complained about having to carry so many MREs and bottles of water. After the war, however, they were glad they had it.

Class II, III(pkg), IV & VII

Having issued nearly everything we had received for our customer during our two week stay in TAA Roosevelt, our general supply activity nearly halted. Our biggest mover was Class III(pkg), as units performed maintenance and replenished Basic Loads. This let the Supply Platoon focus on ration issues. B Rations took more manpower than T Rations, so this was a breather for them. They used the time to teach 76Vs how to issue rations.

Class III

We continued to do business from our 5000 gallon tankers. At one point, the DISCOM Commander asked me to set up our Fuel System Supply Point (FSSP) - a collection of 10,000 gallon collapsible tanks, hoses and pumps. He wanted to keep as much fuel as far forward as possible. I resisted because we had worked so hard to get mobile. Putting the FSSP on the ground would have prevent us from moving in one lift, which is what BG Rutherford had instructed. We reached a compromise when I suggested that we find some 20 or 50 thousand gallon tanks, which the Corps Petroleum Supply Companies use, and borrow them. As the DISCOM had already planned to put a large fuel point in 2d Brigade's area, this worked out and our FSSP stayed loaded aboard trucks.

Lesson: Most POL Platoons in FSBs have only tankers. For an FSB, this is the right choice. Mobility is the primary consideration. In divisions, the FSSP is in the MSB. It takes a day to set it up, longer to fill it, awhile to draw it down, and a day to pick it all up and move it. In a static situation or in a unit that does not have to be instantly mobile in one lift, it is very useful. The MSB is the right place for the FSSP. I would have given ours up, willingly. It took too much of my POL Platoon - the same soldiers who were hauling water - to use it.

Class V

In the FAA, we gave operational control of our Ammunition Transfer Point, an A Company element, to our Ammunition Technician, an MMC guy. By combining the two sections, we formed a sort of under-sized ammo platoon. This element was assigned responsibility for one of a series of artillery ammunition prestock points. The day after we set up in the FAA, CW3 Bob Woodham moved his folks about 10 miles west of us and began to receive ammunition. He ended up with many tons, all neatly organized on the top of a sandy hill. The ammunition was intended to support a series of artillery raids and preparatory fires.

We knew there would be ammunition left over. Since it was all on the ground, we also knew it would take awhile to get it all loaded and hauled away. In that time, it was also likely that the Battalion would move out, leaving our ATP Section behind. We solved the problem by designating a lieutenant with a GPS to go and fetch Chief Woodham and crew, as soon as we knew where we were going. As things ended up, they caught up to us a day or two after we headed north.

Class IX

By this time, we were beginning to run out of things. Repairable items were the biggest problem. We found that many

things that were repairable outside the Battalion, but in USAREUR, were not repairable in the desert and we had to order them. FM radio components are a good example. The radios are highly modular and easily repairable, with the right parts. They use two kinds of components. Some are throw-aways. Broken modules cannot be repaired and are replaced with new modules. Others are circuit cards which are repairable in USAREUR. While CONUS units were used to turning in these components for salvage and ordering new against ASL stocks, we were used to maintaining only a small quantity on shop stock and turning in the broken cards for repair at Pirmasens. We got them back a few weeks later. Demand for these parts soon outstripped worldwide supply. Without access to USAREUR's repair facility, we had a growing number of FM radios that we couldn't fix.

We were also exhausting our bench stock. These are low cost, usually small parts and kits used to repair larger items. Our worst problem was in the Armament Shop, which was running out of the bench stock we needed to fix fire control components. Since the bench stock items were not available to us, we had to exchange components we would normally repair quite quickly with the appropriate fielding team. This meant hours of driving to Dammam or a ride on 11D's Log Bird, a daily helicopter shuttle. For lack of a horse shoe nail...

Medical

We task organized in the FAA. Task Forces 1-41 and 3-66 were balanced. 2-66 Armor fought pure. We had to shift some tank test equipment around among support teams, but we had practiced this in countless exercises in Germany, so it was automatic. We also sent our tracked ambulances to the Battalion Aid Stations they habitually supported.

Preparation for Battle

For us, the biggest thing we did to prepare for battle was to receive and integrate a number of attachments. Happily, most of our attachments arrived just after we occupied, allowing us over a week to work with them, train them to our way of business, and rehearse.

We received three major attachments to improve our mission capability: a Graves Registration Detachment, ambulances from a Corps Ambulance Company, and a Corps Truck Platoon of ammunition (our ATP). The contributions of each unit are addressed adequately in the pages that follow. I'll just note here that the ambulances were from an active unit and I hated to see them leave us after the war. The GRREG Detachment and the truck platoon were reserve units. They came to us with no life support equipment - not so much as a tent - performed well enough, but pressed very hard to be released from attachment as soon as *they thought* their job was done. They

really didn't want to hear what we thought. In fact, the GRREG Detachment departed without authority! We passed word through MP and command channels, but let someone else sort that out.

Lesson: There are differences in disciplinary standards between active and reserve units. While there's no doubt they can do good work, put someone in charge of them and spell out the rules for release from attachment in your first session. Note that the GRREG guys got away easily because their site was outside A Company's perimeter, a normal, doctrinal position for them.

Task Force Iron

Soon after arrival, elements of the Brigade began combat operations. 4-3 FA participated in a series of artillery raids, while TF 1-41 Infantry and the Brigade HQ got ready for the counter-reconnaissance battle.

We could hear the artillery raids. The firing positions were a ridgeline away, to our north. Much of the Corps artillery participated, all along the VII Corps front. The raids, we were told, were intended to strike known targets north of the border, all along the Iraqi defense. Supporting them wasn't difficult because 4-3 FA always came back to us afterward. We sent them a

couple of ambulances and we sent our DAO and ATP Section to a Corps ammunition prestock point, which they ran.

Task Force Iron was composed of 1ID's 1-4 Cavalry, TF 1-41 Infantry, some AH-64s and our Brigade HQ. Their mission was to conduct a slow, deliberate advance from positions in Saudi Arabia, cut through the border berm, move forward to the edge of the Iraqi defense, then fall back a short distance and hold until relieved by *Big Red One's* other two brigades. When the mission was first announced, we thought the 498th would end up supporting the whole task force. It was quickly decided that it would be easier for 1-4 Cavalry to get their support from 101st FSB, which was supporting 1st Brigade and was located immediately to 1-4 Cavalry's rear. This decision was a good one for us because it kept us from having to spread ourselves across far more than normal frontage. Pulling everything back in for reconstitution, which we planned from the outset, would have been complicated.

Long before we went to SWA, we had realized that the entire BSA (nearly 800 vehicles) was too big to move quickly in high tempo operations. Within the Battalion, we had gone through the mental drill of constructing two notional Forward Support Elements (FSE), one heavy and one light. The light FSE was intended to provide minimal support in high risk, fast moving situations. The heavy FSE was designed to provide more sustainment in lower risk situations, until the rest of the BSA could catch up. It was similar in

capability to a divisional FSB. We had used these constructs notionally, in exercises, but had never used them in a full blown FTX. We turned to this concept now.

To support our part of Task Force Iron, we formed a light FSE, built around the medical company. We kept one treatment section, the holding ward and the BMSA in the BSA and sent two treatment sections, the ambulance platoon, and the company headquarters forward. I made CPT Bryant Harp the FSE commander, gave him some POL tankers, some MREs and water, very basic DS maintenance, the support operations van and some of their people, so that he would have their radios and someone to help plan and track missions.

The FSE went forward a ridgeline or two, occupied a reverse slope and got set. The next evening, things were to begin. My driver and I went forward to the FSE in late afternoon. The Apaches had moved in next to the FSE and were ready to roll on a moment's notice. After dark, 1-4 Cavalry and TF 1-41 began to move forward. Bryant and I listened on the Task Force command net, in the FSE CP. There were some light contacts as they moved north. Then TF 1-41 reported the locations of armored vehicles to their front. The Apaches scrambled to engage them. After a long and seemingly careful approach, the Apaches confirmed the targets and asked permission to engage. Some more checking and confirmations were made, then COL Weisman gave permission. The Apache pilot fired two missiles and reported two hits. A few seconds later, Jim Hillman's

voice came on the net reporting that one of his scout sections had been attacked. At first, things were confused. Reports indicated a ground attack; then it became clear that the Apache had struck friendly vehicles. We had a bunch of wounded and an unknown number of dead.

A couple of our tracked ambulances were already at TF 1-41's Aid Station, but Bryant scrambled 2LT Chris Colacicco and the rest of ambulance platoon's tracks, even before the Brigade Commander called for them. I called the 498th's TOC and told the S-3 to tell the Graves Registration Team to get ready for their first business. The rest of the night was spent finding, treating and evacuating the wounded. There was no way to recover remains until the vehicles stopped burning. Everything seemed to take too long that night.

The next day, we finally received the remains of two soldiers. They were partial remains, brought to us in one body bag, without documentation. When they came in, Mike Leatherwood went to the GRREG team to make sure they handled things properly. When he called the TOC and told me the condition of the remains, I had to ask Dr. Charles Miller to go down and help. Charles told me later that he was able to identify the heads of three femurs, so we knew there had to be at least two bodies. We did the paperwork as best we could, then sent a truck to Log Base Echo the next day, to turn over the remains. That night, at the Brigade meeting, I tried to explain to the assembled commanders the state in which we found the

remains and the essentiality of the paperwork moving with the remains. I wasn't gentle enough, I'm afraid, and Jim Hillman didn't take it very well. I had to back off. Jim was really suffering. I apologized for being so blunt and told Jim I was sorry for the losses, but I needed help doing a hateful job better. He settled and we never spoke of it again.

Lesson: This confirmed what most of us have long suspected. Without realistic, peacetime training, units will not be able to do their part of the GRREG mission well. Also, none of us were prepared for the condition of the remains we received. This was true throughout the war. In most cases they were badly burned, partial remains. Often, those doing recovery had to remove chunks of charred flesh from the inside of armored vehicles. This was extremely traumatic for them. We need to find a way to prepare our soldiers for this. Chaplains have to be conscious of this.

Reconstitution

A day or two later, Task Force Iron was relieved by the 1ID brigades who would ultimately make the main attack. TF 1-41 returned to its former position in the FAA. Except for the scouts, they had minor damage and the usual collection of NMC equipment. We put a team from the MMC, the DS Shop Officer, armament, missile,

COMMEI and automotive teams in their Field Trains to gang up on the maintenance chores. We also coordinated for a replacement M3 Bradley, which came with a crew. As it turned out, the replacement crew was from 1ID(FWD), the unit that ran reception in the ports. They stayed with TF 1-41 until after the war. The other destroyed vehicle was a 101st MI Bn GSR track. We reported the loss; they took care of the replacement. TF 1-41 came back together pretty fast. In a day, they were as good as we could make them.

Everyone seemed to appreciate the attention paid to TF 1-41, even though it diminished overall support a bit. In actuality, it was not difficult to organize or execute. The things the 498th team did depended entirely on the unit's ability to identify things for us to work on. We just moved some extra "getters", "fixers" and supervisors closer to the unit. We put some folks in place who were responsive to the XO and BMO and had the authority to draw on the 498th's other assets.

In the same time period, we were also working on 4-3 FA. They were a little more challenging because they never stopped firing. Everything we did for them was done between missions. We were less effective because of this. While they were helped, the effect was not as dramatic as TF 1-41's recovery.

The FSE rejoined us also. The experience proved the functionality of the concept. Bryant Harp was up to the task and

did a great job, though he was not in a maintenance intensive situation. If they'd been out there longer, I'd have had to send him more maintenance leadership. I think COL Weisman convinced himself that he wanted one of my field grade officers in charge of the FSE from then on, just because of the pace at which things happened. For the heavy FSE, that had always been our plan. I suspect it was more for comfort than anything else.

Lesson: We held an informal After Action Review of the light FSE's structure and performance. During the AAR, it occurred to us that we had built the light FSE very much like one of the support packages we routinely sent to Bergen-Hohne with the maneuver battalions, reinforced by more of the medical company. This had been unintentional. We had tried to look at Task Force Iron's requirements with a fresh view. The revelation was important because it validated the usefulness in battle of something we had done as a matter of SOP in peacetime training. Indeed we do fight as we train.

While we were fixing up TF 1-41, BG Rutherford told me to recover the destroyed armored vehicles, which were inside Iraq, and take them to a salvage point. He was concerned about morale and told me not to bring them into the BSA or any unit area. To do the mission, we formed a little task force. We sent a pair of M88s, one

of our own and another from TF 1-41, two of our HETs, a GRREG team and an infantry platoon. The infantry platoon secured the area while the recovery crews hooked the M88s to the hulks and dragged them back over a ridge, into Saudi Arabia. They had to drag them because they were too badly damaged to lift onto a HET. Once inside Saudi Arabia, the GRREG team searched each vehicle. They recovered a few small pieces of burned flesh from the Bradley, bits buried in the junk inside the hull. The HET drivers winched the hulks aboard and hauled them off to the turn-in point. The GRREG team documented and forwarded the remains.

Lesson: When the TF 1-41 guys had conducted their search for remains, the Bradley hull was still hot from the fire. They had not been able to check inside it thoroughly. Mission requirements soon returned them to caring for the living. Since we (the Brigade) had not handled the first remains up to standard, I wanted to be sure we didn't miss anything. That's why I included the GRREG guys in the recovery task force. After this recovery, I got COL Weisman's permission to send the GRREG sergeant around to all the units. He taught the company officers and First Sergeants how to do their GRREG tasks and how it helped him do his job better. He gave the class at our evening meeting in the BSA, too. We lost a few more vehicles during the war and I had the GRREG team search each before we hauled it away. They didn't find anything in any of them. This

was a hard way to learn, but learn we did. Even during wartime, training is important.

Chapter 6

The War

A few days later - 24 February 1991 - it was time to begin. The afternoon prior, Mike Leatherwood and Bryant Harp formed the heavy FSE north of the Battalion area. They combined the units' field trains with chunks of the 498th and ended up with a composite support organization that could move quickly, meet immediate needs and go for help when required. It amounted to about 250 vehicles.

The XO and I formed the rest of the Battalion for movement. That evening, we moved forward a few miles, to the head of the marked lanes that would guide us through the penetrated defenses. We parked the vehicles in a herring bone arrangement between the lanes and kept our security close. There were too many vehicles moving around to do otherwise. Mike did the same with the FSE.

The next morning, the attack began. We were told that thirteen battalions of artillery fired the preparation. We couldn't see much of it but it sounded impressive - 30 minutes of continuous firing. From then on we were on a short leash. We stayed by the radio and listened for the situation updates. Things went very well and 3d Brigade was ordered forward early. By 1300 hrs, we were moving, too.

I had my XO, Dave Sanders, take a small advanced party and begin to cheat forward about 45 minutes ahead of our lead elements. The plan didn't allow us to move prior to 1300 hours, and I was loath to enter an area none of us had ever seen, blind. Besides, everyone else and his brother was creeping forward, most notably the Brits. Dave's mission was to recon routes from the end of the passage lanes to our position and to ensure that our position was clear. I moved right after he did, intending to see what the lanes were like before the Battalion arrived, then visit the Brigade TOC. I recall that the lane markings were screwed up, but their alignment was obvious, so getting through wasn't a problem. I warned the serial commanders. I also recall realizing that there was no way to tell where the lanes ended! I didn't know we were clear until my driver and I stumbled into the rear of a British 155mm howitzer battery. North of the breach, there were no marked routes, only the traces left by the prior passage of vehicles. We ended up bouncing cross-country to find the Brigade TOC, which was in the northwest part of the perimeter.

After a short visit at the TOC, my driver and I moved east, then south, intending to enter our assigned position area from the north. We got to a low ridge overlooking the area and found an Iraqi BRDM dug in there. While we were making sure it was vacant, we began to hear the convoy leaders reporting passing into the lanes. That meant they were only about 30 minutes away. As we'd heard nothing from the XO indicating he was ready to receive them,

we called for him and headed down the ridge. His driver had to get him. A few minutes later, he reported that the whole southern half of our assigned position was covered with DPICM duds. He had the advanced party looking for routes through the dud area on foot, as he was afraid the vehicles would be damaged. By the time he answered, my driver and I were at the southwest end of the area, among the duds. They were everywhere indeed. We spent a few minutes looking for a way through, but there was no clear route - only a less densely seeded route. I called the convoy leaders and instructed them to pass north of a certain grid line before turning into the position, intending to force them to enter from the north, as my driver and I had done. Mike Leatherwood acknowledged and his serial avoided the problem. Unfortunately, Chris Zendt, my HHC Commander, was too far along. As I finished talking to Mike, Chris and his serial came into view. I stopped him and headed toward him. When I reached him, I had his driver pass the word back for everyone to stay mounted. Sadly, there was an immediate explosion in the middle of the convoy, before the word could pass all the way back.

I went to the site of the blast and found an injured 2-66 Armor soldier. The Brigade Surgeon happened to be in the vehicle behind the soldier and was on the scene. After we got a medevac call working, I talked to some nearby soldiers. Reportedly, the injured soldier had been clowning around and deliberately kicked one of the duds. It exploded, blowing the toe of his boot open and

giving him multiple shrapnel wounds in the legs, hands and face. I didn't see well enough to be sure, but I suspect he also lost toes.

The medevac chopper took a long time - maybe 30 minutes. When one finally appeared, it flew too far east. We thought the pilot was screwing up until he landed in the distance. I called my XO and he reported that C Company had arrived and, before he could stop them, worked its way carefully into its assigned area, which contained duds. While trying to set up, one of the treatment squads disturbed a dud. It detonated and threw up enough shrapnel to wound five of them. The medevac helicopter was for the wounded medics. Shortly after, another bird arrived for the 2-66 soldier. We had trouble finding a clear area big enough for him to land, so it took longer than we'd have liked.

After the C Company incident, I made a net call and told everyone to circle wagons in the northern half of the assigned area, out of the duds. I told my company commanders to maintain unit integrity, but to get out of the duds. They needed to get in tight, stay well off the passage routes the Brits would use that night, establish local security and rest as many people as they could. I had the XO move C Company personally. Most company commanders had the good sense to walk their areas before dark and mark any duds with engineer tape or chem-lights. The only business we did that night was to issue fuel.

Lesson: Annex B is a vignette about the tragic death of a civilian LAR from injuries received from dud DPICM submunitions. It contains a number of lessons derived from this day's experience.

That night, the Brits passed through us. We had parts of the BSA on each side of one of the routes. It took them almost all night to pass. Occasionally, we would hear a pop as they ran over a dud and set it off. Once, some British enlisted men came begging help for injured comrades. They had seen the red crosses on C Company's ambulances, so came to us. We sent an ambulance team and brought three of them in. One soldier was dead. The other two, we treated, then evacuated. We had a bad moment over the dead soldier. We weren't sure whether or not we should evacuate him through the U.S. system. We had not discussed the handling of Allied dead in any of our planning sessions. We had presumed they would take care of their own. In the end, that's what they did. The soldiers who had asked for help found out where to take him and took him there. We should have been ready for this eventuality.

Lesson: In coalition warfare, support for allies becomes a planning consideration. In preparation for DESERT STORM, we had rehearsed with the British extensively and had asked about our obligations to them regarding CSS. We accepted general answers that did not address emergencies. We should have asked better questions.

That night, as we sat listening to the radio, we discovered a minor but annoying UK-US communication incompatibility. The British use a command and control system that is a frequency hopping, FM system. It is quite powerful and would occasionally hop into the frequency band we were using. When this happened, they blew us off the air. Half a minute later, they were gone, to return later. We worked around it, but it was annoying when they were close.

During the night, Brigade told us to be ready to move by 0500 hours. We passed the word and were ready early. As movement time approached, we were given a boundary change which caused 1ID to begin movement by heading due north, through a narrow sector, with brigades in column. Despite my protests, I was told the 498th could not move until the combat elements of all the maneuver brigades had passed by. I began to fear that we would be left behind and never catch up.

Before we started, I went up on the ridge above our position. The Brigade TOC and HHC had gathered there. It was my last chance to talk with LTC Jim McGouran, the 2AD(FWD) Chief of Staff (really the Brigade XO), before he took off. While we were talking, the Brigade swung out of the west and moved up the valley, heading north. I really only remember seeing TF 1-41, which was on the right wing. The Headquarters people, including Jim McGouran, followed along behind, stringing out along a trail in the valley,

which ran off north. Awhile later, the other brigades of 1ID swept past. They were closer and more visible. The feeling of power was palpable. Then the trains and FSBs appeared. When they didn't pause to let us pass, I knew we were in a race.

When it came time for us to move, the road north was already clogged by one of the other FSBs. As there was a lot of loose sand in the area and only one decent trail, we had to wait for them to pass. Starting out, we headed up the valley. The intermittent sandy stretches were really tough going, especially for the big trucks. Several of us tried to find a parallel route, but there was nothing passable. Mobility was so bad that we couldn't use the two-abreast formation we had discussed. Then things got worse. As the Corps trucks hauling our ammunition moved out, they got stuck in the sand. They were M915s, hauling 40' trailers with half loads. Even lightly loaded, the highway tractors couldn't pull uphill in the sand. We passed units around them and called for all the tracked recovery vehicles in the column. B Company's M88 and the ADA platoon's M578 responded and spent most of the day hauling trucks up a sandy hill. All this time the FSE was moving, leaving the main body further and further behind.

When the Brigade moved out, we lost radio contact almost immediately. This caused COL Weisman to send Jim McGouran back to the limit of radio range to talk to us periodically. The pattern that evolved was a radio call from McGouran to Mike Leatherwood,

who was leading the FSE, telling Mike what grid coordinates to use as GPS way points. Then he was gone. Mike would call me, often having to drop out of the column and move toward me to make contact. Several times each day, McGouran would repeat the process.

Lesson: I got real frustrated with Mike because he couldn't tell me anything about what was going on up front. We knew nothing of the tactical situation and didn't know what or who, besides fuel, to send forward. It wasn't until we spoke face-to-face that I understood the nature of his communication with Jim McGouran: short and sweet and no time for questions. McGouran offered no information and would not delay for questions. We could have done this better in the Brigade!

Later in the day, as we finished the due north leg and turned northeast, we had a period of sunshine. The land was flat and we were following one of the graded MSRs. We could hear the Brits, who were south of us, talking on the radio occasionally. Other units were moving near us. Most of the trucks had green and black NATO camouflage, so we figured they were VII Corps units. I don't remember stopping to rest or eat, that day, though I'm sure we did.

As the day ended, I decided to keep pushing the main body at least until we caught up with the FSE. Early in the morning, we

finally reached them. We pulled into position in parallel rows, herring boned to the right and left. Everyone dug a hole and slept in it. We tried to organize a guard but things were so confused and everyone so tired that I doubt we did this very well. Luckily, there didn't seem to be anyone or anything around us.

The next morning, the FSE led the way again. A couple of hours later, our main body moved. The same pattern of radio calls from McGouran emerged again. We drove for the waypoints he passed, only to receive new ones later in the day. At least the desert was more trafficable and we were able to use two columns.

Late that afternoon, we caught up with a convoy of substantial size, moving very slowly. I was aware that the FSE was getting farther and farther ahead of us, so I was anxious to pass or find another route. As soon as the terrain permitted, I moved our column to the left, on a parallel track and began to pass them. We went by them for several hours, then got a radio call giving us new waypoints, further to the east. This meant we had to cross in front of the other unit in order to get east. We were far enough ahead that I knew we could get HHC across their bow. A Company was next and I wasn't sure about them. I told CPT John Denovchek, the A Company Commander, to work his way across at a safe place, even if he had to stop and do it one vehicle at a time. HHC crossed and we headed out into a gravelly pan covered with small bushes. Many of the trucks were near the end of their fuel and the fuelers were

with the A Company serial. We stopped in a clear area to wait for them. As luck would have it, at this time the satellites were down and the GPS didn't work. I could describe the area around us to John, but I couldn't give him a grid coordinate. He got across the road and continued east while we waited. We never lost radio contact but he couldn't find us. Several hours later, the satellites came back up, I passed him a grid and he worked his way to us. As it turned out, he'd been pretty close. It only took 30 minutes or so for him to find us. We refueled and moved on.

As the night wore on, I was concerned about breaks in the column as drivers fell asleep during the halts. I dropped back so that I could move forward and awaken people when I heard on the radio that the front was moving. Consequently, I was near the back when we moved into our bivouac for the night. We had caught the FSE again. While everyone got settled, Mike and I made sure the fuelers went forward. After issuing, they had to go all the way back to Log Base Nellingen for fuel, then come forward without knowing where we would be. Quite a challenge for the lieutenants in charge.

After dark on the first day, BG Rutherford called me from his helicopter. I never saw or heard the aircraft, but he knew where I was. He expressed his sadness about Jim Neberman (see Annex B), which surprised me. At the time I didn't know anything about it. He was trying not to speculate about what happened and we were talking past each other for a few minutes until I asked him to speak

plainly. He told me Jim had been killed and that he'd tell me more when he could talk face-to-face.

On another occasion, BG Rutherford told me he had Corps fuel tankers moving forward to a certain grid location. If we could get there, we could get some fuel without driving all the way back to Log Base Nellingen. Sadly, our tankers were already enroute to Nellingen and out of radio range. We missed the chance.

After the first night's refueling, the POL tankers were not returning on the schedule we had worked out. As we couldn't talk to them, we didn't know what was happening - only that they were late. BG Rutherford found them waiting in line for fuel at Log Base Nellingen. The people operating the fuel point had told them (and others) that 3AD, as the Corps main effort, had priority. They wouldn't fill anyone else until all the 3AD vehicles were finished. Everyone else had to wait. Our lieutenant didn't have enough weight to change things, so he put his drivers to sleep. BG Rutherford saw our trucks and found our lieutenant, who enlightened him to the problem. BG Rutherford got the system changed to permit some loading for the other units while 3AD got most of the effort. Pretty soon, our trucks were headed north again. We probably lost 4-6 hours in the exchange.

During the evening of the third night, the Support Operations Officer from 101st FSB, supporting 1st Brigade, called me on the

498th command net. He passed a message in behalf of BG Rutherford giving the location of more fuel tankers coming forward. I passed it along to A Company, but by the time we got there, there was no fuel left.

The third night in Iraq, after we had done what we could about fuel, I went back to my truck to sleep. I stayed by the radio and slept a bit, in the front seat. It was obvious that the Brigade was in a fight to our front. There were tremendous flashes in the night sky and explosions in the distance. Nearby, MLRS was launching steadily. It went on most of the night. By morning, we were working some medevac flights and reports of some friendly KIAs were coming in. We had trouble reaching the medevac unit and it took a long time, relaying through several intermediaries. We also sent some of our ground ambulances to the rear with casualties. They had to go back to a Combat Support Hospital near Log Base Echo, over 50 miles away, with no GPS. And the ambulance crews knew we would move on before they got back. They were brave and dedicated, every one.

At first light, we lined up and moved forward to a passage point manned by 2ACR. As the day progressed, it became apparent that the Brigade had passed through 2ACR the night prior. They had engaged a sizeable Iraqi force immediately and fought most of the night. The battle finished after sunrise, when the remaining Iraqis, seeing the size of the US force, surrendered. When we got

there, the situation was still uncertain and 2ACR still operated the passage points.

A number of interesting issues presented. First and foremost was our lack of knowledge about what had happened and what to expect in front of us. We got some information from the 2ACR guys manning the passage lanes, we got very little from our own Brigade TOC, and we got some from an infantry company sent back by the Brigade Commander to escort us through the battle area.

The next problem was EPWs. The Brigade had captured hundreds of Iraqis and more were surrendering all the time. There was no division collection point at that time and the Corps point was all the way back near Log Base Echo. The Brigade's MP Platoon, reinforced by our Provost Marshal staff section, about 25 soldiers in all, was holding about 500 EPWs. They had reports that about 250 more were enroute to them. They had no concertina wire to control the EPWs, only two tents and their gun jeeps. Several of the Iraqis were wounded. The Provost Marshal was very nervous. He had no rations or water for the prisoners, no way to move them and too few MPs to guard them. He had voiced his concerns to the Brigade Commander and was told to call 1ID's PM and tell him he (the Division PM) had a problem. As the whole division was moving, the Division PM said he couldn't help. This was clearly a worsening situation.

I tried to get some better guidance from COL Weisman myself. He told me he'd pass word to the Division HQ, but that our PM had to work this out in his channels. That having produced no solution, I tried BG Rutherford, who had not heard of the problem. He said he'd work on it but had no way to fix the problem quickly. In the meantime, the MPs had to sit on the EPWs. Having failed to arrange a complete solution, I tried to work on the pieces. I had A Company send forward the trucks hauling our MREs and bottled water. We unloaded a couple days worth of each, then put the truck back in line. A passing CH-47 landed, asking directions to a FARRP he thought was in the area. We didn't know the location of the FARRP, but we asked the crew chief what he was carrying. He had MREs and no claimant for them, so we took the MREs and gave him a load of EPWs to haul away. He was willing and away they went. I had C Company send some medics and a PA forward. They set about treating wounds. Finally, I told CPT Lamar Conn, the B Company (Maintenance) Commander, to be prepared to leave one of his platoons behind to augment the MPs. I figured that we were likely to stop in the next day or so, either to let fuel catch up or because we'd run into water at the eastern edge of Kuwait. If we stopped, the supply guys and medics were likely to go into high gear. The maintenance guys would have a day or so of grace while the units evaluated their equipment. Of the maintenance guys/gals, the support teams did most of the work for the maneuver units. The Ground Support Maintenance Platoon took care of us, the Brigade HHC, the engineers and any

overflow from the support teams. With slight risk, I could afford to give them up to the EPW mission for a day or two.

At dusk, we finally started moving, with the Bradleys in the lead. We left the maintenance platoon at the EPW point. The PM was very relieved. I think I'm now one of his personal heroes. It seemed irresponsible to drive away and leave him at risk.

We moved down through a draw with burning tanks all around. It was eerie in the dark. We had been told to stay on the road because of the danger of mines, but like the penetration, we weren't told where the danger ended. This caused us to stay in a single column for too long. Eventually, though, Mike and Bryant split the FSE into two columns with the Bradleys covering the front and flanks. Much later, the main body did the same.

About midnight we had a scary run-in with a US artillery unit. It began when the Bradleys picked up, on their thermal sights, armed soldiers running to deploy against them. The infantry company commander was appropriately restrained and told his guys to hold fire. He even pulled them back to keep his distance until we could find out who they were. Eventually, we stopped. The Bradleys made several attempts to identify the soldiers. We suspected that they were friendly, but didn't know for sure. Each approach was met by an aggressive reaction by soldiers carrying AT weapons. We were trying to figure out a new approach when CPT Tom Cowen, commander

of the Brigade HHC called me. He'd heard us report on the Brigade net. He reported that he had driven past a US artillery unit just before dark, at about the location we had reported. He speculated that it was the same unit. He was headed back our way looking for some stragglers from his company. He asked us to hold tight and he'd try to visit the artillery unit and settle things down. He did just that. We had to wait while they fumbled around in the dark trying to locate all their people, but eventually, we rolled past them. I hate to think what might have happened if my FSE had stumbled upon them in the dark, without warning. The Bradley's may well have saved us.

We moved all that night and met no enemy. The Bradley company really couldn't protect the entire column, but they did a good job clearing to our front and flanks, helping our peace of mind. They were also fast enough to set a good pace, even in the dark. Soon, the FSE began to outstrip the main body.

We were, by this time, heading east, toward Kuwait. We were passing through what had been a fortified area. The route was unclear and several Iraqi trails crossed our desired route and intertwined with it. It was very easy to take a wrong path. We used the GPS devices to keep the lead vehicles on track and we talked freely on the Battalion net, describing landmarks and the turns to each other. In this way, we were able to progress with greater confidence. We had a problem with fatigue, however. Every time we

stopped, even if just for a few seconds, some of the drivers dozed. I had gravitated to the rear of the column, anticipating the problem, and taken my XO and CSM with me to help. We spent the night beating on doors and leading pieces of serials that had become separated. It was grueling work.

In the small hours of the morning, we reached an obstacle that Chris Zendt had described to me - a low, earthen berm. Chris had followed some tracked vehicle tracks over it and continued east. He had called to warn the rest of us about it. The bigger trucks, he said, might have a problem crossing. Sure enough, the convoy halted in front of it. It was too high for the big trucks. I had John Denovchek send back up the line for his bucket loader. We had to get it off a lowbed trailer. Then, in the dark, the operator had to cut the berm and smooth the cut. He then had to go back to his trailer, climb aboard and tie down the bucket loader. The operator, who was relatively inexperienced, did a super job.

While we were waiting for all this to happen, I wondered why such a berm had been erected in the middle of the desert. As I wandered about, I realized that the berm was a part of a triangular pattern of connected berms. We were crossing an Iraqi defensive position! Happily, no one was home and we continued without incident.

Later that night, we got hung up in deep sand again. The ammo trucks and the HETs, marching together at the rear of the column, were getting stuck worse and more frequently the further we went. I called for the M88 and the ADA M578 again and we started dragging the trucks along. Finally, I felt I was too far behind the Battalion, so I left my XO in charge of bringing the last vehicles in. My driver and I closed with the Battalion about 0400 hours, absolutely exhausted. I was talking to the TOC on the radio, but couldn't find them among all the BSA's vehicles. Finally, we gave up. We got two hours sleep sitting in the front seats. Dave Sanders, my XO, brought the last of the stragglers home just as we were getting ready to roll again, about 0600 hours.

We had been sending all of our fuel forward to the maneuver guys and had not replenished the BSA's few fuelers since we started. At this point, everyone in the BSA needed fuel and we weren't sure we had enough. Over a cup of instant coffee (Mitch used the last of his sterno to make it) and the hood of my Hummer, the unit commanders and I determined who had fuel and who needed it. We set priorities, not by unit, but by vehicle function. Command and control vehicles, for instance, would refuel first, then the next most critical category, and so on. Everyone got some fuel, though few got full tanks. We used up everything we had, including fuel cans. We were nervous as we pulled out.

We were still in the sandy area, and Dave Sanders and his driver were spent from their recovery efforts the night before. I told them to sleep a bit and tag along at the back end of the column. I asked Vinny Boles the MMC Chief and 2LT Geoff Stevens, the HHC XO, to shepherd the big trucks. The rest of us pulled out and left them behind with the tracked recovery vehicles to help them.

By now we were in northwestern Kuwait, heading southeast. We passed areas containing lots of dead armored vehicles, some with the charred remains of Iraqi soldier still in the turrets. Nothing seemed hot, so we figured it was air induced damage. We started to stumble upon groups of Iraqis trying to give themselves up. Many were badly wounded. We lost some time because we had to stop to orchestrate evacuations. We had even more trouble reaching the medevac unit. We tried to get relays through nearby units and we tried to use DISCOM MEDOPS, both with mixed success. Once, COL Shadley, who was up in a helicopter, heard me calling and was able to relay for us. Through persistence and hustle, we were able to execute every medevac call, but it wasn't easy. Why can't medevac units operate on an HF AM radio?

By noon, we were picking up so many prisoners that we had to find a place to put them. I finally called John Denovchek and asked for a 5 Ton cargo truck with a partial load and no sensitive items

in it. He cut one out of his serial and we used it for EPW transport.

During the afternoon, I saw one of the communication section sergeants pull off the trail and double back. I had my driver flag him down. He had seen a group of seven or so Iraqis way out in the distance, heading toward the road. He had thought to capture them but really wasn't sure how to do it. We called for a few more soldiers, talked over how they would go about it, then I followed to lend moral support. I let the sergeant handle it and he did fine. One of the Iraqis was a major who spoke some English; another was a First Sergeant who had a substantial role of money in his pocket. Most of the group had lost their shoes and were quite lame. We put them in the POW truck and rejoined the convoy.

A couple miles up the road, the ORF tanks ran out of gas. Actually, they had a bit left, but they were so low on fuel that the drivers were afraid they'd run bone dry and be stuck on the trail. Wisely, they got off the road before that happened. I had them form a diamond, well off the road, for all around protection. It didn't seem to me that anyone would bother them. I told them I'd send fuel back as soon as I could find some.

By mid-afternoon, Mike had called me and reported that the FSE had halted near an Army barracks by the Kuwait City - Basra Highway. I don't think he knew that we were finally done moving. I

came up the valley around 1600 hours and found the FSE parked in the staggered, overnight formation we had been using. I found Mike and told him to push everyone out into a BSA perimeter and get set to do business. I then went to find the Brigade TOC.

As we came upon the highway, I was struck by the scene before us. The army barracks had been bombed and most of its structures had collapsed. Surrounding it were a dozen destroyed vehicles and scattered ammunition piles. 4-3 Field Artillery had moved into the neighborhood in a bivouac configuration. Beyond them was the highway, littered as far as the eye could see with destroyed vehicles. Still further out, the sky was black with smoke and a hundred oil wells burned in the desert. It was an eerie feeling.

The Brigade TOC was dug in next to the highway. When I arrived, some of the other battalion commanders were there. We had a brief commanders' reunion, I caught up on what was happening (they told me about the ceasefire), and we got ready to recuperate. We had arrived in Kuwait.

ADA and MI in the BSA

One of the disadvantages of being a separate brigade, located away from other US units, as we were in Germany, was the infrequency with which we were able to practice combined arms operations with the attachments one normally expects from division

or corps. For the Four Day War, the Brigade received an ADA battery from 11D's ADA battalion and some MI guys and gals from the MI battalion. We had a Vulcan Platoon and battery trains from the ADA Battery with us in the BSA most of the time. We also had the XO and support elements of an MI Company with us. Both of these attachments are worth mentioning.

When they joined us, I insisted that the OICs come to my evening meeting with the other BSA tenants. This drew the ADA battery 1SG and the XO of the MI company. At their first meeting, I welcomed them to our "family", introduced them around, and promised them the same support that the usual members expected. After the meeting, I took them aside and introduced them to Mike Leatherwood, my S-3, and CPT Lorraine Holland, the Support Operations Officer. I told them that Mike would be their "dad" and help them with whatever they needed. He'd position them, hook them into our communication system, keep them informed, give them instructions, all the normal operational stuff. Support Operations would ensure they had access to rations, water, fuel, maintenance, and medical care. I had Lorraine walk them around the BSA to the places they had to go to get all these services. I was also up front with my expectation that they would join our team, pull their share of perimeter defense and guard, march where and when we told them, and do their share of details.

We had absolutely no problems with these units. Much to the contrary, it wasn't long before they had proven themselves part of our team. On the march, they shared fuel and recovered vehicles for us - things I had thought they might resist. During all those long night marches, the MI lieutenant was a dominant force in the middle of our main body convoy. She kept folks moving, helped find the right routes, arranged recovery of broken vehicles, reported accurately and completely. She was unflappable and a positive influence. In April, when we finally parted company, I thanked the two of them at their last evening meeting. I also found their company commanders and let them know how I felt. I was able to thank the ADA soldiers at a little formation before they left. We were better for their help. I hope they got as much from us as we got from them.

The Commo Guys

We had a huge commo problem when we joined 1ID. We were an MSE brigade and they had the old stuff. To solve the problem, we raped the Brigade of MSRTs and sent one MSE node to the Division TOC. Fortunately, 1ID's signal battalion was full up, so they were able to send us the signal platoon that usually goes with a maneuver brigade. This worked out well for us because we were able to make the solution to the commo problem almost transparent to the BSA tenants.

We had a standard way to hook up our MSE phones (the DNVTs). The junction box (J-box) went under the back of the Support Operations van. Units ran wire from their CP to the J-box. The MSE guys ran cable from the J-box to their van, then made it all work.

When we added the IID signal guys, we had the sergeant in charge put phones into the G-4, Support Operations and 498th S-3. Each section got two phones. We also had a couple bright signal guys work out a way to link from one system to the other. After the war, they actually got it to work. We had the capability to extend the IID phone system to other users in the BSA and we did so from time to time. After the war, the G-1's mail team moved in with us because Truck Platoon was hauling the mail for them. We gave them a phone in the IID system instead of taking an MSE phone away from someone.

Both the commo sections did a great job. They picked good locations, set up quickly, fixed things immediately when they broke, and attended their equipment. The "buck sergeant" IID sent us was a super young sergeant. He always had things under control and several times offered suggestions that helped us get things done more efficiently.

Fuel

Our refueling plan for the war was pretty simple. We topped everyone off before they kicked off and started full ourselves. We split the tankers into two groups. The POL Platoon Leader, 2LT Brian Smith, led one and the Truck Platoon Leader, 1LT Tom Rivard, led the other. We gave each a Magellan GPS and told them they had to move in convoy. We had 20 5,000 gallon tankers. One was in MOGAS service and one was hauling jet fuel for the aviation section, which was with 11D's Aviation Brigade. That made two groups of 9 tankers easy to figure out. We figured the Brigade would use 100,000 gallons per day, which left us just a little short (18 tankers x 5000 gallons each = 90,000 gallons).

The first evening, we refueled a few HEMTTs as the Brigade topped off in preparation for the morning's movement. The empty tankers left immediately to refill. There was fuel at 201st FSB's old BSA and Log Base Echo. I'm not sure where they went, but they got back in time to move with us the next day. During the day, the Brigade refueled twice, using just about all our fuel. Half the tankers turned back after the first refueling pause, around mid-day; the second group headed back after the evening halt. When they went back, they went to Log Base Nellingen. It was probably the first group that BG Rutherford found waiting there.

We ended up practicing "just in time" refueling. The Brigade would refuel and move out, sending the HEMTTs to find our POL tankers. After a moderate wait, the tankers would show, issue fuel and head to the rear. The HEMTTs then moved out to catch up with the Brigade.

On the third day, we knew Tom Rivard's group was headed our way, but we had to move through 2ACR's passage point. I had to leave a lieutenant with a radio at the passage point to wait for Tom. Tom had the grid location of the passage point and knew to bear on it when he returned. Brian's group refueled the HEMTTs after the battle, while we were waiting at the passage lane, then headed to the rear. The Brigade refueled again that evening, but this time our tankers did not arrive. We were so far from Log Base Nellingen that they could not get back to us in time. Tom's group followed us into Kuwait, struggling mightily through the sandy belt. They arrived in time to partially replenish the Brigade as we held positions along the highway.

Brian didn't get back for a full 24 hours. We were just at the point of being seriously worried when he called the TOC on the radio to get our grid coordinates. When he came into the BSA, he had a convoy from 701st MSB with him. He had come upon the 701st convoy out in the desert and stopped to check on them. Neither he nor the lieutenant leading the 701st convoy knew for sure where they were going. They only had rough grid coordinates and

instructions to call on the radio when they got close. They figured they might as well help each other get to the general area, so came on together. He brought the 701st LT to the TOC so that she could call her unit. That done, we found one of our MMC sergeants who had been to the MSB and had him lead her home.

Brian's fuel helped but we weren't out of the woods by a long shot. Since it was taking too long to haul our own fuel up from Nellingen, and the DISCOM wouldn't have fuel stocked for a couple more days, we tried to find a closer source. A POL unit had set up south of us, outside Kuwait city. We tried to coordinate to pick up fuel from them; got them to agree to issue to us, in fact. But when we showed up, they gave us less than what we wanted and told us they couldn't support us. The search for a closer source continued fruitlessly for a couple of days. By that time, the MSB was set up and operating, and we finally got well.

We were issued B-MRE-B after the war. With B-Rations came increased demand for MOGAS, which is used by mess halls in their M2 burner units. Our only MOGAS tanker had run over a DPICM submunition coming through the passage lanes on the first day. The bomblet blew out both front tires and punctured the oil pan. The driver wisely locked the truck and abandoned it. We sent a recovery crew after the tanker, but knew it would be two days before they got back, assuming they found the truck where it was left and it was intact. In the meantime, we had to orchestrate cross-leveling

within the Brigade (some of us had 600 gallon MOGAS pods) and coordinate for the MSB to fill fuel cans for our customers. The G-4 helped with coordination and we got by. The tanker arrived in good shape, still full of MOGAS, right on schedule.

This MOGAS problem was a curious predicament and was a chronic problem the whole time we were with IID. Despite the fact that they were issuing 3000 gallons of MOGAS per day, they had no tankers in MOGAS service, only a few tank and pump units. As often as not, we ended up hauling MOGAS for them when they ran short. I guess that's what teamwork is about.

Chapter 7

Post-conflict Activities

EPWs

As the rest of the BSA rolled in and began to set up, we turned our attention to three immediate problems: EPWs, water and enemy dead.

Mike Leatherwood had orchestrated the establishment of a modest EPW point just outside the BSA. All the units in the BSA pooled their concertina wire to fence it off and shared the guard. The 498th donated a couple tents, and we sent our S-2 and some Kuwaiti translators over to begin interrogations. That evening, at the Brigade meeting, I was told that TF 2-66 Armor was holding several hundred more EPWs bottled up under a highway bridge. They had been rounded up along the road as the Brigade occupied the area. There were too many to add to the BSA's modest facility and COL Weisman was not thrilled by the prospect of operating two sites. In any event, we still had to turn-in the EPWs we had left behind with our MPs. The Brigade G-3 called 11D and began to push hard for a place to take them.

We had brought one 3000 gallon SMFT (a semitrailer-mounted collapsible tank) of potable water with us on the long march. It

was all we could carry. The water was gone the first night and there were no water points anywhere near us. The alternatives were to use bottled water for several days, to find a source and purify our own water, or to drive all the way back to Log Base Echo for water. The first alternative wasn't workable because we didn't have much bottled water, nor did the DISCOM. Besides that, we had lived in the same clothes for four days and people wanted to clean up - which required bulk water. The last alternative was too hard. We had too few trucks and too few SMFTs to make it work. So, we put some teams out to find water sources.

The day after we occupied, units started telling us about bodies in the area. When one went certain places, one could smell them. We put a net call out to get a clean-up going. We had to rely on the units to recover the remains, as the GRREG team was too small to conduct searches. We issued all the remains pouches we had, picked a hasty burial site and got the engineer company to dig an appropriate trench.

By day two, we were hurting badly for bulk water. Most of the units had used what water they had brought in their water trailers and some were even low on bottled water. The DISCOM was in a similar fix and couldn't help us. Someone told us that TF 1-41 had "liberated" some Iraqi bottled water from the supply area of the nearby army barracks. We called them, explained the situation, picked it up and issued it to the Brigade. We also put more scouts

out looking for water sources, including the engineers. Toward evening, John Denovchek, the A Company commander, reported finding a water tank near the highway. Apparently, a water pipeline ran along the highway. The Iraqis had tapped into it in several places and installed water points which included holding tanks. When I went to check, A Company already had one 600 GPH ROWPU operational with a second on the way. Later that day, the MSB got into a large water tank to our north and began to purify water.

The body clean-up took a few days. We asked the Kuwaiti translators about Muslim burial customs and tried to observe them as we put the poor bastards to rest. We surveyed the burial site, completed all the required paperwork, and kept track of the personal effects, which were buried with the remains. We were able to identify very few of the dead. We closed the site having interred about 30 remains. Later in the week, TF 3-66 Armor found another batch, all in the same geographic area. We buried that group together, in a second site.

Lesson: Our GRREG team consisted of five or six Army Reservists from a Puerto Rican unit. They were well trained and motivated but had no actual experience prior to DESERT STORM. They came to us in a couple of CUCVs with no equipment save their trucks, personal gear and blank forms. They asked us for tents, stoves, lights, a couple of field tables and some litters, which we rounded up from

within the Battalion and gave to them. There were too few of them to handle many remains at once, so they also asked for some workers to help with lifting and moving. During the war, the only people we could spare were cooks (we were eating MREs), so we had the GRREG sergeant train one augmentation party per company. In Kuwait, these people did some very necessary but grisly work.

These guys need to come with their own big truck (a 2 1/2 ton cargo truck would suffice) and equipment. A lot of units are closer to the bone than the 498th was, which would prevent them from giving up the equipment the GRREG detachment needed. Many medical units do not carry extra litters, for example. The only reason we had them was that they were stocked by our Brigade Medical Supply Activity (BMSA). Sadly, support units must plan to absorb the augmentation somehow. The GRREG detachment could not have performed its mission without this support.

At some point I realized or was told by someone that the same augmentees had been helping with GRREG for a long time, more than their fair share. We swapped them out the next day. Soon after that, we trained up a group of mechanics to replace them. We had begun to issue B-rations and needed the cooks to return to the mess trailers. When the GRREG team had work, our Chaplain was

always nearby. I also asked him to look in on the GRREG folks at other times, hoping it might help their peace of mind.

Reconstitution Again

Over a few days time, the DISCOM brought supplies forward. The ration system got back to normal and we didn't have to drive so far for fuel. Repair parts availability remained abysmal.

We had a lot of trouble making much headway repairing the things that had broken during the attack. We were just about out of the parts we needed to conduct the most common repairs and we had not been receiving anything we ordered. We had gone several days without even receiving anything from our Class IX people at DSA Junction City. To correct this, we re-instituted our Truck Platoon shuttle to DSA Junction City. It took a couple of days to get enough trucks positioned, but we began to receive an S&P load or two each day. It helped but didn't solve our problem.

I hadn't visited our DSA stay-behinds since before the attack. Neither the MMC people nor anyone from A Company had indicated any problems with the DSA operation, to the best of my recollection. BG Rutherford brought me one. He had visited the DSA and found our Class IX area overflowing with unprocessed receipts. He was concerned enough to offer me a helicopter ride to DSA Junction City.

There was, indeed, a mess at the Class IX area. The stay-behind folks had been religious about picking up ALOC pallets that came in for us. They had at least 30 awaiting receipt processing. I asked them about the containers USAREUR had sent us and found that they had sent us the contents of a few, but had not processed more than half. When I asked what the problem was, the Class IX sergeant explained that the ISO containers were the problem. While the SARSS computer could tell him which of our original 58 containers to issue from, he found he had to pull everything out and go through it in order to find the parts he needed. The computer was no help with the unprocessed receipts, of course. This was so manpower intensive that he had diverted the receiving people to help work the containers. He figured he could help us the most by shipping to us the parts he knew we had. While all this logic was good, it didn't solve our problem. We talked through some options and settled on a plan which called for him to do the following: pull everything out of the containers over which we had inventory control and set it on the ground in front of the container, to speed up the pulling of parts against MROs; screen the ALOC pallets and process those which held bulk items destined for a few customers (maybe half were in this category); and dedicate some people to processing the USAREUR containers, which were likely to contain some things we needed badly. For my part, I told the MMC stay-behinds, most of whom were supply sergeants, to come down and help. When we got back to the BSA, I had John Denovchek send the Class IX Platoon Sergeant and a few more

warehousemen back to DSA Junction City. Over the next several days, we began to receive more stuff.

While this effort improved things somewhat, we needed most badly a few particular parts that were not in our stocks. These we got by sending people south, back to Saudi Arabia. Our MMC people worked through the DISCOM and availed themselves of their contacts and 1ID's helicopter "log bird". Their reach extended as far as the new equipment fielding teams in Dammam. We also sent senior NCOs and Warrant Officers, including some from our customer units, out looking for things. These teams visited other units and eventually reached repair parts companies that were setting up near KKMC. This combination of MMC activity and door-to-door shopping was terribly time consuming but usually came up with critical parts. Gradually, painfully, readiness improved.

Preparing to Attack North

During all this, 1ID was working on a plan to attack north into the Basra pocket. I guess every division in the Corps did likewise. We were actually beginning to do the planning and were talking about a rehearsal schedule. Personally, I was not disappointed when CINCCENT's initial talks with the Iraqis set up the demarcation line and ended hostilities for good.

Clearing Our Zone

Soon after we stopped, we were told to systematically destroy all Iraqi equipment in our area. 1ID passed out sectors to the maneuver units to clear. TF 3-66 Armor and the engineer company did most of our brigade's sector. They stayed within an easy drive, so supporting them wasn't a problem. They very quickly ran out of demolition material, however. We issued what we had in the ATP and inquired where we could get more, but were told it was a shortage commodity Theater-wide. TF 3-66 finished by using field expedients.

Water!

The water tank we found began to dry up after only 12 hours of water production. I finally went to the place and looked around for myself. My petroleum training paid off. I managed to find the valve from the main pipeline to the water tank we were using. The water point soldiers and I opened the valve and partially refilled the tank, but the pressure in the pipeline soon bled off and the flow stopped. Apparently, whatever pumping station kept the pipeline flowing was off line. We were looking at a bad situation.

Later that day, the water purification sergeant bailed us out. The water tank we were using was across the highway from a large Kuwaiti army barracks. He had seen the Brits occupy the place and take into it their equivalent of our ROWPU. He went in to see what

they were using for a water source and found they had a large water storage tank in the compound. They wouldn't let him use it, but they agreed to let us share after I sent the A Company Commander to make the request. Finally, we had enough production. The problem then became moving purified water. Ultimately, we produced water using 2 ROWPUs at a time, 24 hours a day, with three trucks hauling it to the BSA, 3000 gallons per truck load. Our peak demand was 13,800 gallons in a single day. After everyone cleaned up and did laundry, things settled down to about half that per day.

The Demarcation Line

One day, as I was driving north on the highway, returning to the BSA from the water point, an international fleet of helicopters flew past, headed south. That evening, we were told of the meeting between General Schwartzkopf and the Iraqis, and the demarcation line the agreement established. The Brigade was ordered to move north and east to occupy the eastern-most portion of it. We had a day or two to conduct reconnaissance before we moved. Mike Leatherwood and Dave Sanders found a place for the BSA in an agricultural area just north of one of the burning oil fields. We had no up-to-date maps of the area, so we scouted routes to the east, on paved roads, then north, through the desert, skirting the burning wells. We split the TOC and moved over two days. The heavy FSE went forward on the first day, with Mike in charge. The rest of us followed on the second day, after cleaning up the BSA.

The area we occupied was a checkerboard of agricultural fields, each surrounded by an earthen berm maybe 8 feet tall. At one end of each patch was a cistern which fed tiled irrigation trenches built into the top of the berm. At regular intervals, spillways diverted the water down, into the fields inside the berm. Some of the berms had gaps which allowed us entry; one, we had the engineers cut. It was a great area. Trees grew there and some grass. On a nice day, it was a very pleasant place. Sadly, such days were few. Usually, the smoke cloud from the oil fires was above us, making things unnaturally dark, sooty and foul smelling.

Over the course of a few days, as we sought easier ways to get to the DSA, we found our way through the maze of paved roads leading to the west, all the way to the main highway. Support was easy. The Field Trains were in the BSA and we let them do most of the running to their units.

Into the Desert Again

After a week or ten days, we were told that 3AD would move into our area and relieve us. 1ID would assemble west of our original, highway positions, and move to AA Butts as Corps reserve. AA Butts was perhaps 80 miles west, in Iraq. Just another day at the salt mine by this point.

On the appointed day, the Brigade moved back to a point just north of our first position in Kuwait, then west into an area of open desert formerly occupied by the Iraqis. The BSA moved entirely by road. We wound our way, unit by unit, along the road from the agricultural area to the highway. Passage was restricted in many places by dead Iraqi tanks. Near the highway, we passed 3AD's phone center and Wolfmobile, which was just setting up. A few miles south of the Iraqi-Kuwaiti border, we turned west, past 1ID's DSA, then south on a road that was probably built by the Iraqis. It was very rough and only the first few miles were sloppily asphalted. The last several miles were dirt and wound south through a series of gullies, finally ending at an assembly area.

As we dropped down into one of the gullies, we passed a destroyed Iraqi 2S3, 122mm SP howitzer. It was completely shattered and gutted by fire. Behind it were several more, apparently killed from the air, in a line, just as they had stopped. The floor of the gully had ammunition of all sorts, some of it partially burned, thrown everywhere. As we left the valley, we passed a line of trucks, probably from the same convoy, shot full of holes but not bombed. Interestingly, we saw no bodies, though we didn't stop to look closely.

The assembly area was a great place because all the Brigade's units were in close and we could see one another for the first time in weeks. I don't know how the other units' soldiers felt, but it

seemed to perk mine up. It was the first time most of them had seen the other units since we reached the desert. While they had always known *intellectually* that the others were out there, the lack of normal contact was unsettling for many. Here was tangible evidence of their presence. For my part, it was a treat not to have to navigate a long way after dark to the Brigade meeting and back.

We moved all the next day to AA Butts. Our movement plan was more complicated than normal because recovery was a big issue. The 498th's six HETs were all carrying broken tracked vehicles. Many others were running on field expedient repairs. The wheeled vehicle fleet wasn't in much better shape. Because our HETs were loaded and no Corps HETs (1ID had been required to send theirs to Corps) were available, the units were instructed to use their own recovery vehicles to drag along anything that broke down. This proved disastrous because it overstressed many of the M88s. By the time we got to AA Butts, we had broken M88s scattered along the route.

We had a near adventure trying to get to our assigned area. The desert was sandy again and tough going for the big trucks. As the day progressed, Mitch and I worked forward in the convoy, eventually pulling ahead. Bearing on a GPS waypoint, we were trying to reach the new area well ahead of the mainbody in order to check on the advanced party. The direct route was too sandy, much too difficult for the big trucks. I called the advanced party and had them send people east looking for a better way in; Mitch and I went

west. The western loop was hopeless - all sand broken by a steep-sided, rocky valley. A trail ran north through the valley, but there was no way to get east, into our position. With the convoy closing, we gave up and went to the area. Mike Leatherwood and his band of advanced party thieves had found a way to our east. It wasn't wonderful, but it would have to do. We sent guides back to lead the serials in.

About half the BSA closed before dark, mostly the non-498th elements. Our guys and gals came in after dark. Everything went pretty well until the HETs reached a sandy stretch and got stuck. Somebody called the TOC for help, so we got some wreckers, an M88 and the ADA battery's M578 and headed to the place. We spent the next several hours pulling them through. By the time everyone closed, the troops were beat. I had the last couple of serials park close together, inside a perimeter established by the early arrivals. We set the guard and turned in.

The next morning, we pushed the elements of the BSA out into individual bases with HHC, 498th near the center of the base cluster. C Company had a heck of a time getting to their area even though it was a short distance away. Their 2 1/2 tons kept sticking in the sand. It took longer than expected, but we were set by late afternoon. Then it was time to do something about vehicle recovery.

The units knew where all the breakdowns were located, so finding them was as simple as a lieutenant with a GPS. We unloaded our HETs and wreckers, then had the units send us some GPS-equipped officers and their remaining, operational M88s. We formed them into little task forces composed of two HETs, one M88, one or more wheeled wreckers, and the leader's vehicle. One HET hauled the M88 to a location on the MSR near a broken tracked vehicle, then unloaded the M88. While the HETs waited along the MSR, the lieutenant led the M88 to the broken vehicle. The M88 would drag the broken track back to the MSR. The broken vehicle would be winched aboard one HET; the M88 reboarded the other. The wheeled wreckers were used to recover and tow breakdown wheeled vehicles. The lieutenant then brought everyone home. This procedure was fairly efficient and protected the remaining, operational M88s as much as we could. A day or two later, we were shopping for M88 engines.

The first evening, we noticed a light just a couple of miles due south. It was a phone center's satellite dish, illuminated by a spot light. For the next few days we sent to the phone center everyone who wanted to go. It was the first time we had been close to one.

A few days later, COL Weisman told us we had been assigned a response force mission in support of 2ACR, which was patrolling the western end of the demarcation line. We had been directed to find

and occupy an assembly area about 30 miles further to the northwest. The advanced parties had the luxury of a couple days to pick sites.

A few days later we were moving again. We moved through an area populated by bedouins. We drove past several family groups living in low, rounded tents lined with carpets. The women and children begged food as we came by. Many MREs and MOREs were "donated" by soldiers. We saw few of the men; just a few shepherds and an occasional guy driving an old truck, usually hauling water. Happily, these people did not seek us out as the Euphrates Valley refugees did later.

The track north was one that had been used by 2ACR previously. We found quite a lot of their litter - unserviceable assemblies and shipping cases. I had B Company pick all of it up and turn it in for retrograde.

One segment of the route went through an Iraqi air station of some kind. There was a chain link fence around a large area and a paved road running north, out of the place. Someone told me there was a runway a bit to the east but we had no time to look. We passed a couple of buildings constructed of steel girders covered with light sheet metal siding. They were twisted wreckage. Their contents were blown all over the area around them. There were no

bomb craters. I looked like a cyclone had shredded the destroyed buildings. Impressive Air Force precision.

The position we occupied was on a rocky bluff overlooking a sandy valley. 4-3 FA was in the valley. Task Forces 2-66, 3-66 and 1-41 were to the north and west. We could see TF 2-66 in the distance. The Brigade HQ was on a higher knoll behind us. We had to put A Company at the bottom of the hill so that they could spread out into the valley. As it turned out, this was a good move because it put them right next to the MSR which made them easy to find.

After a few days, it became evident that boredom might be a problem unless we did something, so we started some training. The maneuver units, with help from the engineers, set up some ranges and we went out to fire. Of particular interest to our CSS soldiers were the claymore and hand grenade ranges. While we had trained with live mines in Germany, our requirement was for each platoon to witness the detonation of a live mine. Few had fired one. Aply assisted by some sergeants from 1-41 Infantry, many of our soldiers got to aim, arm and fire a live claymore mine. We also practiced with live grenades. For the first time in 20 years of service, I myself threw a live hand grenade. We also did some M16 and machine gun firing. In one case, as we were preparing to fire, a pickup truck full of Iraqis drove through the back of the range. They were apparently bedouins heading somewhere to the north.

We spent Easter on the bluff. We had a sunrise service overlooking the valley and spoke of the ancient city of Ur which was a few miles to our northwest. In the afternoon, per COL Weisman's instructions, we set up volleyball nets and had a sports day. By rotating guards frequently, nearly everyone got most of the day off and everyone that wanted to participate got to compete. It was the closest thing to relaxation that many of us experienced during the deployment. It was great idea.

The whole time on the bluff, we were going back to 1ID's DSA for water and supplies. Occasionally, we'd send trucks all the way back to DSA Junction City, usually for repair parts. Two interesting things happened while we were there. The first occurred a day or so after we moved in. A battery commander from a Patriot battery that was located just to our north came in asking for support. The Corps S&S Company that was supposed to support him was a long way to the rear. He was having trouble hauling enough water with only one water trailer. We agreed to pick him up as a logical area support responsibility. He was too small to be a burden. I had to warn him, though, that his battalion would too big for us to take on, without some arrangement for additional supplies. The second thing was the need to clear DSA Junction City. While we were behind 2ACR, 1ID was alerted for redeployment. That meant they had to begin falling in on King Khalid Military City (KKMC). It also meant we had to move our containers out of DSA Junction City. But to where? We weren't going home yet.

Of necessity, we started looking at Redeployment Assembly Areas near KKMC. BG Rutherford was of the opinion that we should set up our own area, perhaps further out from KKMC than most units, but something all our own. We flew down in a helicopter and picked an area. It was separate from, but near 11D's chosen site.

A few days later, the Brigade sent advanced parties to the RAA. I sent my XO, a larger than normal battalion advanced party, and a reinforced Truck Platoon. Within a day or so, all the units' advanced parties were there, busily coordinating support and arranging the area. Truck Platoon, working for DISCOM MCO, began hauling containers from DSA Junction City to the RAA. Some Corps trucks were available this time, so it went much faster than the move to DSA Junction City. We also had no externally imposed deadline. Mid-process, BG Rutherford flew COL Shadley and me down to check on things. He was very concerned that the DISCOM would be gone, and with it the mess and medical support, before we had cleared. We were in good shape, though, as the DISCOM still had quite a bit of work to do also. COL Shadley made things even easier by agreeing not to pull out until we were all done.

When we got back to the BSA, I told my company commanders to prepare to ship anything we owned that was not essential or was broken beyond hope of repair to the RAA. Over the next few days, we began shuttling one S&P a day to and from the RAA. We offered space to anyone in the Brigade who had stuff to send. Often, since our

drivers knew the way, the other units would convoy with the shuttle driver to visit, deliver mail or check on people. It was a worthwhile service.

A week or so into the RAA business, word came back to us that the advanced parties' work was being hampered because a lot of their trucks were broken. We had sent them a couple mechanics and half of the Class IX Platoon was living with them, but they could only do what a standard tool box would permit. Since all the units were hurting, we formed a composite organizational and DS maintenance team, with one of the 498th's company maintenance technicians in charge, and sent them south. They improved things over a few days, but we started moving again and couldn't get them back.

Independent Operations - Relief of 1AD

About this time, 2ACR withdrew from the demarcation line. 1ID was required to patrol the former 2ACR sector. They chose to do this with a minimum number of ground troops and aerial surveillance by their 4th (aviation) Brigade. Initially, the Brigade stayed put as the response force. A few days more passed and we were told that 1AD, the next unit to the east, would soon be withdrawn. 2AD(FWD) was ordered to detach from 1ID and assume surveillance of 1AD's entire sector, a frontage of almost 70 km.

We began the logistical planning immediately. I sent my MMC chief to 1AD to see what they would leave behind that we could use and that would not burden us. He was also instructed to find out who was supporting them and see if they would support us. In the meantime, CPT Holland, the G-4 and I went to 1ID to work a definite arrangement through them. Not surprisingly, they were focused on planning support for the Aviation Brigade and their own withdrawal. They helped us put some pressure on the appropriate Corps G-4 folks, but that was about all.

The answer we got from VII Corps was that 1ID's supporting CSG would support us. This was not thrilling news because the CSG did not plan to move up behind us. They also did not want to commit to pushing supplies to us. As the distance from a likely BSA in 1AD's sector to the CSG was at the limit of our capability, I asked the Brigade Commander to get some pressure building for a better deal. What we got was a surprise - a date beyond which 1ID's CSG would not support and a promise that 3AD and their CSG would pick us up. This was a surprise because 3AD's DSA was in Kuwait, near our old water point. It was farther away than 1ID's supporting CSG.

This was not all coincidental. Shortly before all this planning, BG Rutherford was notified that he would be promoted and assume command of 3AD. BG Gene Blackwell, 3AD's ADC(M), would become Commanding General, 2AD(FWD). A few phone calls brought COL Dan Eby, 3AD's DISCOM Commander, winging his way to us for a

planning meeting. Soon after, our MMC guys drove to 3AD's DSA with instructions to stay as long as they needed to get things arranged. Over a few days the planning fog cleared. We would be supported by 11D's supporting CSG through our move, then change to 3AD on a precoordinated date.

We had a really neat Change of Command ceremony for Generals Rutherford and Blackwell. It was held in a rocky valley just east of the BSA. We had Bradley's and tanks in overwatch, the artillery battalion prepared to fire a salute (WP on a time fuse so that it would burst in the air. General Franks nixed it for safety concerns even though we'd rehearsed it.), vehicles lined up as a back drop for the parading soldiers, and a mounted contingent which passed in review, after the marching soldiers. The last vehicle in the mounted pass was a 5 Ton tractor hauling a container bearing a 4' x 8' farewell sign for MG Rutherford. It was a thing of beauty, hand painted by a fuel handler from the POL Platoon. It cracked everybody up.

A couple days later, we were moving north again. I'm sure there was an elaborate tactical plan, well integrated with 1AD's withdrawal, but I didn't care much about it. We got to move mostly on paved roadway for the first time since Kuwait. The route went southeast, on our dirt MSR, picked up a paved road that ran north, through a destroyed airfield, to a highway in the Euphrates Valley, east about 30 miles, then south to another airfield. We put the BSA

with the Brigade TOC, on the airfield, mostly on hardstand as there was unexploded ordnance in the area.

The airfield was pretty well flattened but the runway had been repaired. 1AD had used it to bring in C-130s full of MREs. We were asked if we wanted to keep the service, but I turned it off. We were well fixed for MREs and a plane load was a lot for one brigade to absorb. I didn't want to get stuck with a lot of stuff to haul on the way out. Besides, we had the promise of a CH-47 everyday, for whatever we needed. That was better sized to our needs.

Our maneuver units ended up along Highway 8, manning checkpoints which controlled refugee movement. Right away we began to get people, some of them badly hurt, looking for medical help. We sent part of our holding ward and a treatment section to the main checkpoint in our sector, to render humanitarian assistance on a 24 hour basis. Except for the people at the checkpoints, the rest of us were instructed to keep a low profile. We did not want to be overcome by refugees, who were flowing into the area looking for safety.

The airfield proved to be a good location. There was a hole in the south fence which gave access to an MSR. Our drivers quickly learned the way from us to the paved road in Kuwait and to 3AD. Much to my surprise, the shuttle from the RAA came in through

Kuwait the day after we moved. The drivers had realized they could save time by coming as far as they could on paved road.

3AD did two good things for us. They hooked us into their MSE system, giving us true area coverage, the way MSE is supposed to work, for the first time, ever; and A-rations. We had two A-ration meals the entire time we were with 1ID, mostly because refrigeration was not available. 3AD gave us the refrigeration to make the A-rations work and one A-ration meal a day.

Water became a problem again. 1ID's water point was too far away, 3AD's water point was too far, and we only had three serviceable SMFTs left (and they were showing some wear). We spent some time trying to find some new SMFTs, without much luck, so we went scouting for water points again. This time, somebody told us about a village a few miles south of the BSA, that had a well. Sure enough, it was there. The well was damaged, but the pump had been replaced and it worked well enough to meet our needs. We were in the water production business again.

Initially, we had only two soldiers at the water point. As we hadn't seen many people in the area around us, this concerned me only a little. During a visit to the water point, a day or so after they began production, a shepherd came to the point asking for water. That evening, I had A Company send a vehicle with a radio and enough soldiers for a 24 hour guard. Prior to the radio's

arrival, the only way we could communicate with those soldiers was to drive there.

Things settled into a routine pretty quickly. That routine held even when 1ID's aviation brigade withdrew, leaving our flank open. Soon after, we were told to withdraw, leaving only 3AD manning the eastern end of the demarcation line.

Desert BDUs

One afternoon, while sitting in the Support Operations van, CPT Holland answered the phone and began talking to someone about desert BDUs. Since we had been trying to get them for about four months, and they had been a topic of general officer interest, I took the phone from her. The caller was the chief of the 800th MMC, who controlled the issue of the uniforms. He informed us that our turn had come in the priority sequence, but that our Junction City folks had arrived at the supply point in Log Base Echo with too small a truck. He had called from Al-Qaysumah, 200 miles away, to tell us that we had only a few hours to get another truck to the supply point, or he'd give our uniforms to the next unit. Needless to say, this provoked me. After a long and acrimonious conversation, I sent my MMC chief to 800th MMC to make sure we got our uniforms.

BDUs. The common sizes took care of about three-fourths of our soldiers. The very small, very large and long sizes were what we needed to finish issuing. We were also beginning to hurt for boots, which we were getting by sending senior NCOs to the supply point with letters from commanders. This problem wouldn't go away. We didn't get the last of the uniforms we were owed until after we closed in KKMC. We never got all the boots we needed.

In KKMC, a rumor went around that the desert BDUs were deliberately held until just before units went home, so that everyone would have a bright, new desert uniform for the press photos. We had been through everything in green BDUs. This rumor really aggravated everyone. In the end, COL Weisman had to order many of us to wear the desert uniforms.

The Return to Saudi Arabia

Withdrawal presented its own set of problems. Even though we had been sending broken vehicles that we could not fix to our RAA, we had more broken combat vehicles than we had HETs. Our withdrawal depended upon the availability of Corps or Theater HETs to haul them out. In preparation, we sent several convoys to the RAA, to lighten us up. We wanted to move everything that was left in one lift and have some spare capacity for unforeseen requirements like breakdowns. That meant starting with our wreckers unencumbered, too.

The pre-move convoys freed several of our HETs and we had the promise of Corps HET support. We planned to send a number of the Corps HETs along the MSRs that paralleled the maneuver units' route of march under our control. They would stop at predetermined points each night. If tracked vehicles broke down, unit M88s would tow them to the designated collection point or the MSR, whichever was closer. Vehicle locations would be reported by the units to the Brigade G-4 who would pass them to a lieutenant from the 498th who was with the HETs. Our lieutenant would lead the HETs to the pickup point and make the recovery.

Beyond this plan, we needed HETs to move 11 vehicles. We figured we needed US HETs to haul tanks, but the foreign-made HETs available in Theater (Italian and Czech) could haul everything else. We asked for US HETs for the M113 family vehicles because they can haul two. I also insisted on sending one of our platoon leaders to a rendezvous point to lead the HETs to us. The Ambulance Platoon Leader, 2LT Chris Colacicco, got the job. He had extensive experience navigating through the Theater and had both the personality and inclination to shake things up if the HETs didn't show on time.

In the meantime, the maneuver units worked out their movement plan. They would move west and south in tactical formation, back through the desert, almost mirroring the route we had taken to get there. They would need a couple days to complete the march. The

units beefed up their Combat Trains, taking all their fuelers, but sent most of their wheels to us, in the BSA. The BSA would march out on the road all the way. We would go north to the secondary road paralleling Highway 8, then east, picking up Highway 8 just above the Kuwaiti border, south through Kuwait, west to Hafr Al-Batin, then south to KKMC. The BSA's move would be completed in one day.

For several days, we had been seeing Iraqi soldiers in civilian vehicles moving through the area. The number of sightings was increasing. As a result, COL Weisman was extremely concerned about the security of the BSA after the maneuver units moved out. He knew we would send our serials out quickly, but have to leave a party behind until the HETs arrived. He gave the order for an infantry company to fall in on the BSA for security. While I was glad for the protection, the movement of the infantry company then became my problem. If they moved by road with us, they would slow us down. The road march would also exact a toll on the Bradley's. If they went cross-country, behind the Brigade, we had to provide fuel and medical support. As we had only wheeled vehicles for this purpose, we would slow them down. It also split us into more pieces. Using HETs to haul them out was not possible because we had not planned for it far enough in advance and didn't have enough HETs coming. We had requested and been promised enough HETs to move all our broken vehicles and no more. This meant that the 498th's four operational HETs (2 were broken at the time), which were in

the RAA, could come back to the BSA if we needed them. We called them forward and I told COL Weisman to leave me not a company, but a platoon. We'd put one Bradley on the north gate, one on the south gate, and one at each end of the runway, all scanning outward. They'd be able to see far enough to give us early warning, they could assemble quickly if something happened, they had enough people to operate around the clock, and were armed heavily enough to handle anything we had seen in the valley lately. The beauty was that at the last minute, we could call them in, load them on our four HETs, put the infantrymen into a couple of cargo trucks, and haul everyone out in our convoy. This plan made too much sense and COL Weisman agreed. The Brads reported that afternoon.

Medical support for the maneuver units' withdrawal is also worth mentioning. The unit Aid Stations marched with the units and had a doctor and a PA with them. Our tracked ambulances marched with the units they habitually supported. The problem was having someplace to evacuate to. The logical solution was aeromedevac support, which was available along the route. But aeromedevac had proven to be unreliable because the medevac units were too far away to hear the calls. Our solution was to send someone who knew how to call aeromedevac, in a truck with two radios, along the line of march between the medevac unit locations and the Brigade. One radio would monitor Brigade Command, to hear location reports and problems; the other would stay on the medevac frequency. The obvious choice for this was CPT Bryant Harp of C Company. He was a

former medevac pilot, had commanded the medical company for over a year, understood the mission and knew how to move in the desert.

All the units were told they could call for medevac directly, on the medevac frequency, or by calling Witch Doctor 6 (Bryant's call sign) on Brigade Command. CPT Harp would relay any calls on either net, as required, and move within range of the medevac unit's radio station if that was required. Each night, he would join the Brigade HQ and report to COL Weisman. Though I don't think he was required to evacuate anyone, the plan worked pretty well. Bryant was generally able to raise both the medevac units and the Brigade within a few minutes. They tested the system daily to make sure.

We sent our tankers, with the Corps HETs, down an MSR along the western edge of the corridor through which the Brigade marched. At each halt, a logistical area, sort of a mini-BSA, was designated, near the MSR. After refueling their unit, empty HEMTTs would go to the designated location and wait for the tankers. It worked like the LRPs we occasionally used in the field in Germany.

On the appointed day, the units moved out. We saw one of the battalions sweep past, headed west. The Brigade HQ fell in behind them. As soon as they were clear, our serials began to move, spaced about 30 minutes in time. By mid-afternoon, only those of us waiting for the HETs remained, including one OH-58 left for me to

use should the HETs not show. If that happened, I would go to 3AD for help.

The next morning, the HETs did not arrive on time. As the morning wore on, we got more and more nervous. We called on the radio for 2LT Colacicco every 30 minutes or so, hoping for an answer. Finally, Mitch and I headed up the road to look for him. We went north to the main road, then turned east and drove all the way down to Highway 8. We went far enough that we lost radio contact with the BSA. We headed back toward the BSA behind an Iraqi bus. It took us a few minutes to realize that it was filled with Iraqi soldiers. We followed it until it passed the turn-off for the BSA, then headed east again, intending to head south through the Rumayla oil field on the chance that the HETs were using that route. As we neared the intersection, 2LT Colacicco called. He was, indeed, headed up through the oil field, having reckoned that route a bit shorter than the highway. An hour later, the HET convoy appeared and we led them to the BSA.

It took an hour or so to load the HETs, put the infantry in the cargo trucks, release the helicopter, and get rolling. I stayed with the convoy until we crossed back into Kuwait. Then, Mitch and I moved ahead, intending to get to the RAA as quickly as we could. 2LT Colacicco was more than competent to lead the convoy to KKMC.

Mitch and I stopped at 3AD's Wolfmobile, right where we had seen it several weeks earlier. It was the first "Wolfburger" we had eaten. We were gone before the convoy reached the place.

The route out took us down toward Kuwait City, past the destruction on the Mutla Ridge - the so-called highway of death. The roadway had been cleared, but the number of destroyed vehicles and the totality of the destruction were numbing. We turned off toward Hafr Al-Batin and stopped for fuel at a horse racing track that had been turned into a convoy support center. A short while later, we began passing the bivouac areas of Arab units of the coalition - Syrian and Egyptian. A group of jubilant Syrian soldiers actually flagged us down, eagerly shaking our hands and insisting that we pose for photographs with them. Having no real choice, we smiled for the camera, shook hands effusively and moved on. Awhile later, we passed through the border defensive zone. The mine fields and trench lines were still in place on either side of the road. The road itself had been rather badly patched where it had been cratered by the Iraqis. There were two border crossing stations, one Kuwaiti, the other Saudi. The Kuwait station, having been occupied by the Iraqis, was destroyed. The Saudi station looked as though nothing had happened, despite being located only a few hundred meters from the Kuwaiti station. South of the border station, we were able to spot the place we had spent the night during the move from TAA Roosevelt to FAA Manhattan, so many weeks

before. At the time, we hadn't realized it was so close to the border.

We got to KKMC after dark. We tried to find the RAA by road but had no area road map, found no signs that helped and encountered no one who could direct us. We did have grid coordinates, so we ended up using the Magellan to take us the last few miles, cross-country.

Rafha

That night, after finding the 498th's area, the staff briefed me on the Rafha mission. The Brigade had been tasked to send two infantry companies plus support to a refugee camp inside Iraq, near the border town of Rafha. They were to guard the camp and facilitate its relocation inside Saudi Arabia. Commercial HETs and buses would meet the Brigade the next day at the points we had been given for crossing Tapline Road. The two companies would load and head west, while the rest of the Brigade would cross the road and continued south to the ammunition turn-in area, located in our old RAA site. We figured out a support slice and tasked our companies that night.

The next morning, I went to the ammunition turn-in area and found our ammunition technician, CW3 Bob Woodham, well prepared. From there, Mitch and I went directly north, to the road crossing

area. The Brigade was already there, loading the infantry companies. It only took a couple of hours to get the whole Rafha crew, BG Blackwell included, heading west. The Brigade moved to assembly areas north of CW3 Woodham's turn-in area and spent the night. The next morning, they moved quickly and efficiently through ammunition turn-in and into motor parks in the RAA. It took Chief Woodham, the Ammunition Transfer Point soldiers, and the unit ammunition sections several days of hard work to package everything, document it and turn it in. It was a huge project and they did it exceptionally. There were no problems at the ASP and the Brigade was complemented on the efficiency and correctness of the operation.

Lesson: This is another example of both the robustness of the 498th and cooperation within the Brigade. Divisional FSBs do not have an ammunition technician; they are MMC assets. Organizing an effort as complicated as this turn-in is beyond the abilities of most ATP Section sergeants. In our case, CW3 Woodham routinely had OPCON of the ATP and unit ammunition sections to perform warehousing, maintenance and load-out training in Garlstedt, and ammunition draw and turn-in after gunnery. This operation differed only in the quantity of ammunition they handled.

That night, CPT Holland, my Support Operations Officer, called from Rafha with a list of requirements. From then on, she called morning and evening, always with a list of instructions from General Blackwell as to what was needed and when and how things should be delivered. As the G-3, who was with the Rafha contingent, was calling with similar instructions on the operational side, this instantly set up internal conflict within the Brigade. We had been told our mission was to prepare to redeploy, but the requirements coming from Rafha began to take more and more assets. Also, the G-3 and CPT Holland were under obvious pressure.

After a couple days of the same, I drove to Rafha and spent a couple days. As it turned out, the situation was politically charged and changing continually, which accounted for some of the confusion. The Saudis, it seemed, did not want the refugee camp moved inside Saudi Arabia, but were under pressure from the US to do so in order to secure the refugees. The Saudis had contracted for the construction of a new camp, but the contractor could not begin for several weeks. In the meantime, there were problems with water and food distribution and sanitation in the existing camp. BG Blackwell, trying to balance political sensitivity with the desire to complete the mission quickly so that we could redeploy, resolved to build a temporary camp inside Saudi Arabia and relocate the refugees. From this evolution came the demands and time constraints.

We were trying to do all this using Corps assets, insofar as possible, but the DS tasks fell to the 498th. From my visit, it was obvious that CPT Holland had more work than one person could do. I called for reinforcements from her section and the MMC. We also sent more ration handlers, a water team, more fuel handlers and some DS mechanics. Altogether, CPT Holland ended up with about 100 people from all four companies, configured very much like the support teams we used to support one-battalion training at Bergen. With this team, she supported our two infantry companies, the headquarters, themselves, a Corps engineer company, a transportation company, a water unit, and a hundred-odd bus drivers drawn from various units. It amounted to more than a battalion.

The Brigade ended up putting together a special response team to handle the coordination and take some of the pressure off the Rafhans. We found that we could get better response in KKMC because we could go to the supporting organizations and deal face to face. The G-3 and CPT Holland were merely voices of the phone. The 498th's MMC became heavily involved in this effort. Ultimately, I had to send my XO to Rafha. BG Blackwell was extremely complimentary of CPT Holland's work throughout the mission, but he wanted the Field Grade to add some weight to the phone calls and facilitate coordination within the Task Force. Mostly, he acted as a blast shield between the CG and CPT Holland which allowed her to get more work done.

We ended up getting enough refrigerated trailers to put some with the infantry guys, giving them the capability to use A-rations and hold ice. They had their own water storage, which we provided, showers and latrines. They were very pleased with their situation and let us know.

The Rafha mission wouldn't die. The Task Force built the second camp, including sanitation facilities and water system, turned it over to the Saudis, moved the people from the old camp to the new, fed the people the whole time, then accepted the refugees from the Safwan camp as 3AD withdrew into Kuwait. Their final task was to recover and haul to KKMC all the commercial buses that had broken down in the Rafha area during the effort - there were about 50.

The Rafha equipment was the last of our gear to reach port. It got there just before we left for Germany. My XO stayed with his support team until they got through cleaning, painting, customs and documentation. He brought them home a couple weeks after the main body. It was an interesting, unconventional mission that would have been a piece of cake if we had been able to turn the Battalion loose on it. It was made more difficult by the conflicting requirements. Sadly, this put the soldiers of the Rafha Task Force under undue pressure.

Life at KKMC

Without doubt, KKMC was the least hospitable place we lived during our entire desert adventure. Despite the fact that the tents were mostly already set up, that we had plywood floors, fest tents for meals, telephones and recreation, even our own "Wolfmobile", it was a lousy place. The desert floor in that region was covered by a thick layer of talcum powder-like dust. Nearly every afternoon, like clockwork, a hot wind would begin to blow. The dust filled the air, bringing all work to a halt. At dusk, the wind usually died and the dust finally settled, having coated everything and penetrated everywhere. Occasionally, the storm lasted all day. We were constantly immersed in this irritating dust. It was impossible to feel clean. Even the heat, which was formidable by this time of year, was less burdensome than the dust. Many of us missed the open desert and would willingly have foregone the minor comforts we had in KKMC for gravel beneath our feet.

The dust storms excepted, life at KKMC was much the same as it had been in the tent city in Jubayl. We lived in tents, each unit having its own area. The fest tents were centrally located, as was the Wolfmobile. To the west, across a dirt road, we parked our vehicles in unit motorpools. The containers were there also; unit containers to the north, our supply containers to the south. To the east of the tents were the standard, locally fabricated latrines. We burned them out daily and cleaned them ourselves. This was a

much better arrangement than we had at Jubayl. To the west, between the tents and the road, were the standard showers. For the first time since going to the desert, we had enough.

We tried to reestablish a normal work routine at KKMC, part of a rough effort to withdraw from our exertions and gradually return to normal. We had morning formations and a set work call time. We conducted normal command and staff meetings, Battalion duty and company CQ. We made people straighten their areas and conducted inspections. Much of what we did was intended to reestablish normal, soldierly routines.

We also performed our fair share of fatigue details. We had to help haul water to the mess hall and fill showers. We provided KPs and attendants for the recreation tents. We hauled trash to the landfill. These tasks were complicated by the equipment we were given to use. The water trucks are a good example. They were a mixed fleet of commercial and Warsaw Pact military equipment. The commercial trucks were 4X2s of Japanese manufacture. They were underpowered, by our standards, but ran reliably and had small gasoline engine-driven pumps to deliver the water. Sadly, there were too few to fill all the showers and service the mess in a single day. The other trucks were East German; big, rugged, 6x6 trucks with great cross country capability. They were decontamination vehicles, had massive Russian V8 engines, power take-off driven pumps and complicated valves and fittings. They

came with no manuals, even in German, and no instructions. We weren't even briefed by the prior owners. They barely ran. I had some mechanics try to tune them up but we couldn't even find spark plugs that would work. They limped along for a few days, then began to strand their operators. Things would have gotten pretty desperate but for the fact that the population of the Redeployment Assembly Area was dropping. As units left, fewer showers needed filled, allowing the Japanese trucks to get the job done. We turned the East German trucks in at the property disposal yard before we left. Despite these minor diversions, mostly, we got ready to ship things home.

Packing up

The inventory, cleaning, servicing and packing of unit equipment went pretty fast. Instead of shipping the trucks home combat loaded, the way they had come, we maximized the use of our containers, leaving the trucks in a closer to administrative configuration. It allowed us to better secure tool sets, GPSs and other pilferables. Packing the maintenance company's stuff was, of course, problematical because everyone was pulling the first thorough maintenance they had time for in a couple of months. The things we could get by without, we packed away. The containers were inventoried as they were loaded, documented and packing lists maintained by the company commanders. It wasn't a fool proof

system, but it helped. Our big problems were the latrine and shower depot, which we were assigned, and our repair parts.

The latrine and shower depot was an area behind the containers in which someone had placed hundreds of latrines and showers. They were in various states of repair, but still in demand. Also, it was difficult to move them without a forklift. We had forklifts, so we got the job. We put a minimal R&U effort into knocking some of them back together, issued a bunch, burned some of the scrap, and hauled a bunch more to the dump. As units cleared out, however, the stack grew. At the end, it took a rather massive effort, with a Brigade detail to help, to get the stuff to the dump.

In the course of four months' business, we had been forced to re-warehouse most of the containers. We had found it too hard to get to things when the containers were completely full. We had also used up so much stuff that we had room to spare. We used that room to download as many of the Class IX Platoon's cargo trucks as we could. Trailers that carried tires to Saudi Arabia went home empty, the tires we had left having been packed in a container. Once again, the greatest effort in the Battalion fell to the Class IX Platoon. In 105 degree heat, the platoon pushed themselves to get the job done on schedule. Each day, they filled a couple of trash cans with ice, bottled water and sodas. Then they went to work. They emptied the containers, swept the dust out, cleaned and inventoried loads into them, used what packing materials we had

left to cushion things, stood by for the customs inspection and sealed the containers. They started early in the morning, before breakfast, rotated people to chow, knocked off from noon until three in the afternoon, to escape the worst of the heat, then worked until they ran out of daylight. Throughout, their spirits were good, they all pushed fluids and kept their output high. When they were done, we had lists for each container and we left no parts behind, but we did not have inventory control of the containers. There just wasn't enough time to do the location surveys and computer updates required. We had to accept the fact that reception of the goods in Garlstedt would be complicated by the way we shipped them.

About half way into this process, COL Weisman called me and said there would likely be a chance for us to move to the port a week early. He intended to go for it. At that point, I was honestly not sure we could get everything done. After consulting the A Company Commander and his platoon leaders, we decided to forego inventory control, put more people on the containers and try to meet the new deadline. We had to cut A Company some slack on the details, but they made it. We were ready to roll by the early date, a Herculean accomplishment, in my opinion. I was really proud of those kids for rising to the challenge.

Some Comments on Readiness

After five months of continuous operations, our five ton truck fleet, especially the tractors, which did most of the long distance hauling, was a disaster. The M911 HET tractors were even worse. We had cab mounting bolts working loose, compressor failures, cooling system problems, transmission trouble - anything that pounding across the desert can do to a truck. Anything that could work loose did, and usually fell off. We had radiators literally fall out of the HETs, requiring us to weld extra supports into the trucks. We had also been through countless tires.

Our 4K forklifts were all broken, along with one of our 10Ks. Our 6K variable reach forklifts, which were new when we went to the desert, were also beginning to show the wear. We were at the point of exhaustion.

The reason was our inability to get repair parts. At the end, we had pretty good access to components such as engines and axles. We were actually installing these components for want of some of the smaller parts that make them up. But there were a thousand other parts that we needed, in fact, ordered, but never received.

This may well set a gauge - a rule of thumb - for future operations. A unit that starts in good shape can hold up for about five months with some but not adequate Class IX resupply.

Chapter 8

Redeployment

Redeployment was conducted in two parts. The vehicles and containers, with a minimum complement of drivers and leaders, went by road back to the port of Jubayl. The rest of the people were picked up in buses, taken to the KKMC airport and flown to Germany on commercial charter flights.

Air Movement Home

When all this was put in motion, the Rafha mission was still underway. About 100 soldiers from the 498th were supporting the effort and there wasn't much we could do speed things up for them. Someone had to prepare the way for the rest of us, however, so I sent Mike Leatherwood, the S-3, and CSM Gallardo on the first flight. Their mission was to open our barracks, arms rooms and essential offices. The air redeployment drill was much the same as deployment. Everyone was manifested, inspected, weighed, loaded and shipped. The first group left the day before we moved the equipment to the port.

Movement to Port

Those of us in the equipment party had to ship our containers and a bunch 2ACR had left behind, strike and turn-in all the tents,

police the area, take down and containerize the fest tents, load the tracks on HETs and ship them, then road march the wheeled vehicles to the port. The 498th had a piece of each mission. We coordinated customs inspection of the 2ACR containers and shipped them. We took care of our tents and supplied trucks and forklifts to the Brigade detail that hauled them away. We loaded our tracks with the rest of the Brigade. Our forklifts were essential to the dismantling of the fest tents. When we were done, we loaded the last forklifts onto our own HETs and lowbed trailers, spent one last night, and met our SP time the next morning.

The convoy route back to Jubayl ran north from KKMC along the Wadi Al-Batin, east on Tapline Road, southeast to the superhighway, then south into Jubayl. It was the same, long drive, with the same hazards, but we were veterans by now. I moved in the middle of our column, not in any serial. I happened on the scene of one minor accident moments after it occurred. One of Bryant Harp's 2 1/2 tons bumped the vehicle in front as they were pulling off the road for a rest halt. No injuries, but the trail vehicle had a punctured radiator and had to be towed. I stayed with Bryant until he was ready to continue, then moved on, ahead of his serial. By late afternoon, we were back in Jubayl.

This time, the Brigade had guides in place to meet each serial and lead them to their assigned staging areas. We staged our vehicles on cross streets, out near the oil refinery. Circulating

vehicles picked up the drivers and their baggage and took them to Camp 6, a permanent camp on the refinery grounds. The troops were crowded three and four to a two man room, but there were enough beds and lockers and indoor plumbing, the first we had seen since we arrived in Saudi Arabia. The officers and senior NCOs were pretty much in two man rooms. The field grade officers were put up in some little two room bungalows. One of the rooms was a bathroom and the shower water was hot.

Painting Everything Again

Life in Jubayl was a lot more hectic on the way home, almost as though we had to earn our way back to Germany. We had a day or so to use the laundromat and go to the swimming pool, then it was our turn on the wash rack. In a loop around a portion of the refinery area, someone had installed lights, water lines, pumps, hoses and pressure sprayers. We rotated units, in block times, through this mass wash rack. Most of the vehicles had to be washed twice to get them clean enough for shipment. Cleaning equipment breakdown was a constant problem, making the entire process an exercise in frustration.

After washing, we lined up for paint. Apparently, USAREUR decided that all returning vehicles had to be NATO green before they could come home. After a couple days training, the Brigade's paint crews took over the spray booths and we went through, unit by

unit. We were next to last, and set the Brigade record for the most pieces painted in a 24-hour period. We scheduled vehicles through by type of vehicle, by company. Each successive unit had to be in line, ready for masking, 30 minutes prior to start time. My driver and I stayed out there all day. When we had our own truck done, I let him go, then stayed on site until the Battalion finished the next morning. It was worth the effort, I think. I got to solve a few problems, keep pushing the schedule, and talk to the troops as they prepared their vehicles.

After painting came customs inspection, documentation, and movement to a sterile area. Once in the sterile area, we no longer controlled our vehicles. It took several days to get all this done, mainly because the number of customs MPs was limited. They could only inspect a certain number of vehicles each day. We stood the inspection with drivers and supervisors present. We made a few corrections, had very few fail and got those to pass the next day. The day the last vehicle went into the sterile area, we packed for the flight home.

All the Junk in Jubayl

A lot of units had shipped from Jubayl before us. As a consequence, there was already a lot of military equipment in the port when we arrived. Of particular note was a large area near the port filled with captured Iraqi equipment. There was about a

battalion's worth, each, of tanks, artillery, infantry fighting vehicles, air defense systems...anything one could think of. It was an impressive collection. Reportedly, it was all bound for the UK.

There were smaller collections of Iraqi equipment staged in the port with U.S. Marine equipment, apparently awaiting shipment with the Marine gear. We heard rumors that several U.S. Army units also had sizeable collections and that everything bound for Europe was being collected in Dammam.

These "collections" were a sharp contrast to the instructions we followed in 2AD(FWD). BG Rutherford and COL Weisman decided early (and BG Blackwell subsequently upheld) that we would take no enemy vehicles home to tiny Garlstedt. We were allowed to collect uniforms and individual soldier equipment suitable for museum displays, communication gear and other non-weapons for unit displays, but only two small arms per battalion. The 498th's Armament Repair Section was required to demilitarize the weapons and I had to certify that it had been done. All weapons also had to be entered on the unit's property book and CW3 Willie George, the PBO, had to provide a certificate to that effect prior to shipment. CSM Gallardo and I selected a new AK-47 and a heavy barrel AK-47 as the 498th's weapons. The armament shop welded the bolts shut and partly filled the barrels. We had to show the Brigade Commander the paperwork before we were allowed to pack the weapons.

This policy was eminently sensible. It cut down significantly on the possibility that munitions would find there way to port. It discouraged soldiers from foraging for weapons. It instilled discipline by forcing leaders to choose the few items they would send back to Germany. It also avoided a large transportation burden. No 2AD(FWD) soldier or vehicle caused us problems with the MPs because of weapon violations.

The Bus Ride and Customs Inspection

When the last of our vehicles went into the sterile area, we were ready to go home. Before we could go, we had to clean up some details.

We had to pick several soldiers to stay behind as part of a Port Support Activity, with a major picked by Brigade in charge. We polled the Battalion for volunteers, extolling the virtues of the civilized lifestyle in Jubayl, the potential to save some more money, and the promise of credit for an overseas tour at the six month point. We got more volunteers than we needed. From them, we picked the best qualified soldiers - drivers, mechanics and medics with good records of performance. They reported to the PSA right away and didn't return to Garlstedt until all U.S. equipment was shipped, sometime in late summer, well after I had left the Battalion.

We had to clean our barracks and turn the facilities back to the custodial unit. That took a day or two, given the scarcity of cleaning supplies and the number of rooms. There was no lack of willing hands, however. I had my company commanders do the inspections and report back. I only looked at a few rooms per company. In Germany, we had set a high standard and achieved a good record for returning facilities used during exercises. In most cases, the German landowners invited us back. Clearing the camp in Jubayl was no different and everyone knew what to do. It was painless.

After clearing the barracks, we gathered up our gear, boarded buses and headed for King Fahd Airbase, where our odyssey had begun months before. To be honest, I don't even remember the ride. I remember only a pre-dawn, preliminary, customs check for our chalk, on a tennis court at Camp 6. Everyone was clean, ready and happy. I stood the inspection with the medics (C Company) and had CPT Harp search my gear. This was the final unit inspection. The next hurdle was customs.

It was after dawn when we got to the airbase. We went to a big building, still under construction, that is probably a terminal. We had to carry our gear (two duffelbags, a ruck and a carry-on, each) which was burdensome. We stood in line interminably. We emptied our bags for a very cursory inspection. We stood in line again. Then we went through a door where a customs MP randomly selected bags to be

emptied for detailed inspection. They picked my carry-on; no problems. No 2AD(FWD) soldier got into trouble that day, a tribute to their discipline and our junior leaders' thoroughness. Finally, we turned in our bags and entered the waiting lounge. We were there a long time, too. It was hard to be patient.

Finally, the plane showed. As there were soldiers from both the 498th and 2-66 Armor on the flight, LTC John Brown and I split the baggage detail and sent about a dozen soldiers each to load bags. They were all volunteers! We promised them seats in Business Class in exchange for their help.

Most of the troops entered the back of the plane. The officers were invited to enter the front. It was a TWA 747 charter and the flight crew was very friendly and attentive. When we boarded, I noticed that no one had occupied the First Class seats on the cabin deck. I asked the lady who they were for and she said the magic words: "No one". I diverted most of the officers with me and as many of John's as I could find into the seats. That was my first, and probably last, time in First Class. The big seat was great.

We took off before noon. The cheer on takeoff was spontaneous. The flight crew took great care of us. Some of us even got to visit the cockpit. Try that wearing a .45 pistol on a normal flight! Most of us tried to sleep, after our early start.

The cabin crew had been collecting military insignia from the passengers on prior flights. They continued the effort with us. They were able to get pin-on rank and unit insignia. What they really wanted were the brand new CIBs and CMBs many of our soldiers wore. I don't think they got a single one. We landed in Rome, Italy, and refueled. There was a longer-than-normal delay that was never explained to us. We were airborne again by mid-afternoon, this time bound for Hamburg.

Reception in Garlstedt

We landed at Hamburg before dark, maybe 1700 hours, on 17 May 1991. It had been over 100 degrees when we left Saudi Arabia. In Hamburg, it was about 40 degrees with a strong wind. When the door of the plane opened, COL Baerman, formerly the Brigade Commander, more recently Garlstedt's Rear Detachment Commander, came aboard to greet us. He spoke to the troops, then pulled John and me off the plane. He had a van waiting to take us to Garlstedt. John and I prevailed upon him to let us stay until all the soldiers were off the plane. Each of us stood by an exit ramp and shook hands, thanking everyone for all they had done. We nearly froze. When they were done, I got to say hello to LTC Chuck Munson, the same guy who had packed us out in January. His unit was running the Arrival Airfield Control Group (AACG). Then we climbed aboard COL Baerman's van and headed for home. I was wishing for my field jacket.

Two hours later, we pulled through the gate at Lucius D. Clay Kaserne. We went to the "498th Parking Lot" and waited for the buses carrying the soldiers from our flight. When they had arrived, we formed a procession and proceeded slowly down the hill to the PX parking lot, the designated reception area.

In the PX parking lot, a band played and people waited. Flight manifests had been published earlier, so all the wives and kids knew to turn out. There were even "designated greeters", ladies who had volunteered to give the single soldiers a hug and a hello. Everyone who had returned before us also turned out to welcome their comrades. It was a great experience.

Mike Leatherwood found me almost as soon as my wife and kids. He took my weapon and turned it in for me. CSM Gallardo gave me 2 minutes on procedures for the soldiers who lived in the barracks. He had prepared the way for them, but they'd be a day or so getting their possessions back and their rooms resettled. Then I went with Vickey and the kids to 3-66 Armor's motor pool. That's where our baggage had been taken and stacked under one of the covered sheds. Unfortunately, there wasn't enough light to find everything. We got two of my three bags, then went home. We got the last one the next morning.

Wrapping the Whole Thing Up

LTG Franks gave the entire VII Corps four days off after getting home. Everyone in the 498th took the four days. My only official duties during that time were to greet the other flights. That was more of a pleasure than a duty. Finally, some two weeks behind the rest of us, the "Rafhans" came home: my hundred-odd supporters, two infantry companies from 1-41 Infantry, and some of the 2AD(FWD) staff. Thus ended our desert adventure.

In the days following our return to Germany, we reopened barracks and offices. We returned to organized Physical Training, something we could not afford in the desert, and normal duty days. We began to plan training that could be done without equipment and my Change of Command. We got into REFORGER planning and a long range training plan. We also began to say goodbye to a lot of friends. All those held past ETS or normal PCS dates began to move out. Among them was SPC Mike Mitchell, my driver and most amiable companion for the entire journey. Vickey and I finally said goodbye to the 498th Support Battalion, too, on 14 June 1991. I turned things over to LTC Merle Russ and we moved to Frankfurt, to join 3AD. I suspect I enjoyed my two years, even including the SWA excursion, more than Vickey enjoyed hers. Her DESERT STORM story would probably be more worthwhile than this one and would certainly fill another paper.

Chapter 9

Conclusions

I learned a lot from this experience. In addition to the specific lessons sprinkled throughout this paper, there are a few larger concepts worth mentioning.

Things I Learned

Faith in Soldiers - Over my years of service I have developed an abiding faith in human nature, at least, as applied to soldiers. It has long seemed to me that if a leader deals honestly with soldiers, treats them as thinking adults and deals fairly with them, they will always come through. This deployment provided countless examples. Whenever there were problems and time permitted, we explained what we needed and why to our soldiers, and they never, ever let us down. Two examples come to mind that best remind me of this.

Dependent Care

During deployment preparation, we had to deal with our soldiers who had dependent care plans. All had plans on file that were workable during training exercises in Germany. Faced with an indefinite deployment, many of those plans unraveled. We were

concerned that we would lose good soldiers, men and women both, because of this.

I had the S-1 call all the affected soldiers, their company commanders, our chaplain and CSM to a meeting in the chapel. In the meeting, I had the S-1 explain Army policy and the rights and responsibilities they had - the TDY to escort a child to CONUS was particularly important. I then made a little speech in which I recommended to them that their first responsibility was to make workable arrangements for their children, but that I was duty bound to enforce Army policy, even if it meant eliminating some of them. I tried to convey to them that they were part of our team and that the Chain of Command would do anything reasonable to help them. I closed by telling them to make their arrangements and we would call them together again when it was time to do the paperwork.

A few weeks later, we had another meeting, collected everyone's decisions and did their paperwork. Most took children to relatives in CONUS. I cannot express how gratified I was to see the soldiers of the 498th deal with their dependent care problems honestly, make their arrangements, and rejoin us for deployment. We lost only one soldier in this process.

Teamwork

A few days after the Cease-fire, while we were near the highway in northern Kuwait, COL Weisman asked all the battalion commanders for an opportunity to speak to each company in the Brigade. He wanted to tell them what we had done and its significance, and thank them for their part in it.

When he came to the 498th, I took him to C Company - the Medical Company - first. We had a formation and he promoted the Treatment Platoon Leader from 2LT to 1LT. He then called all the soldiers into a circle around him and made his speech. When he was done, he took questions and answered them as best he could. Most of the questions were routine - when are we going home? - that sort of thing. One struck me dumb. A female Specialist, an ambulance driver from a Stuttgart based ambulance company, who had been attached to us since before the war, asked COL Weisman if he could arrange for her and her company-mates to return to Garlstadt with us. They wanted to wear our patch on their right sleeve and serve the rest of their tours as members of C Company.

The only thing we had done for these attached medics was to welcome them and treat them like our own soldiers. I heard later, from the two 11D FSB commanders, that their attached ambulance medics, from the same company, had been nothing but trouble. I cannot account for this stark difference in experience. I only know

that we tried to be straight up with these soldiers and treat them like our own. To evoke such loyalty, such comraderie for so little effort is a wondrous thing.

Belief in Teamwork - More than ever before, I am a believer in teamwork. Teamwork produces synergy. With it, the sum of the parts can be greater than the whole. Everyone on a team generates the creative energy required to achieve. Without teamwork, great things can result only through a leader's strength of will - by driving people. When that will lapses or the people wear out, the organization must fail. No single person always has the best solution to a problem. Without teamwork, the ideas of others are often lost. Our BSA reminds me of this.

In the BSA lived my four company commanders, whose cooperation and compliance I had good reason to expect, the HHC commanders of the maneuver task forces and the HHB commander of the artillery battalion. I had less reason to expect the support of the later four. After all, they really worked for someone else. Yet they were all mature, thinking officers, who, with just a little encouragement and recognition, fit easily into our fold. In addition to BSA defense, they helped us move containers, haul away POWs, find repair parts and turn-in ammunition. I can think of at least a half dozen times when every truck the 498th owned was committed and we still needed more. When this happened, we asked for help from the greater BSA and always found it. Often, one of

the field trains commanders would have to unload something to free the truck for us - not a small sacrifice, under the circumstances. In return, they got nothing more from us than a promise of help when they needed it, something that was our mission to give, that they knew they could have for the asking anyway. The BSA "team", working together, accomplished more than the units could have accomplished individually.

Good Planning and Decentralized Execution - The concept of centralized planning and decentralized execution is essential to good logistical support. So much of the logistical business is/can be/should be planned in detail and executed as a matter of SOP, that decentralized execution is a fact of life. Once a mission is set in motion, neither battalion commanders nor company commanders can supervise it. The lieutenant or sergeant or specialist in the truck has to be responsible for the task. If they are well-trained and understand what needs to be done, they will find a way.

In the desert, our POL and Truck Platoons always found a way. Often sent to distant locations in pairs or small groups, they always found what we sent them to find, got it loaded, and brought it back to us, no matter that we had moved while they were gone. I can appreciate their anxiety upon returning to a BSA location to find us gone. If they understood the situation, they knew where to look for us or that we would find them. Individual soldiers

accepted this kind of responsibility willingly. They got the job done.

Support Forward - *Support Forward* works! It is beyond doubt the best scheme for supporting the kind of maneuver warfare we espouse. No other scheme makes as much sense. While we can argue a bit about unit structure, robust, multi-functional Forward Support Battalions make total sense. I would sooner give up the system support teams that perform DS repairs for maneuver units to maneuver unit maintenance platoons than see those maintenance platoons become a part of the FSB. Capabilities have to be forward to be well integrated and responsive.

FSBs Are Too Small - The separate brigade support battalion, with its full staff, four companies, and robust capabilities is superior to our divisional FSB structure, which strips many capabilities in the FSB to a bare minimum or takes them away altogether. The MSB is too far away to do the maneuver elements of the division much good and has too many worries of its own. The 498th, with one more platoon of medium trucks, would have been truly self-sufficient. Perhaps I'm a heretic, but I think it is time to try another CSS structure in our divisions.

Our Training Works - The training the 498th Support Battalion did in Germany and the standard operational procedures that resulted from it allowed us to find easy solutions to most of the

operational problems we faced in SWA. Because we had workable ways to solve such problems as support of a detached element, our planning talent was relatively unencumbered by day-to-day operations. They were able to concentrate on our bigger problems. There was nothing we couldn't get done. From top to bottom, we were well trained.

How All This Changed Me

This experience changed me in ways I am still discovering. I suppose even a fairly benign combat experience, as mine was, must change one. I never thought of it much before the deployment, but now I think there are differences between combat veterans, even my sort, and non-veterans - even among logisticians. It may not make us better; it certainly doesn't make us worse; but it does bring into focus the relative importance of many things.

It is still difficult for me to identify and categorize the differences in me. Most of them are "felt" rather than "thought". In fact, the writing of this document has been an attempt to look critically at as many of these "feelings" as I can expose, in the hope that the process will confirm them as useful to others.

I believe I have much more balance in the way I decide relative importance and urgency. I also have a better sense of pace. Five months is a long time, but the soldiers of the 498th

were working at a level they could have sustained almost indefinitely.

I find that I am strongly opinionated about certain professional matters now, in some cases almost to the point of closed-mindedness. For better or worse, here are a few:

1. Despite all the hoopla about how tough it was to support Desert Storm logistically and all the marvelous strategic successes, our doctrinal logistical system failed miserably. Even the things that worked reasonably well were flawed: we fed our soldiers, but poorly; we got them fuel only because it was available in quantity in Saudi Arabia; we got them enough ammunition but there were significant, and unnecessary item shortages; we maintained our combat systems at the cost of the fielding system and war reserve vehicles (thank God for them).

2. The things that did not go well were disgraceful:

- a. Our logistic automation system is a disaster. In the Brigade, we ran ULLS, SARSS, SAMS, DS-4 and SAAS-3. ULLS doesn't work well for maneuver units in the field. Dust and dirt bother the commercial hardware, generator power is harder to come by than in support units, and the architecture doesn't work when they split their trains. SAMS is a DS-level system and works great as a stand-alone. The ULLS data it gets is totally unreliable in the field and

the system support teams can't input often enough to make managing them worthwhile. SARSS is great, too. But it doesn't allow for operations split between two locations (every division did this in the desert) and the computer can't drive enough remote terminals. DS-4 is a hopeless anachronism. It costs too much in terms of operator and repair effort, and did nothing useful for us in the desert, mostly because SAILS didn't work. To top it all off, I am absolutely convinced that SAILS must die. We would have been better off sending requisitions to the national system by e-mail (if we'd had it) than using SAILS. From a Direct Support perspective, everything stopped at 800th MMC, our SAILS site. We need to start over, building around SAMS and SARSS, and including the communication links required to make a nested, distributed system with skip-echelon capability built in.

b. I don't understand how we let all these containers sneak up on us. They have been a fact of life in the commercial world for years. They totally confused the distribution system because we didn't know how to handle them. At DS level, we had no equipment to deal with them. We need a system that works and equipment in supply units that matches the system.

c. Before we went to the desert, we had no water purification equipment and no way to haul bulk water. Suddenly, we were fielded ROWPUS (which worked great) and given SMFTs. In addition to being a transportation burden, the SMFTs wore out quickly. The water distribution section was too small to run all their machines around

the clock and the small pumps they used to issue water to customers were unreliable. We need a water trailer, collapsible water tanks similar to our POL tanks, and reliable pumps (perhaps electric, with a generator). Security is also an issue. Water production sites will seldom be located within the BSA.

d. Since the Army got AAFES to take over military clothing, we have neither the stocks nor a system for replacing soldiers' uniforms. Our five months in the desert cost most of us at least two sets of BDUs and a pair of boots. We needed this stuff in the desert. We got it in Germany, after we got home. CIF equipment is at least as big a mess. We saved the manpower spaces in the '70s in our pursuit of a better "tooth to tail ratio". If we have to treat soldiers this badly, it was a false economy.

e. Before we left Germany, we bought a bunch of 30 liter buckets for the POL Platoon to use as drip pans. In the desert, they were used for washing clothes. We never saw a military laundry unit and didn't have contract support until we got to KKMC on the way home. We had no showers except the wooden ones built under contract, in Theater. In the interest of hygiene, we carried them with us, often strapped to a trailer or expando-van. It was that or nothing. We did the same with the wooden latrines. Our Army has become so dependent on portable toilets that few units own latrine screens and toilet boxes. Few First Sergeants, traditional guardians of troop hygiene, know how to set up a field latrine. For

a modest cost and some training, we could fix the latrine and shower problem. The laundry issue requires units, perhaps in the Reserve.

Closing

I wrote all this for a couple of reasons. First, I am extremely proud of the 498th Support Battalion and the way its soldiers performed. Their creativity, adaptability and persistence often accomplished near-miracles. I wanted to record some of their accomplishments before the memories fade further. Secondly, we experienced so much in such a short time that it seemed worthwhile for even a few of us to record our experiences for the benefit of others. Perhaps, by reading this, a few future logisticians will be better prepared for their challenge.

We Can Handle It!*

***Motto of the 498th Support Battalion - *The Handlers*.**

Annex A

This annex outlines the internal structure of the 498th Support Battalion. It shows the two principle strengths of the Battalion - four robust companies and a whole staff.

It should be obvious from the tenor of this paper that I believe this structure superior to a traditional FSB. Since more is

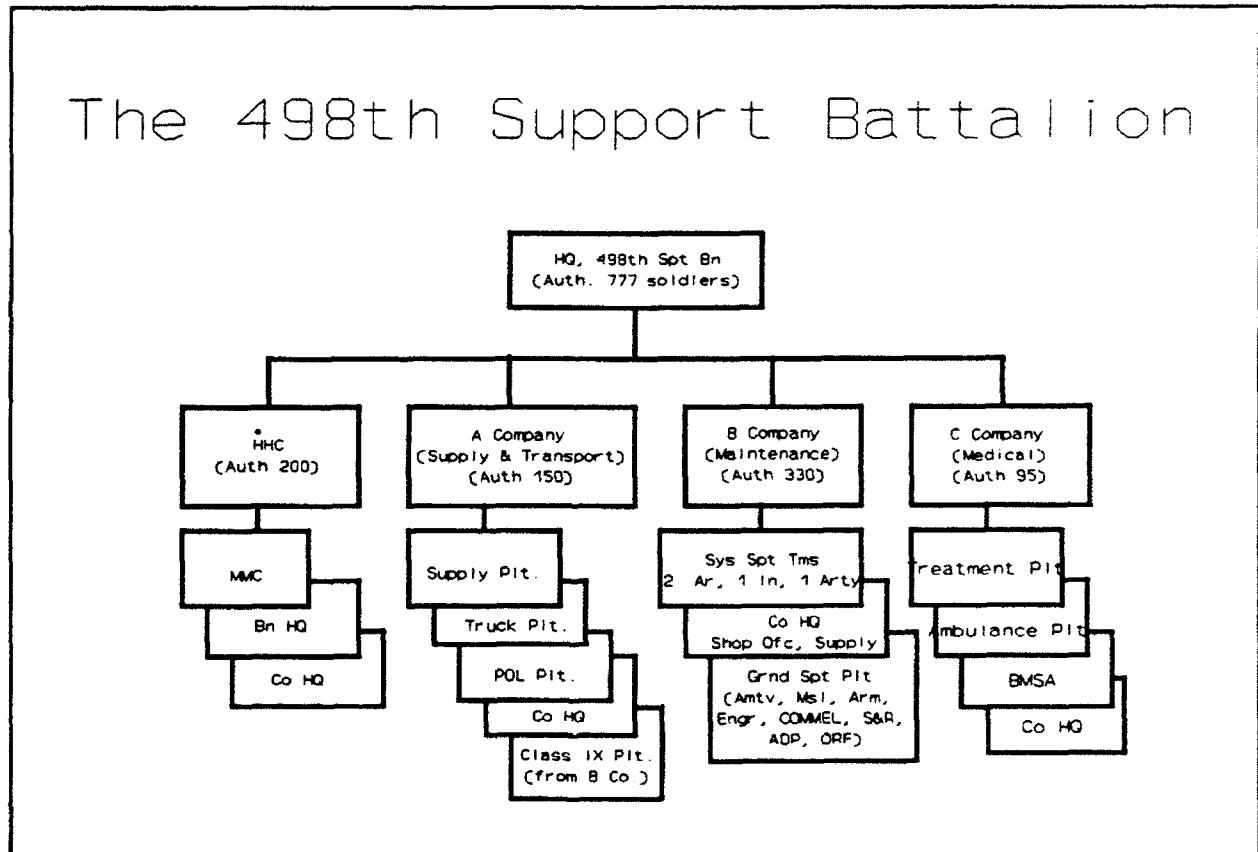


Figure 1
Structure of the 498th Support Battalion

usually better, and the 498th certainly had more of many things than a divisional Forward Support Battalion (FSB), this is

obviously not a genius revelation. While the 498th was much larger than an FSB, most of the increase in size can be attributed to additional capability, not redundancy. The 498th was intended to be highly self-sufficient and capable of operating over greater distances than are normal for an FSB. Whatever the reasoning, the design worked.

The 498th had a full Headquarters and Headquarters Company - not an FSB's Headquarters and Headquarters Detachment - mostly because of the added population of the Materiel Management Center (MMC). In the MMC was all the management capability and computer support found in a division's MMC, albeit at reduced rank and size. While the size of the MMC could certainly be reduced with the right automation, it gave the Brigade the means to operate independently. We really could manage readiness and we had the people to send places to get things for us - something that was essential to survival in SWA, and something that FSBs could not do for themselves. The full HHC also took care of the soldiers far better than an FSB's adjutant can take care of them in his spare time (the normal setup).

A Company was a Supply and Transport Company. Under normal circumstances, we had enough capability in that company to meet all the Brigade's needs for supplies and transportation. In SWA, the Truck Platoon was too small by at least half. A second platoon of medium trucks would have made us truly independent at minimal cost.

The Class IX Platoon was moved from the Maintenance Company to the S&T Company partly to reduce B Company to a more manageable size and partly to gain efficiency by letting A Company's Supply Platoon warehousemen help with the demanding Class IX workload. This was also a good move and prevented us from hopelessly overloading our Class IX soldiers.

B Company was a FSB maintenance company with some pieces beefed up. We had larger Communication-Electronic, Missile, Service and Recovery, and Armament repair sections than normal, and each was headed by a maintenance technician. The warrant officers gave us tremendous depth and produced some of the best trained NCOs and repairers that I have ever known. Our major shortfall was in the area of component repair. We rebuilt some brake shoes, all combat vehicle heaters, certain alternators and starters, but little else. We had only two MOS-trained soldiers to work the shop that fixed these items. Two was too few, so we routinely put two or three more in for OJT. Our worst shortfall, however, was Operational Readiness Float (ORF). We had an extensive fleet - too big, in my opinion - and were not authorized a single soldier to manage or maintain it. Even moving it was a major challenge. If I had it to do over, I'd have pushed to turn in all but the combat vehicles.

C Company was a full-service, forward medical unit. We had five tracked and seven wheeled ambulances in the ambulance platoon, which was normally an adequate number. Six or seven tracks would

have allowed us to send one with the artillery battalion routinely, instead of covering them with a wheeled ambulance. We had a 40-bed holding ward and three treatment sections, which gave us more than enough flexibility. Our Treatment Platoon had expando-vans as treatment vehicles. They're okay, but not the equipment we would want if we had to replace a maneuver unit's aid station, as doctrine prescribes.

The final strong point of the 498th was a whole staff (see Figure 2). Whereas an FSB Commander normally limps along with barely enough officers to cover two shifts, a communications NCO and an S-2 NCO, the 498th had enough people. We had a real MI Officer S-2, a Signal Corps Communications Officer, and a Support Operations Officer who had the time to plan and manage because the

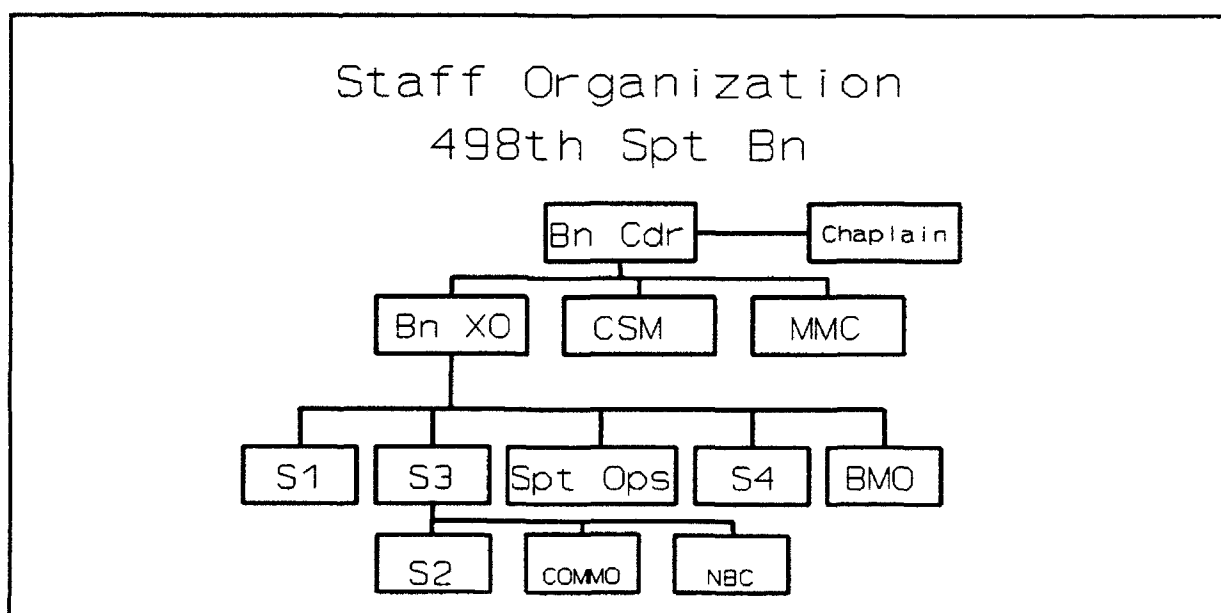


Figure 2
The 498th Support Battalion Staff

MMC took the day-to-day maintenance management function away. Admittedly, we didn't always get pick of the litter for skills we shared with the maneuver battalions, but the people we got were more than good enough for our needs. We never had security clearance or CEOI problems because we had trained staff officers, expert enough in their field, to do the things that kept us out of trouble. The availability of this expertise took a lot of workload from the Battalion XO and myself, freeing us for tasks which helped us get the Battalion ready for the next mission. If I could fix just one thing in our FSBs, I would give each a whole battalion staff, like the one shown above.

Annex B

This vignette concerns the death, in SWA, of James F. Neberman, a DA civilian LAR who had been associated with the 498th Support Battalion.

In 1989, when I took command of the 498th, one of my first efforts was to install/modify/energize a process for the management of maintenance. I was trying to find both a management scheme - a system of meetings and reports - and team structure - the people - to optimize everyone's readiness. The idea was to use a team approach to bring solutions to readiness problems and forestall the unit-DSU finger pointing which often occurs. A player in the process, from my perspective, was the Garlstedt Logistics Assistance Office (LAO). The OIC, MAJ Lee Abernathy, was new in the position, energetic and eager to contribute; so I sold Lee on the idea that he and his people were my ultimate troubleshooters. When a problem arose that no one else could fix, I intended to look to him to go to the greater AMC "system" for a solution. He accepted this role over and above the normal checking/training/helping things a well managed LAO does. Over the course of time, Lee and his LARs gained prestige, solved several tough problems, and became indispensable to our maintenance effort.

Within the LAO, Lee had five AMC commodity command LARs. They varied in quality from exceptional (Greg Schech, the TROSCOM LAR

who went to the desert with us, and Charley Fritz, from MICOM), to terrible. One of the high-end performers was the AMCCOM LAR, Jim Neberman. Of the group, Greg, Charley and Jim were real contributors, both to our maintenance program and to our community.

Jim Neberman PCSed back to CONUS with his family during the summer prior to our deployment to Saudi Arabia, and took a job at Rock Island Arsenal, in his parent command. His Garlstedt position was never filled and we missed him. When it became apparent that the LAO would deploy to SWA with us, we included Lee and Greg (the only two who, as things shook out, would go with us) in all the predeployment activities of the Battalion - POM, training, family care, everything. In fact, I appointed my HHC Commander, CPT Chris Zendt, responsible for Lee and his team, whomsoever they ended up taking. Generally, I think Lee and Greg were well served by this team approach. It trained them in some essential survival skills and further bonded them to us. We were certainly well served, as they often got us parts when all the normal means failed.

Lee went to the desert shorthanded. This was widely known, but nothing was done to remedy the situation because of a shortage of deployable LARs and because we were to fall under the umbrella of 11D and their LAO while in SWA.

I am not sure how it came about, but at some point, Jim Neberman either volunteered to go to SWA or was notified that he

would be sent by AMCCOM. It is my understanding that he volunteered to rejoin Lee's LAO team and 2AD(FWD). This loyalty was characteristic of Jim and I was gratified to hear that he would join us.

A few days prior to the attack into Iraq, Lee and I discussed how he could best help us and still meet his requirement to safeguard his civilians. At the time, it was generally felt that they could not reside forward of the brigade rear boundary during hostilities, but that they could come forward, if things were secure, to do work. (I'm not sure from where the guidance came.) I agreed that he and his people should live in the DSA with 1ID's LAO team, and come forward to work and attend our maintenance meetings. At some point, Lee told me that he had to go pick up Jim. He departed to do this a few days prior to our attack. Those last few days were busy and I do not recall seeing or speaking to Lee during that time. Apparently, he returned to the DSA with Jim a day or so before the 1st Infantry Division attacked.

The afternoon prior to the attack, we march ordered the BSA and split it into two contingents. The first was our Forward Support Element. The rest of the 498th Support Battalion, the remnants of the Field Trains, and the organic support elements of our attachments, moved in the second element. Before dark, we moved up to a designated holding position well short of the Iraqi defense, but aligned with the marked lanes we would use to pass

through the defenses. Our first position north of the defenses was within the area to be cleared by 2d Bde, 1st ID, the east flank brigade. We were to set up farther south and east than I wanted, but the unsettled tactical situation, the desire to give our brigade (the exploitation force) some depth to support maneuver, and the desire to keep us out of the lanes through which the 1st (UK) Armoured Division would pass on the first night, dictated where we would go.

I've detailed our occupation of the position, the problems we had and the ways we adjusted elsewhere. The focus of this annex is our LAO team.

Sometime during that first afternoon, amidst all the confusion, Lee Abernathy arrived with his LAO guys. He came to check on us and to be sure he could find us. Jim Neberman and some "borrowed" LARs were among his party. When it became obvious that we were in good shape and would do no business that day, the LAO party departed, intending to return to the DSA. On the way out, the truck Jim was driving exploded, killing him almost instantly. Lee, who had been following Jim, at first thought Jim had struck a mine. Despite this, he stopped, rendered aid, and finally went for medical help, hoping the medics could do something. Some while later, I was told that during the visit to the BSA, Jim and one of the borrowed LARs had gathered a quantity of unexploded DPICM submunitions, put them in plastic bags and stowed them in their

vehicles. Jim's bag had exploded, causing his death. EOD took care of the other bag, but, because of the instability of the munitions, could not save the other truck. Neither Lee nor Greg Schech knew that the others had gathered the explosives.

This tragedy taught me several things:

1. Prior to deployment, we had trained on COL Baerman's Third Law - "Don't pick up anything man-made on the battlefield". Despite that training, we still had problems with duds. I am convinced that our junior leaders did not understand the danger these devices posed clearly enough to protect our soldiers from them. They're pretty; strangely attractive even. And terribly dangerous. We should have pushed this more in training, especially OPD and NCOPD sessions.

2. The artillery plan instructed firing units to use HE in areas to be occupied by friendly forces. As a result, the BSA leadership had discussed marking, reporting duds and keeping soldiers away from duds found in unit areas. We had thought in terms of HE duds. We were not prepared for the widespread littering of our area and its approaches with these munitions and we had no way to deal with them. (Later it was determined that some of the artillery units had used DPICM in order to conserve HE, which they were short. I don't know at what level that decision was approved, but I do know that we were never informed.) As a result of this, I

now understand fully the impact of the fire support plan on CSS units. I also understand that artillery officers and the junior guys in the Bde TOC do not understand this! Which means that CSS units must protect themselves and plan alternate routes/areas.

3. I don't know why Jim picked up the duds. Surely he knew better. I would like to believe that he might be alive today if he had trained with the Battalion prior to deployment. I don't know if it would have changed a thing, but I wish he had been given the chance. I wish he had arrived earlier, so that we might have seen to this before the attack. Even now, nearly 2 years later, my heart aches at his loss. I can only imagine how his wife and family feel. I saw Lee Abernathy temporarily devastated by this experience. I learned of the pain caused by the loss of a valued teammate and that we don't train enough on this kind of thing. Leaders have to know about this!

This was the first and last trouble we had with duds, though we encountered them daily thereafter. Other units never got over this and continued to lose people. This is a credit to the leaders of the Battalion and the discipline and common sense of the soldiers. At least we were smart enough to learn from this terrible experience.