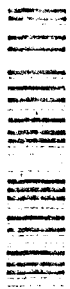


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JRTC TO JUST CAUSE: A CASE STUDY
LIGHT INFANTRY TRAINING

AN INDIVIDUAL STUDY PROJECT

by

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United States Army

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ABSTRACT

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This study examines the significant training experiences of the 5th Battalion, 21st Infantry, 2d Brigade, 7th Infantry Division (Light) as it prepared for Joint Readiness Training Center Rotation (JRTC) 90-1 in October 1989. On December 19, 1989, the unit deployed on Operation JUST CAUSE as the 7th Infantry Division (Light) Division Ready Force One. The seven battlefield operating systems (BOS) outlined in U.S. Army Field Manual 25-100: Training the Force, November 1988, serves as the focal point for the unit's preparation for JRTC and its combat operations during Operation JUST CAUSE. This study can provide light infantry battalion and brigade commanders a broader understanding on how to improve light infantry training.

INTRODUCTION

In Field Manual 25-100: Training the Force, General Carl E. Vuono states: "Our top priority is training" ¹. My intent, in this study, is to examine light infantry training, what worked and what did not. Specifically, it is a case study of the 5th Battalion, 21st Infantry (5-21 Inf) training for a Joint Readiness Training Center (JRTC) rotation followed by deployment on Operation JUST CAUSE in December 1989.

I will use the seven battlefield operating systems (BOS) outlined in FM 25-100 as the basis for this case study. Additionally, as a major source document, I will use the Army War College Study Project, Joint Readiness Training Center (JRTC) Training Observations, Implications for Senior Army Leader Training by LTC Howard Crawford Jr. and LTC Robert M. Hensler, published April 1, 1989.

GOAL

The goal of this case study is to provide future light infantry battalion commanders a training source document that reflects the perspective of one unit's training experience for JRTC and the dividend received during combat operations on JUST CAUSE. It is not intended to be all inclusive nor to state that the 5-21 Inf did everything well. However, it is my conviction that the environment of my command tour and the quality of mentorship

from my brigade commander mandates that I attempt to record the training innovations and procedures that were instituted and worthy of consideration for those who follow.

CASE STUDY PRESENTATION

I will select 3-5 critical observations/implications that have been highlighted in the source document. From my experience with the 5-21 Inf, I will expand on the unit's training preparation for JRTC and then discuss the functioning of each BOS during the unit's operations during JUST CAUSE. At the conclusion of each BOS section I will provide training tips future units and commanders should consider in their training programs.

UNIT DATA

5th Battalion, 21st Infantry is a light infantry battalion assigned to the 2d Brigade, 7th Infantry Division (Light) [7th ID(L)]. The unit participated in JRTC Rotation 90-1 at Fort Huachuca from October 21 - November 5, 1989. The unit was alerted on December 19, 1989, and arrived in Panama at 2PM on December 20, 1989. The unit redeployed to Fort Ord on February 5, 1990.

The battalion knew for one year that it would participate in a JRTC rotation. The brigade headquarters, combat support, combat service support, and brigade commander had participated in an earlier rotation in December 1988. All of this knowledge and experience was utilized in our

preparation. There were no surprises at JRTC with regard to the challenges and environment that was to be encountered. A methodical and detailed search of lessons learned and common mistakes was conducted. Each BOS was reviewed to ensure that during training the unit, tested its standard operating procedures (SOP) to ensure it could meet the tasks, conditions and standards that were expected.

To state that the unit won every battle is not true or even implied. We made training mistakes and we did learn. We confirmed our SOPs and from my perspective demonstrated a high degree of competency. Throughout the rotation and under JRTC stress, all BOS functioned and there were no catastrophic failures. This was confirmed over and over during our operations on JUST CAUSE.

INTELLIGENCE

TRAINING IMPLICATIONS

1. The S2 section needs constant support for manning and training.
2. Technical knowledge of potential enemies needs reinforcement in every training event.
3. Over tasking scouts normally insures failed reconnaissance.
4. Train all infantry squads in reconnaissance skills. 2

JRTC PREPARATION

S2 Section

Of all the BOS, intelligence is the most difficult and contentious. The

manning of the S2 section has been a constant shortfall throughout my army experience. Normally, you will find an inexperienced lieutenant in a Captain's billet and the BICC officer is rarely assigned. I was fortunate in this area. The battalion S2 was an experienced captain with infantry platoon leader experience prior to a MI branch transfer. Additionally, he had served with me in a prior assignment thus we had an excellent relationship. He had 22 months in his position prior to the rotation. The BICC officer was provided from MI battalion assets and reported to us three months prior to the rotation to participate in some of the train-up. This was a local fix and the issue of S2 manning continues today.

Technical Knowledge

A challenge of a JRTC rotation is to determine what the OPFOR is going to do. You receive an OPFOR intelligence packet and the Cuban Handbook, however, more often than not, the highly disciplined and well trained OPFOR utilizes a degree of gamesmanship and unit developed tactics. We found this especially true during the low intensity phase of our rotation. This made it extremely difficult to template their reactions to the unit's plans. From my perspective, my S2 was highly skilled and had the capability to template/laydown enemy courses of action. Technical knowledge was not the issue. An uncompromising OPFOR was a part of the problem. This does not infer that the OPFOR should be cooperative, rather that they should

follow the doctrine ascribed to their use.

Scout Platoons

The over tasking of scout platoons was well known to us prior to our rotation. In all of our training preparations and exercises, we worked hard to ensure we did not fall into this common fault. Essentially, we routinely focused the scout platoon on reconnaissance of our specified objectives

The scout platoon also suffers from extreme TO&E undermanning and is incapable of accomplishing the myriad of intelligence tasks that evolve during your rotation. Light infantry scouts normally infiltrate by foot over great distances in minimum times. Sleep deprivation and resupply are major hurdles to overcome. You can, if not cautious, wear them out early on. During our rotation scouts were resupplied at night by rotary wing kick outs and the missions they were assigned were within their capabilities and carefully scrutinized to ensure they were not overloaded.

Reconnaissance

Infantry squads are trained in patrolling and other key METL tasks. To train all infantry squads in reconnaissance skills to the level of a scout platoon is unrealistic. The training time available and resources are simply not available.

The unit SOP stipulated that each company would have one squad capable of conducting these types of tasks. Normally, this was the anti

-armor section of the rifle company. They were used to conduct reconnaissance of routes and moved forward of the rifle companies during offensive operations. During train-up these squads participated in a scout platoon designed training program to improve their skills. By having these elements, it reduced the taskings that might have been placed on the scout platoon.

Intelligence in Operation JUST CAUSE

The unit deployed on Operation JUST CAUSE as the DRF 1 for the 7th ID(L) on December 20 1989, arriving in country beginning at 2PM. I was not informed of the mission or destination prior to the unit closing on the departure airfield at N+12. This issue was an OPSEC decision to which I did not have input. This was wrong! I and my key leaders should have been given information in the planning phases. Simple things like map distribution were done on the run. OPSEC has a role, but not at the expense of planning time for the soldiers who are being placed in harms way.

During JUST CAUSE the unit executed all of its mission essential tasks during combat operations that ran from the Canal Zone to the borders of Costa Rica and then back to Panama City for stability operations. With the exception of the initial mission, a battalion night air assault into a remote area suspected of being an alternate command post, at no time during our forty five days of operations were any significant intelligence products

provided from sources outside the brigade. My brigade and its battalions pooled their intelligence sections into an all source center to sort through the thousands of reports being provided by the local citizens. Routinely, we would develop our own target folders, determine validity, assign a priority and dedicate resources to check them out. From my perspective, the intelligence system worked only through the innovation of the brigade, higher levels of support were not evident to me. A final example: From January 10-February 4, 1990, my unit had responsibility for stability operations in the San Miguelito area of Panama City. This area was allegedly the "toughest" part of town. During this mission, at no time did we receive any intelligence products from Division, USARSO, or SOUTHCOM. All intelligence was gathered internally by soldiers on patrols.

In summary, the intelligence BOS during JUST CAUSE was the least functioning and the most frustrating with which to deal.

Training Tips

1. Demand quality in your S2 section. Fill the BICC requirement.
2. Don't shortcut IPB in training. Force your S2 to become an expert.
3. Focus light infantry scouts on the objective. Be cautious, don't overload their capabilities.
4. Specify scout requirements and tasks that rifle companies must perform. Cross train selected squads with scout platoon.

MANEUVER

TRAINING IMPLICATIONS

1. Sustain focus of tactical collective training at squad and platoon level, however scrimmage periodically at battalion and company level to train commanders and staff.
2. Train leaders on how to use AMTP's and how to structure STX lanes.
3. Stress quality night training against a realistic OPFOR.³

JRTC PREPARATION

Physical and Mental Stamina

As the unit conducted training, both in individual skills and collective skills, a major question that a commander must answer is, "How tough, physically and mentally is my unit?" The answer to this question sets the tone for all future training. This issue was answered by first assessing the physical fitness of the whole battalion. The physical training program designed by the brigade commander was extremely strenuous and mentally challenging (Figure 1). He required company commanders and the battalion commander to regularly lead their units with the brigade commander assessing the performance of the unit. The program was all encompassing, followed correct fitness plans and was based on muscle failure procedures. It challenged every soldier and served as a tool to measure the desire of the unit to excel. It was an important tool in our assessment and helped establish a "Don't Quit" mind set for the soldiers.

COLD STEEL PT CONDITIONING PHASE			
EXERCISE	SET 1	SET 2	SET 3
push up	30	25	20
mountain climber	25	20	20
bottoms up	20	20	20
push up	10	10	10
body twist	10	10	10
flutter kick	100	100	50-70
leg spreader	30	25	25
flutter kick	25	25	25
Upon conclusion: 8-count push up - 15 reps			
then 3 mile run: 21-24 minutes			
FIGURE 14			

Leaders

In February 1989, the battalion underwent its first external evaluation that replicated the JRTC model. The brigade commander used this exercise to demonstrate to leaders that they were not indestructible and that they have a mental and physical point that once reached causes them to function at a level that would only ensure failure. By doing this early on, the unit quickly learned the value of depth in all leadership and functional areas. This lesson learned was incorporated into all future training. The lesson learned is that you can talk about fitness, the importance of sleep plans, and training your assistants. However, until you personally know your unit's physical abilities and each leader knows his own physical and mental thresholds, you will hinder the ability of the unit to perform to its

maximum capabilities. As the commander, I knew my own limitations in this area along with the strengtns and weaknesses of my company commanders and staff officers.

Training Focus

The 7th ID(L) operated under a standard XYZ training cycle, each cycle being approximately six weeks long. During our train-up, the unit did not deviate from this schedule and pulled its fare share of support and mission cycle. With early notice of your rotation and a feasible plan, you can avoid a cram type program and also avoid wearing down your soldiers/leaders. It is my view that in your home station environment you can burn out your organization prior to your rotation.

In the 12 months prior to our rotation, the battalion had four training cycles at Fort Hunter-Liggett that provided opportunities to focus on battalion and company collective mission essential tasks (METL). These four cycles represented opportunities to scrimmage with all required resources and the brigade headquarters serving as the command and control element. Each of these exercises was executed similiar to a standard JRTC timeline and were used to build upon each prior exercise to test and validate SOP's that covered all of the BOS.

Training time in garrison (Fort Ord area) was utilized to conduct individual, squad and platoon training. The unit, through the non-

commissioned officers chain, identified what we considered to be the most critical individual skills and focused all of our individual training in this area (Fig 2). Additionally, participation in expert infantryman badge, expert field medical badge, and Connolly Cup (field mess) competitions reinforced individual training tasks that are critical to battlefield success.

INDIVIDUAL CRITICAL SKILLS

TASK	SOURCE
Perform mouth to mouth resuscitation	CTT 081-831-1042
Apply dressing/prevent shock	CTT 081-831-1016/1005
Operate/maintain weapon	
a. M16A2	CTT 071-311-2025/2003/2030
b. M249	SM 071-312-4025/4027
c. M60	CTT 071-312-3001/3005/3007
Camouflage self/equipment	CTT 051-191-1361
Practice noise/litter/light discipline	CTT 071-331-0815
Construct individual fighting position	CTT 071-326-5703
Report enemy information	CTT 071-331-0803
Move as a member of a fire team	CTT 071-326-0501
Engage targets with assigned weapon	
a. M16A2	CTT 071-311-2007
	TM 11-5855-213-10
	SM 071-010-2307
	SM 071-315-2308
b. M249	SM 071-010-0001/0006
	TM 11-5855-213-10
c. M60	CTT 071-312-3031
	TM 11-5855-213-10
	SM 071-315-0008/2313
d. M203	CTT 071-311-2104
	TM 11-5855-213-10
React to indirect fire/move under direct fire	CTT 071-326-0502/0510
Put on, wear, remove M17 series protective mask	CTT 031-503-1002
Select temporary fighting positions	CTT 071-326-0513
Indirect fire	
a. Locate target by shift from a known point	SM 061-283-1004
b. Call for/adjust indirect fire	FM 6-30
Prepare, restore, engage targets and perform	

misfire procedures for the LAW and AT4

1. M72A2 LAW

2. M136 (AT4)

Install/recover AT and AP mines

Day/night land navigation

Employ hand grenade

Communications

a. Operate a station in a radio net

b. Encode/decode messages using the
KTC 600

c. Construct field expedient antenna

CTT 071-318-2201/2202/2203

SM 071-054-0001 thru 0004

SM 051-192-1002 (M16)

CTT 071-325-4412 (M18)

SM 051-192-1008 (M21)

CTT 071-329-1006

CTT 071-325-4405

SM 223-573-8006

SM 113-573-4003

Cold Steel Extract

FIGURE 25

Extensive use of situational training exercises (STX's-lane training) were developed for squads and platoons to conduct battle drill training. These STX's were executed using the MILES systems to ensure that fire support, medical treatment, casualty evaluation, and chain of command succession were always exercised.

Use of AMTP's/METL

Army Mission Training Plans (AMTP's) were used extensively as the drivers for all collective training. The brigade with battalion assistance, developed a series of "blue books" that were distributed down to platoon level. Figure 3 provides an example of a battalion METL task and a rifle company METL Task in an expanded format.

The use of these "blue books" served to narrow the training focus and established minimum essential tasks that must be accomplished to successfully execute the mission. I strongly recommend this approach.

Night Training and Realistic OPFOR

During our intensive training cycles, all missions were executed at night. Troop leading and prepare for combat tasks were done during daylight. It became second nature to move and attack at night, while defend missions were always attacked by the OPFOR at night. Under the auspices of the brigade, the OPFOR element executed their mission using counter training objectives.

BN METL

ESTABLISH AND EXPAND A LODGEMENT
BN CMD GROUP/STAFF

COMMAND AND CONTROL BN
COMMAND GROUP OPS
PERFORM S3 OPS
OPERATE MAIN CP

PERFORM INTELL OPS
PERFORM S2 OPS
OPERATE FIRE SPT SYS
EMPLOY FIRE SPT

PERFORM AIR ASSAULT
EMPLOY AIR SUPPORT
INTERGRATE ENG SPT
PLAN COMMO
EST LODGEMENT

INF CO

PREPARE FOR COMBAT
OCCUPY ASSEMBLE AREA
MOVE TACTICALLY
PERFORM PASSAGE OF LINES

AT PLT

PREPARE FOR COMBAT
OCCUPY ASSEMBLY AREA
CONDUCT MOUNTED MVM
EST OVERWATCH POS

FA BATTERY

PROVIDE FIRE SPT

MORTAR PLT

PREPARE FOR COMBAT
OCCUPY ASSEMBLY AREA
MOVE MOUNTED
FIRE/ADJUST FIRE

ADA SECTION

PERFORM ADA OPS

CBT/ FIELD TRAINS

PERFORM COMBAT SVC
SUPPORT OPS
OPERATE COMBAT TRNS
OPERATE PAC

SCOUT PLT

PREPARE FOR COMBAT
PROVIDE GUIDES
CONDUCT ZONE RECON
PERFORM AIR ASSAULT

ENG PLT

PERFORM OPS

SIG PLT

MAINTAIN COMMO

COMPANY METL

ASSAULT

KEY LEADER TASKS

PREPARE FOR COMBAT
ISSUE AN ORAL OPORD
CONDUCT LDR RECON
SUSTAIN

INDIVIDUAL TASKS

SEL TEMP FIGHTING POSITIONS
MOVE UNDER DIRECT FIRE
REACT TO INDIRECT FIRE
REACT TO FLARES

<u>MANEUVER UNITS</u>	<u>SUPPLY SEC</u>	<u>AT SCT OR CO SCTS</u>
PREPARE FOR COMBAT	PERFORM LOG SPT	RECON ROUTE
MOVE TACTICALLY	PERFORM AERIAL RESUPPLY	RECON AREA
ASSAULT		PERFORM ANTI-ARMOR AMBUSH
BREACH OBSTACLES	<u>NBC SECT</u>	
KNOCK OUT BUNKER	PREPARE FOR COMBAT	<u>RTO/COMMO SEC</u>
CLEAR TRENCHLINE		MAINTAIN COMMO
BD 1: REACT TO CONTACT	<u>60MM MORT SEC</u>	
BD 2: BREAK CONTACT	FIRE/ADJ FIRE	<u>FIST</u>
BD 4: REACT TO INDIRECT FIRE	MOVE DISMOUNTED	EMPLOY FIRE
SPOYERWATCH/SPT BY FIRE	ENG SQUAD	
CONSOLIDATE/REORGANIZE	PERFORM MOBILITY OPS	
PERFORM LINK-UP		

* BLUE BOOKS DEPICT CTT,
SM, OR AMTP TASK NUMBER

FIGURE 3 6

* NOTE

The OPFOR unit mission was to win. Properly planned, the OPFOR can get the same training dividend as the unit undergoing the evaluation.

Maneuver in Operation JUST CAUSE

The magnitude of the maneuver BOS in JUST CAUSE can be seen by the following summary from the 7th ID(L) AAR:

Upon TF 2-7's deployment to Tocumen airport on 20-21 Dec 89 and effective attachment to 7th Infantry Division (Light) at 210600 Dec 89 after initial attachment to the 82nd Airborne Division, TF-2-7 was given an operational area ranging west from the Panama canal across the country to the Costa Rican border. Primary objectives included neutralizing the PDF, securing key sites and facilities, protecting US lives and property, restoration of law and order and demonstrating support for the emerging Panamanian government.

The operation began with 5-21 Infantry's air assault into the town of Coclecito at 220300 Dec 89. The remainder of the task force moved by C130 and ground convoy to relieve 2-75 and 3-75 Rangers at 232000 hours in Rio Hato. Rio Hato became a major base of operations in the initial phase of the campaign. The next phase of the operation was the transition of Brigade forces from the Rio Hato staging base to David in the western part of Panama. Again, TF 2-7

conducted a relief-in-place of Ranger elements at 260900 Dec 89 by C130 movement and ground convoy. Enrique Malek airport in David became the Brigade's new base of operations in Western Panama. On 4 Jan 90, 2nd Brigade relieved the Rangers on Isla De Coiba. Operations in western Panama concluded on 8 Jan 90 when the 2-7 and 3-7 Special Forces Battalions conducted an area relief in place in the Western region. This transition consisted of extensive area assessments to verify the stability of the region prior to departure of the Brigade task force. Over 300 assessments of key towns in the region were conducted by Brigade and Battalion teams. With the deployment of the Brigade to Rio Hato and Howard AFB by C130 and ground convoy preparation began for operations in Panama City.

Following completion of the Western campaign, the Brigade deployed to Panama City to conduct a relief-in-place of the 82nd Airborne Division on 8 Jan 90. On 130001 Jan 90, 2nd Brigade conducted a relief in place of 9th Regt to allow for their redeployment to CONUS. Primary objectives included showing a strong US/PPF presence, showing support for the new Panamanian government, and neutralizing any remaining PDF/DIGBAT elements. Civil/military operations included medical relief and political/economic assessments critical to future defense and nation building programs.

The operation began with TF 2-7 deploying by C130 and ground convoy to Howard AFB and Tocumen airport from Rio Hato, completing the movement by 12 Jan 90. The initial operation included a nine company sweep through San Miguelito, considered the most unstable area of the city. US presence in the area quickly stabilized the situation by reducing the number of curfew violators each night from 830 initially to less than 50 at the end of the operation. Each element in the task force was given a sector of the city with key sites and facilities to secure. The operation culminated in late January, when 2nd Brigade was relieved by 16 MP Brigade and 193 SIB from 22-30 Jan 90.

5-21 Infantry operated in the San Miguelito area and later north to Calzada Larga and Alcaidiaz; 2-27 operated in the Tocumen area and later towards La Mesa, Pedragal, and Cabuya; 3-27 Infantry operated in the Torrijos/Tocumen area and east of the city towards Chepo and Pacora. Elements of each unit were rotated to Howard AFB for rest and refit. The operation

netted over 100 captured weapons and 20 EPW's captured.⁷

TRAINING TIPS

1. Train at night-ALWAYS!
2. Ensure time schedules allow for rehearsals at all levels.
3. Train with MILES-collective training without MILES is not training.
4. METT-T soldiers load
5. Understand AMTP's, use them, focus training effort.

FIRE SUPPORT

TRAINING IMPLICATIONS

1. Integrate fire support rehearsals with maneuver rehearsals.
2. Use every innovative measure available to intergrate and use the 60mm mortar at company level.
3. Find means to integrate night CAS into maneuver exercises in such a way as to support actions on the objective.⁸

JRTC PREPARATION

Similiar to the ADA and Engineer BOS, the key to success with fire support begins in a habitual relationship of the FIST Teams at company level and the FSO/FSE team at the battalion level. This habitual relationship of field artillery specialists with their infantry counterparts should be long term and will ensure a concerted effort of fire support planning.

Rehearsals

The battalion FSO in coordination with the unit developed the basic fire

support plan. It was then published to FIST Teams for further input/modification, the plan was then finalized.

Two rehearsals occurred during the preparation phase for missions. The first was the company commander's backbrief, which always included an actions on objective and fire support plan. The second rehearsal was conducted by the battalion FSO with all key indirect fire elements. This was a detailed and specific laydown of all fire support assets planned to support the mission. This laydown educated all fire support personnel on the complete fire support plan. It is my view that the fire support laydown was a critical rehearsal.

Utility of 60mm Mortar

The 60mm mortar issue and use is a simple equation tied directly to availability of ammunition. In light infantry battalions, the 60mm combat load of ammunition is carried by the soldiers. Indiscriminate use rapidly depletes a small combat load. Generally, my unit's combat load was 60-80 rounds of ammunition.

SOP's were developed for employment. 60mm's were reserved for initial suppression of enemy fire until other indirect fire was called. Secondly, 60mm mortars were reserved to the company commander for actions in and around objectives. In the defense, they covered close in dead space.

CAS Integration

This is one area in which I have not seen much improvement during my career. As a platoon leader in Vietnam, I directed CAS on targets through the USAF Forward Air Controller. Learning the specific techniques was a matter of survival. In today's training environment, our junior leaders do not have the same opportunity I did.

During our rotation, we had an AC130 Gunship in support. Its employment was via my TAC CP through my USAF TACP. Additionally, we placed a staff officer who knew the ground plan on the AC130. The unit also ensured an FM Secure Communications node worked.

All of the above steps, precluded any casualties from CAS. This has been a significant problem with units at JRTC and was controlled during our rotation by positive control via the TAC CP. The lethality of CAS assets is too great to normally delegate the release authority below the battalion level.

Training tip: A technique used during our rotation included the integration of an Attack Helicopter Team working with an AC130 at night. The Observer Helicopter directed the use of the AC130 infrared capability, which illuminated the battlefield and improved target identification for either rotary air attack or AC130 assets. This technique was extremely successful.

Field Artillery in Operation JUST CAUSE

All FIST/FSE elements deployed with the battalion on 19 December 1989. In our operations throughout Panama, indirect fire support was used sparingly. During our initial occupation of Rio Hato, illumination rounds were fired on the first two nights. From approximately D+4, no further indirect fire support was employed.

CAS and AC130 missions were flown in support of air assault missions in Western Panama. These were used as a show of force and to provide a psychological impact on remaining PDF and Dignity Battalion elements. USAF TACP deployed with the battalion and the USAF request channels worked extremely well. USAF CAS and AC130 support were always available on request.

TRAINING TIPS

1. Rehearse fire support plan with all players.
2. Ensure changes to fire support plan are disseminated.
3. Include 60mm mortars in company level fire support plan.
4. Place LNO with AC 130 gunship, ensure secure commo.

MOBILITY, COUNTERMOBILITY, SURVIVABILITY

TRAINING IMPLICATIONS

1. Maneuver staffs and their TF engineer must train together.

2. Conduct multiechelon training with integration of mobility, countermobility, and survivability tasks.
3. Closely monitor the use of heavy engineer equipment.
4. Cover all obstacles with fire.⁹

JRTC PREPARATION

Train Together

The organization of the light infantry division engineer company does not routinely lend itself to training together. The engineer company has only two sapper platoons as opposed to three infantry battalions per brigade. Again, early in our training program, the commitment of a specified platoon to support the battalion was accomplished. This allowed for a routine association through all of the train-up. Additionally, engineer squads had habitual training relationships with the battalion's rifle companies along with the engineer platoon leader consistently training with the battalion command and staff elements.

Multiechelon Training and Integration

This training imperative was extremely well done and planned in detail. The battalion, during two major collective training phases, conducted a deliberate defense that integrated all aspects of engineer support in a countermobility and survivability role. Lessons learned during the first exercise, with regard to movement of CLASS IV, obstacle planning, and initiation of obstacle emplacement, paid long term dividends. SOP's and specific roles were assigned. The battalion was able to develop a

confirmed timeline for major requirements, such as the total amount of time required to "dig in" with overhead cover and emplace all obstacles.

The brigade engineer plays a critical role in the countermobility role. As the brigade develops its order to battalion, the brigade engineer designates 3-5 key obstacles to be emplaced in the battalion sector. This allows the battalion to immediately commit its engineers to their emplacement as the battalion staff refines and adds to the obstacle plan. This step by the brigade headquarters saves time and maximizes engineer assets.

Individual engineering skills were training were scheduled once a quarter at home station. Engineer lanes (STX's) were established to cross train infantry platoons in mobility, countermobility and survivability tasks. Subjects covered were construction of fighting positions, emplacement of deliberate/hasty obstacles and breaching techniques. This quarterly training served to cross train infantry with engineers and was an excellent training experience that bonded these elements.

Heavy Engineer Equipment

If Murphy's Law applies anywhere on the battlefield, it is at 0200 hours on a rainy, cold, foggy night when you can't find your heavy engineer equipment. A simple rule learned the hardway: Positive control of heavy engineer equipment is required; guides from the supported battalion must

escort individual pieces of equipment to each job site.

Cover Obstacles

Again, having the training opportunity to conduct two battalion size, deliberate defend missions, the lessons learned the first time were applied rapidly to our SOP's. All obstacles must be covered by fire and must be covered by observation and patrols to counter enemy efforts to create breeches.

A training tip developed within the brigade utilized the direct support artillery battalion's position designator (PADS) to accurately record grid locations of all obstacles and anti-tank positions. This data was then used in the development of an effective fire support plan to cover the obstacles.

Engineers in Operation JUST CAUSE

2/B/13th Engineers deployed with the unit on December 19, 1990. Shortly after arrival in country, the engineers were task organized under Brigade control and received their missions from Brigade. Missions conducted during JUST CAUSE were: sweeping arms caches and PDF facilities for mines and boobytraps (mobility); constructing and manning roadblocks (counter-mobility); and performing area damage assessment, expedient airfield repair and captured equipment backhaul (sustainment engineering).

TRAINING TIPS

1. Time is critical, ensure brigade engineer does initial planning
2. Establish positive control over heavy equipment.
3. Train with sapper platoons (STX's) quarterly.
4. Cover obstacles with fire, observation and patrolling.

AIR DEFENSE

TRAINING IMPLICATIONS

1. Train in an active air defense environment.
2. Train air defense officers in light force tactics.
3. Conduct sustainment training for manpads gunners.
4. Monitor security and transport for ADS elements.¹⁰

JRTC PREPARATION

Training Relationship

An on-going training relationship was established with the Air Defense Battalion. Throughout the year prior to our JRTC rotation, the unit consistently trained with the same ADA section. This relationship solidified our understanding of ADA capabilities and in turn, the platoon leadership became aware of the units' SOP's and light infantry tactics.

ADA Environment

It is extremely difficult to conduct home station training in an active air defense environment. Air Force aircraft to replicate OPFOR are not available on a regular basis. When you can get them, they are usually

blocked for a specified time and target. This was also true during our rotation, limited blue CAS was available from D-day to D+5, OPFOR CAS from D+6 to D+9. The integration of friendly and OPFOR CAS remains an issue to be worked in light infantry training and JRTC rotations.

Non-dedicated Manpads

Soldiers in the 81mm platoon were designated as MANPADS gunners. During train up, they received training on the STINGER system and received gunnery training in the moving target simulator. The mortar platoon had the necessary vehicles that allowed them to transport the weapons systems. Additionally, their tactical positioning provided an expanded ADA coverage to the battalion sector. 50% of OPFOR CAS was destroyed during the rotation (32/64 MIG5).

ADA Positioning

Early in our training program, we learned the vulnerability of ADA assets to rear area OPFOR elements. Without close coordination and commander involvement, they could be extremely vulnerable to compromise and destruction. To counter this, our SOP specified that stinger teams would be positioned in close proximity to our combat trains, C2 and brigade trains nodes. This provided them the necessary security and did not require the unit to provide frontline soldiers for this mission. With three ADA teams committed, the remaining two teams were available to task organize

with infantry companies dependent on a METT-T assessment.

ADA in Operation JUST CAUSE

The DRFI stinger sections deployed on December 19, 1989 to provide air defense for the battalion. The section deployed in a dismounted role with its basic load of missiles. Shortly after arrival on D-Day the air threat was eliminated. The section downloaded their ammunition and remained with the battalion until December 29, 1990. During this time frame, the battalion executed one air assault mission and one air land mission as the unit moved from Tocumen Airfield to David City, in western Panama.

During these operations, I tasked organized the section (12 personnel) to the 81mm platoon to assist them in their movement and security, especially their ammunition during our initial air assault. This action was certainly non-doctrinal, but provided the mortar platoon needed assistance and ensured the ADA soldiers were members of the team. This action and its smooth execution was a direct result of our habitual training relationship.

TRAINING TIPS

1. Ensure non-dedicated MANPADS gunners are identified and trained.
2. Secure ADA assets by co-location.
3. Constantly track ADA status and locations.

COMBAT SERVICE SUPPORT

TRAINING IMPLICATIONS

1. The maneuver brigade staff must conduct integrated training with its CSS slice more often.
2. Exercise CSS functions to their full potential during external evaluations. Notionalize nothing, thoroughly evaluate related functions; TACCS, reporting, triage, evacuation, chemical, etc.
3. Place command emphasis on the soldiers load.
4. Develop wargaming skills among all staffs, especially tuning the CSS portion.
5. Develop standard resupply packages to assist in requesting and positioning key supplies.¹¹

JRTC PREPARATION

Role of Brigade

The brigade S-4 and his BSA organization plays an essential role in the combat service support to a light infantry battalion. He has all of the transportation and stockage capability of the brigade. He is capable of displacing, but does it less frequently than the battalion combat trains. A talented Brigade S-4 is always looking out and pushing supplies forward.

During our intensive training cycles, the brigade always deployed with 100% of its CSS slice. As with the battalion attachments, this facilitated SOP's and familiarity with the brigade task force. We never lacked for support in training, JRTC or JUST CAUSE.

NOTIONALIZE NOTHING

This is a major imperative in your training program. Casualty

evacuation, TACCS reporting and Class I and V resupply were exercised on every exercise. During our train-up, this training philosophy made the tough issues routine. Again, SOP's were developed and became second nature to the unit.

SOLDIERS LOAD

This issue requires a relentless and vicious approach by NCO and officer leaders. The light infantryman carries his load on his back. Average weights can run from a low of 55lbs to 90+lbs. The utilization of "butt packs" can provide flexibility to soldier loads; however, we were not authorized to use them. METT-T analysis was used to determine the mission essential equipment required for any one mission. The commander must assess the distances, terrain and time available and load his soldiers must carry to ensure that they are physically capable of executing the mission. The adage of "Travel light, Freeze at night," still applies.

CSS BACKBRIEFS

A technique developed within the brigade and utilized during our train-up and JRTC rotation was the CSS backbrief to the brigade commander. As the unit was in the prepare for combat/troop leading procedure phases, the battalion executive officer with the key battalion logistics staff, would wargame all aspects of CSS support to the mission. Once a detailed CSS plan was developed, it was briefed to the brigade commander. This

requirement may appear to be excessive micro-management, but in reality, it is a logical step. It ensures that the BSA assets, combat trains assets and fighters were working off the same plan. The CSS plan was in extreme detail; vehicles identified, leaders identified, resupply pre-packaged etc. Remember, a light infantry unit has little vehicle mobility.

This process worked extremely well and provided the battalion commander the assistance a brigade should/could provide. During our JRTC rotation, all CSS resupplies were normally conducted at night utilizing rotary aircraft.

Resupply Packages

Resupply packages were developed by brigade, included in the TACSOP, and exercised constantly. These designated packages included CLASS I, V, VIII, IX for a scout squad through a rifle company. This eliminated lengthy radio messages and systemized our CSS support. The front line units specified the package they wanted, time and location. The BSA then did the remaining work to include the request for air and coordinated the air mission brief.

Who's In Charge

Logistical support is too critical to a light infantry battalion to leave to inexperienced soldiers or untested systems. Our SOP was: HHC commander ran the battalion field trains within the BSA, the S-1/S-4 ran

the combat trains. The support platoon leader worked out of the BSA to all forward elements (essentially on the road). The HHC XO served as the security OIC for the combat trains. The HHC First Sergeant (in my case a top notch NCO who in previous external evaluations had commanded the battalion), was located at the Battalion TOC to serve as my "fireman".

CSS in Operation JUST CAUSE

Fortunately, the American soldier never goes short when deployed in a combat zone is an axiom that applies here. The battalion deployed with the standard five day supply of CSS essential items.

From D+5 with the logistic pipeline turned on, we did not want for anything. A few anecdotal experiences can serve as a few examples:

Class I: During operations in western Panama, all soldiers were provided a daily Class A ration meal by the local populace. These meals were given freely by the Panamanian people and certainly appreciated by the soldiers who have never been fans of MRE's.

Transportation: The battalion deployed with \$50,000 as operational funds. This fund was used throughout the brigade to contract labor and vehicles to move soldiers and captured equipment. Additionally, these funds were used to initiate civic action programs that began the clean up of the San Migulito Area in Panama City.

We train in peacetime to establish a CSS system that ensures support

within a bare bones area of operations. However, with funds, innovation and the support of local populace significant augmentation to the CSS structure can facilitate this BOS.

TRAINING TIPS

1. Don't notionalize your CSS systems in training exercises.
2. Rehearse and establish tested CSS SOP's.
3. Backbrief CSS plan.
4. Put quality leaders at critical CSS nodes.

COMMAND AND CONTROL

TRAINING IMPLICATIONS

1. The C2 system must be reliable, secure, fast and durable.
2. Troop leading procedures to include the estimate process and courses of action development must become the primary focus for mission analysis and planning. No short cuts.
3. Rehearsals and briefbacks can and will fix problems in plans and prepare units for execution. Focus on the objectives or the key activity to support the defense.
4. Train leaders at every opportunity and provide depth to your chain of command.¹²

JRTC PREPARATION

Command and Control System

The key to your C2 system success has a direct relationship to the soldiers who man the system. I firmly believe your staff must reflect your style, work ethic and intensity of your efforts. Additionally, in my case,

key officers had served in their positions in excess of 12 months. My executive officer had the least amount of time prior to our rotation (4 months); my S-2 had 22 months; and my S-3 had three years in the battalion and 12 months in his job. The S-1 and S-4 had approximately 12 months each. This team had undergone four collective training periods including two external evaluations. They were fully capable of performing their jobs and had done so under a number of stressful exercises. Stability and stressful training are essential keys to training your staff.

Our SOP also allowed us to man a TOC, TAC1, TAC2 and Alternate TOC (Combat Trains). The additional TAC2 was utilized for missions that required a second C2 node to facilitate communications and control. It worked extremely well during our "out of sector" mission at JRTC and also allowed the TOC to monitor the situation and reduce its electronic signature.

During our rotation and at the initiation of one of the Assistant S-3's, the TOC and alternate TOC (combat trains) were always dug in below ground level. I mention this not as a new idea; however, in training, the engineer equipment to do this is not always readily available. I was told at JRTC that we were the first unit to consistently dig in the C2 nodes. During the rotation, our TOC was never detected or hit with indirect fire.

Troop Leading

Under the guidance of the 7th ID(L) ADC(M) a standardized staff process was developed for brigades and battalions. It consisted of:

- Mission Analysis Prep (30)
- Brief Battalion Commander (15)
- Battalion Commanders Guidance (15)
- Analysis of CS's/Staff Estimate (90)
- Presentation to Battalion Commander (30)
- Prep Oral Order (90)
- Brief/Authenticate Order to Battalion Commander (30)
- [()=time available]

Mission Analysis Preparation expanded to include:

- Brigade Mission
- Brigade Commanders Intent
- Battalion Mission as Stated by Brigade
- Enemy Situation
 - Terrain Analysis (OCDCA Overlay)
 - Go/No Go Terrain
 - Enemy Sketch (Where, Size, Strength, Time to Influence, Likely Intentions)
- Weather
- Implied and Specified Missions
- Restated Mission
- Forces Available (Be Specific)¹³

This process became ingrained in the staff and facilitated the efforts of the staff for each mission.

Rehearsals

An imperative at all levels. Again, a technique employed by platoons and squads was to begin rehearsals of common collective tasks prior to receipt of the company operations order. Many collective tasks have a

commonality throughout every possible mission. This maximised the time available and facilitated the company commanders rehearsal of key tasks. Where possible, the engineers were used to construct rehearsal sites i.e. trenches, wire obstacles. The key to rehearsals is a detailed time schedule, effective junior leaders and the delegation of tasks.

Command Depth

As previously mentioned the unit was capable of forming two tactical command nodes to augment the main TOC. At the company level, executive officers were trained to assume command. Part of the training to assume command was done using the ARTBASS simulation game. Instead of using the first string, we used the second team during some ARTBASS exercises. Additionally, while involved with ARTBSS, multi-echelon training was conducted with assets to replicate the collective tasks. Resupply missions were conducted, medical evacuation executed, rotary wing aircraft were used to replicate AC130 gunships. Initially I was not an advocate of ARTBASS, but with some innovation you can use ARTBASS as a driver to develop the second team to function in your absence. This training paid inordinate dividends during JRTC when company commanders and staff were not available due to battle results.

Once during our training it became necessary for the HHC 1SGT to establish and run the alternate command post. If necessary during JRTC or

in combat I knew that I had superb depth and if required the senior NCO's could ably execute the C2 component of the battalion.

Command and Control in Operation JUST CAUSE

The best example I can give of the results of effective C2 training strategy occurred during our first mission in Panama on D+1. The unit executed a battalion night air assault into western Panama that required a refueling stop at a forward point. As the unit began to take off from the refuel point, the aircraft carrying the TAC CP lost an engine. The TAC CP arrived at the objective LZ two hours later. The senior company commander had taken command and the battalion had continued its mission with no degradation.

Throughout JUST CAUSE, I routinely used my TAC2 on missions and at times, had C2 nodes spread over 900 square miles. All of the previous training and our JRTC experience paid dividends during JUST CAUSE. C2 was the easier BOS to synchronize during our combat missions.

TRAINING TIPS

1. Ensure physically and mentally tough leaders.
2. Vigorously pursue "fall-out-one" drills.
3. Augment simulations to train other BOS's, be innovative.
4. Ensure multiple C2 nodes, practice them.

CONCLUSION

The purpose of this case study has been to identify the training challenges that confronted a unit in its preparation for a JRTC rotation and some of the processes and procedures that were employed to confront these challenges.

The unit returned from the rotation on November 10, 1989 and deployed as the 7th ID(L) DPF 1 on December 19, 1989, to Operation JUST CAUSE. It was evident that all of our procedures and SOP's stood the test of combat operations. From my perspective as the commander, I could not have asked for a better trained unit. Much of this success over time can be attributed to the training environment of the 7th ID(L), command group guidance, and the mentorship of my brigade commander, COL Linwood Burney.

This project was to record a single unit's training experiences for the use of future light infantry commanders. I ask you to put it in your "kit bag" of references and utilize as you deem necessary. I remind you that:

In no other profession are the penalties for employing untrained personnel so appalling or so irrevocable as in the military.¹⁴

ENDNOTES

1. U.S. Department of the Army, Field Manual 25-100, p. 1-1.
2. Howard W. Crawford Jr, LTC(P) and Robert M. Hensler, LTC(P), Joint Readiness Training Center (JRTC) Training Observations, pp. 16-17.
3. Crawford and Hensler, p. 31.
4. Headquarters, 2d Brigade, 7th ID(L), Cold Steel PT MOI.
5. Headquarters, 2d Brigade, 7th ID(L), 2nd Brigade Cold Steel Extract, pp. 3-5.
6. Headquarters, 2d Brigade, 7th ID(L), Battalion and Company Battle Books, p. 2-8.
7. Headquarters, 7th Infantry Division (Light), Operation Just Cause and Related Panama Deployments After Action Report--7th Infantry Division (Light), pp B1-B6.
8. Crawford and Hensler, p. 46.
9. Crawford and Hensler, p. 54.
10. Crawford and Hensler, pp. 62-63
11. Crawford and Hensler, pp. 79-80
12. Crawford and Hensler, pp. 94-96
13. Headquarters, 7th ID(L), Sold Thrust Staff Planning Process MOI.
14. U.S. Department of the Army, Field Manual 25-101, p. 4-1.

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