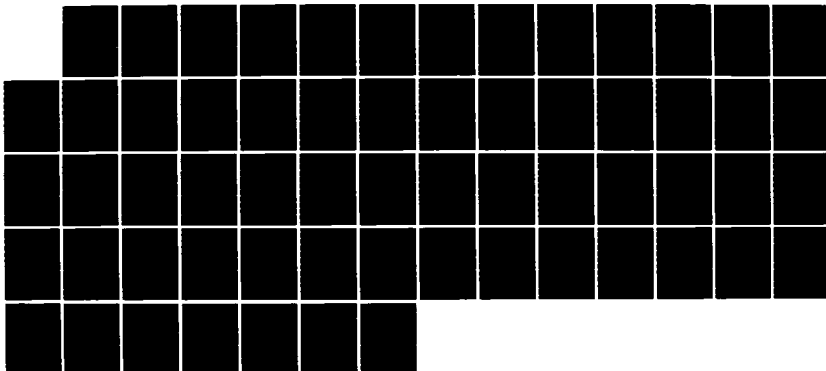
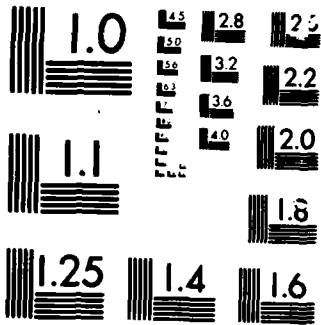


AD-A167 250

TACTICAL CONSIDERATIONS FOR THE DEFENSIVE EMPLOYMENT OF 1/1
LIGHT INFANTRY IN KOREA(U) ARMY COMMAND AND GENERAL
STAFF COLL FORT LEAVENWORTH KS E E THURMAN 82 DEC 85
F/G 15/7 NL

UNCLASSIFIED





MICROCOPY

CHART

2

AD-A167 250

Tactical Considerations for the Defensive
Employment of Light Infantry
in Korea

by

Major Edward E. Thurman
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

DTIC FILE COPY

DTIC
SELECTED
MAY 15 1986
S E D

Approved for public release;
distribution is unlimited.

2 December 1985

86-2190

APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION UNLIMITED.

86 5 15 050

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for Public Release; Distribution is Unlimited	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) <i>Scholar Advanced Military Studies</i>		7a. NAME OF MONITORING ORGANIZATION	
6a. NAME OF PERFORMING ORGANIZATION US Army Command and General Staff College	6b. OFFICE SYMBOL (if applicable) ATZL-SWV	7b. ADDRESS (City, State, and ZIP Code)	
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (if applicable)	10. SOURCE OF FUNDING NUMBERS	
8c. ADDRESS (City, State, and ZIP Code)		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Tactical Considerations for the Defensive Employment of Light Infantry in Korea			
12. PERSONAL AUTHOR(S) Thurman, Edward E., MAJ, US Army			
13a. TYPE OF REPORT Monograph	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 1985 December 02	15. PAGE COUNT 48
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	Infantry, Light Infantry, Korea	
	SUB-GROUP	Military Theory	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This study provides an analysis of the environment and enemy which the American infantry confronted during the Korean Conflict. These elements are analyzed with respect to their effect on a potential modern conflict involving light infantry against a light enemy in rugged terrain. Specific recommendations are provided on overcoming the dominant effects of the terrain on firepower, mobility, protection and leadership. Means to counter infiltration, penetration and "human wave" assaults are presented. Finally, a light infantry defensive model is provided incorporating defensive considerations for brigade and smaller units. Among the many conclusions drawn from this study are: light infantry remains a viable force in Korea against the current threat; the light infantry units do not possess the capability to perform a covering force mission, especially during periods of limited visibility and so techniques			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL Major Edward E. Thurman		22b. TELEPHONE (Include Area Code) 913-682-7596	22c. OFFICE SYMBOL ATZL-SWV

such as the combat outpost line should be reviewed for adaptability. Organizational conclusions include: the light infantry is organizationally fragile and must receive priority fill; weapons systems for this force must facilitate cross-training even at the expense of technology; weapon systems must be improved for the battle under 300 meters; units down to the lowest level should be organized with the assets with which they must fight. Tactical conclusions include: increase live fire training; provide the light infantry with reliable ground sensors to assist in countering infiltration; give the light infantry scout a motorcycle for increased mobility; every light infantry soldier must be capable of performing as an infantryman; tactical reserves must be far enough forward and numerous to provide a responsive counterstroke in the event of enemy assault.

The study concludes that the lessons learned during the Korean Conflict remain valid today and should be incorporated into the doctrinal, organizational and tactical structuring of the light infantry divisions.

Tactical Considerations for the Defensive
Employment of Light Infantry
in Korea

by

Major Edward E. Thurman
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

Approved for public release;
distribution is unlimited.

2 December 1985

APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION UNLIMITED.

86-2190

Accession for	
NTIS	X
DDIC	
Uncl.	
Just.	
By	
Date	
APR 1986	
Dist	
A-1	

School of Advanced Military Studies
Monograph Approval

Name of Student: Major Edward E. Thurman

Title of Monograph: Tactical Considerations for the Defensive
Employment of Light Infantry in Korea

Approved by:

Thomas G. Ferguson Seminar Leader
(LTC Thomas G. Ferguson, Ph. D.)

Richard Hart Sinnreich Director, School of
(COL Richard Hart Sinnreich, MA) Advanced Military Studies

Philip J. Brookes Director, Graduate Degree
(Philip J. Brookes, Ph. D.) Programs

Accepted this 31st day of December 1985.

ABSTRACT

TACTICAL CONSIDERATIONS FOR THE DEFENSIVE EMPLOYMENT OF LIGHT INFANTRY IN KOREA, by Major Edward E. Thurman, USA, 48 pages.

This study provides an analysis of the environment and enemy which the American infantry confronted during the Korean Conflict. These elements are analyzed with respect to their effect on a potential modern conflict involving light infantry against a light enemy in rugged terrain. Specific recommendations are provided on overcoming the dominant effects of the terrain on firepower, mobility, protection and "human wave" assaults are presented. Finally, a light infantry defensive model is provided incorporating defensive considerations for brigade and smaller units.

Among the many conclusions drawn from this study are: light infantry remains a viable force in Korea against the current threat; the light infantry units do not possess the capability to perform a covering force mission, especially during periods of limited visibility and so techniques such as the combat outpost line should be reviewed for adaptability. Organizational conclusions include: the light infantry is organizationally fragile and must receive priority fill; weapon systems for this force must facilitate cross-training even at the expense of technology; weapon systems must be improved for the battle under 300 meters; units down to the lowest level should be organized with the assets with which they must fight. Tactical conclusions include: increase live fire training; provide the light infantry with reliable ground sensors to assist in countering infiltration; give the light infantry scout a motorcycle for increased mobility; every light infantry soldier must be capable of performing as an infantryman; tactical reserves must be far enough forward and numerous to provide a responsive counterstroke in the event of enemy assault.

The study concludes that the lessons learned during the Korean Conflict remain valid today and should be incorporated into the doctrinal, organizational and tactical structuring of the light infantry divisions.

TABLE OF CONTENTS

	<u>Page</u>
Section I.	Introduction. 1
II.	Historical Perspective. 3
	Overview 3
	Engagement at Chinaman's Hat 4
	Observations 8
III.	The Environment 9
	General. 9
	Effect on Firepower. 10
	Effect on Mobility 11
	Effect on Protection 12
	Effect on Leadership 13
IV.	The Enemy 13
	General. 13
	Combined Arms. 14
	Tactical Doctrine Overview 14
	Envelopment. 15
	Penetration. 16
	Norms. 16
	Surprise and Deception 17
	Summary. 17
V.	The Defense 18
	General. 18
	Overcoming Terrain Effects 18
	on Firepower
	Overcoming Terrain Effects 21
	on Mobility
	Overcoming Terrain Effects 22
	on Protection
	Overcoming Terrain Effects 23
	on Leadership
	Overcoming Enemy Infiltration. 23
	Overcoming Enemy Penetration 24
	Overcoming Enemy Echelons en Mass. 24
	Light Defense Overview 26
	The Screening Force. 26
	The Squad. 28
	The Platoon. 29
	The Company. 31
	The Battalion. 33
	The Brigade. 34
VI.	Conclusions 36
	General. 36
	Doctrinal. 37

Organizational37
Tactical38

APPENDIX A. Order of BattleA-1
APPENDIX B. Battlefield Maps (Chinaman's Hat)B-1
APPENDIX C. Brigade Indirect Fire Weapons Matrix. . . .C-1
Endnotes.40
Bibliography.43

SECTION I

INTRODUCTION

"Light Infantry Divisions will add a new dimension to the strategic mobility of Army Forces. From bases in United States, these divisions will be capable of rapidly reinforcing forward deployed U.S. Forces in NATO or the Far East."(1)

The Chief of Staff of the Army directed the creation of light infantry divisions within the U.S. Army force structure primarily to respond to threats in the low intensity end of the conflict spectrum. The quotation above from his 1984 White Paper, however, clearly indicates that these forces are to be used in other theaters, such as Korea, as timely reinforcement of forward deployed forces. A question thus arises concerning the utility of a light division capable of rapid deployment to Korea. How precisely might US Army light infantry units be employed in the defense in Korea?

The Korean War resulted in the initial stationing of US combat forces in Korea. The strategic position of Korea in relation to China, the USSR and Japan has resulted in the retention of these forces in Korea and the acceptance of a regional responsibility by the United States. Despite the increasing strategic importance of Korea, there has been a reduction in overall US ground force strength since the Korean War. Additionally, plans are in draft to further reduce this strength in favor of additional combat support assets.

Strategic defense plans in the Republic of Korea (ROK) call for a forward defense similar to plans existing prior to the Korean War. This is driven primarily by the northern location of the capital at Seoul. This factor, combined with the lack of depth afforded by the

relatively small size of Korea, makes a rapid reinforcement capability imperative. To illustrate the effect this had in the Korean War, one only has to note that when hostilities began on 25 June 1950, the expected US response was described as a "police action." BG William L. Roberts, commander of the Korean Military Advisory Group in 1950, stated that "The Koreans have the best damned army outside the US." (2) By 8 July 1950 the estimate for US participation was increased to four divisions. (3) This revision was made in the face of the near collapse of the ROK and US Armies facing the North Korean People's Army (NKPA).

Selected military authors continue to conclude that additional US forces would not be required in the event of an outbreak of hostilities on the Korean peninsula. (4) This assessment is rationalized by improvements made in the ROK Army since the war. Unfortunately, this estimate ignores the simultaneous improvement of the NKPA and the dominant effect of terrain on any conflict on the peninsula. A comparison of unclassified orders of battle between the two countries is provided at appendix A. It is clear that the numerical superiority of the North Korean force is sufficient cause for concern.

Regardless of the potential for employment of light forces, specifically against the NKPA, an examination of light infantry in rugged terrain against a mid-intensity threat is appropriate. The Korean War chronicles a major employment of US light forces in such a mid-intensity conflict, and the lessons learned should not be disregarded. As Aristotle pointed out, "Almost all things have been found out, but some have been forgotten." (5)

The problem addressed by this paper, therefore, is to determine how a light infantry brigade might best be employed in the conduct of the defense in Korea. To accomplish this, a historical perspective of

the Korean War will be used to gain insight into the nature of the infantry defense during that conflict. Particular attention will be paid to the impact that the environment and the enemy had on the nature of battle at the tactical level. Current enemy organizational structure and tactics are next summarized to assist in placing the light infantry defender's problem in the proper context.

The analysis of the light infantry brigade in the defense begins with an examination of various means available to light infantry units to overcome the degrading effects of the environment on firepower, mobility, protection and leadership. Secondly, considerations for countering enemy offensive tactical operations are discussed. To this point in the analysis, solutions are offered independent of the size of the light infantry unit. To place the problem in a brigade context, successive elements from squad through brigade are discussed in order to "build" the defense from the ground up, ensuring that the focus and responsibilities of each echelon are delineated. Finally, conclusions concerning doctrine, organization and tactics are drawn to reinforce, clarify or suggest improvements where shortcomings exist. This methodology is followed to investigate and support the hypothesis that a light infantry brigade conducting a defense in Korea can succeed if and only if innovative and mobile tactical techniques are employed.

SECTION II

HISTORICAL PERSPECTIVE

Overview. The Korean War officially began at 0400 hours, Sunday, 25 June 1950 when the NKPA crashed across the Demilitarized Zone (DMZ) in a multi-pronged offensive which by 4 August 1950 had the Republic of Korea (ROK) and US Army forces bottled up in the Pusan perimeter and

apparently near defeat. This situation was reversed by the Inchon landing on 15 September 1950, which in a strategic and operational masterpiece, cut the North Korean lines of communication and resulted in the breakout from Fusan on 18 September 1950 and the subsequent retreat of the NKPA back across the DMZ by 17 October 1950. Pyongyang, the North Korean capital, was taken on 19 October 1950. The X Corps continued to advance to the Yalu River during October-November 1950 and just as United Nations (UN) victory appeared to be guaranteed, the Chinese Communist Forces (CCF) entered the war by crossing the Yalu River on 14 October 1950. The CCF continued to increase its strength until 25 November 1950 when it initiated a counteroffensive northeast of Pyongyang. This again turned the tide of battle, pushing the United Nations' forces back to the south. The X Corps actually withdrew to the south and east and had to be evacuated from Hungnam in December 1950. Seoul was again captured by the North Koreans on 4 January 1951. The CCF offensive continued to the south and finally culminated near Chipyeong-Ni on 14 February 1951. The UN then conducted a counteroffensive and Seoul was once again under South Korean control on 18 March 1951. UN forces moved as far north as the 38th parallel by 13 June 1951, prior to the conclusion of the first year of the war. The situation stabilized at this point and the war continued generally along the 38th parallel until 27 June 1953 when a cease fire was signed at Panmunjom. Firing ceased, yet the war has never officially ended.

In the many battles fought during the Korean War, the same lessons were learned again and again. The enemy and the terrain dominated tactics. One operation in particular, however, illustrates many of the lessons learned and will be discussed here.

Engagement at Chinaman's Hat. On 25 November 1950, the Eighth (US) Army seized Pyongyang and was continuing its northward offensive to the Yalu River with II ROK Corps in the west and X (US) Corps in the east. Eighth Army did not at this time realize the extent of CCF support to North Korea and anticipated little trouble in consolidating on the Yalu. The CCF had, however, crossed the Yalu and moved along multiple infiltration axes to two concentration areas. The concentration area in the west was centered on Huichon in the II ROK Corps sector directly in the path of the 2d Infantry Division which was assigned to the corps. The 1st Cavalry Division, also assigned to II ROK Corps, was in reserve and following the 2d Infantry Division in the attack as shown in figure B-1. The 2d Infantry Division was attacking with the 9th Infantry Regiment on the left and the 38th Infantry Regiment on the right. The 23rd Infantry Regiment followed the 9th Infantry Regiment in sector.

On 25 November 1950, the 2d Infantry Division was disposed in night defensive positions with the 9th Infantry Regiment generally north of the Chongchon River as shown in figure B-2. The 38th Infantry Regiment was in the same posture on its right. Flat, open ground permitting the artillery to emplace was at a premium and as a result, the 38th Infantry, which would be moving out of artillery supporting range, attached an artillery battalion and controlled it in sector. The remaining divisional artillery was to be placed in a valley of some 500 by 4500 yards at Kujang-dong. This emplacement would support operations on 25 November, but could not range anticipated operations on 26 November. To be capable of supporting the next day's operation and to make room in the already overcrowded position at Kujang-dong, two artillery battalions were positioned forward on the Chongchon

River directly behind the 9th Infantry Regiment. The 503rd FA was on the west and the 61st FA, from the 1st Cavalry Division, was on the east. The 23rd Infantry Regiment was then brought forward and co-located with the artillery on the river in the area marked "entrenched camp" at figure B-2.

The defensive position selected by the 23rd Infantry was on the river adjacent to Hill 329 which was called "Chinaman's Hat" due to its peculiar shape. The lead battalion of the regiment arrived at 1600 hours and occupied positions prepared by units which had previously defended there. The infantry defensive position incorporated the 503rd FA, but the 61st FA was positioned slightly to the north along the river. At this point the actions of this battalion, the 1st Battalion, 23rd Infantry, will be examined in greater detail.

The 1st Battalion, 23rd Infantry was defending as shown in figure B-3. At 1820 hours, the battalion commander, LTC C.E. Hutchins Jr., called the commander of Able Company, CPT Melvin R. Stai, to determine if Stai had heard firing in his sector. Stai had not heard any firing and so he decided to move to his front lines some 300 yards away to investigate. Upon arriving, he found that his 1st Platoon had been engaged for some time and was nearly out of ammunition. The Chinese 94th Regiment had infiltrated the American 9th Infantry Regiment and had moved across the Chongchon River in seven columns of 100-200 men each. This movement was totally undetected by the defenders in either the 9th or the 23rd Infantry Regiments. The Chinese had used dusk, stealth and mass to achieve total surprise. Able Company was receiving the brunt of this attack.

Able Company's 1st Platoon was first to detect the enemy. A

machinegun augmented by a few riflemen opened fire killing perhaps twenty Chinese soldiers on the river bank. The Chinese, though for the most part naked from the waist down, quickly formed a skirmish line and attacked at a fast run. The 1st Platoon was overwhelmed by the attack and the majority fled toward the rear of the defensive position. A few men continued to hold the position as best they could. The platoon had met an "echelon en masse" at extremely close range and simply did not have the firepower with which to counter it. The company commander detected the fleeing 1st Platoon and ordered the 3rd Platoon to counterattack to restore the line. The cooks and others in the kitchen area established a second defensive line in depth. As the 3rd Platoon conducted the counterattack, it received enfilade fire from a well placed enemy machinegun on the southern edge of the defensive position. To make matters worse, the northernmost CCF columns had entered the 61st FA positions and caused a complete rout, driving several of the artillerymen to the south through the Baker Company area. The enemy now controlled all of the 61st FA guns. As the fleeing artillerymen passed through Baker's positions, their shouts caused some panic and fleeing in the Baker Company ranks. LTC Hutchins later remarked of this, "We learned firsthand that panic is contagious." (6)

Despite these distractions, the 3rd Platoon, continued the attack. Firepower within the platoon was lacking in that about a third of the weapons had frozen shut. The 3rd Platoon did manage to retake the 1st Platoon positions and found itself receiving heavy enfilade fire from the southern enemy machinegun and facing additional Chinese troops crossing the river. The 2d Platoon and Baker Company to the north also came under heavy fire as the CCF passed through the 61st FA positions and attempted to envelop the position. The 1st Battalion commander

called for tank reinforcement and at about 0200, after nearly eight hours of fighting, tanks from Baker Company, 72d Tank Regiment arrived and moved into line with Able Company. The regimental tank company likewise moved forward to support Baker Company, 23rd Infantry Regiment. Despite enemy attempts to destroy them with demolition charges, the tanks held and were decisive in disintegrating the enemy attack.

In the end, the CCF attack failed, although they retained possession of Chinaman's Hat. The 2d Infantry Division was eventually forced to withdraw under further CCF pressure. During the assault, the Chinese had suffered 410 dead and 111 prisoners. The US forces suffered fewer than 200 killed and wounded. Captured CCF soldiers indicated that the mission of the 94th Regiment was to infiltrate the 2d Infantry Division lines to destroy the artillery positioned along the Chongchon River. No further mission had been assigned.

Observations. Several significant aspects of this event deserve mention in that they are characteristic of many such engagements in Korea. First of all, the terrain had a major impact on this operation. Specifically, the artillery was forced to position in an undesirable location. Additionally, the enemy was able to enhance stealth in the attack. Finally, the Able Company commander failed to realize that he was engaged, despite being only 300 meters away. These were all caused by terrain effects. Second, the enemy successfully used infiltration techniques to bypass the 9th Infantry Regiment in the front line in order to gain entry into the 2d Division rear area. This infiltration was conducted during the hours of limited visibility to enhance the probability of success. Third, the objective of the 94th Regiment

(CCF) was the US artillery positioned to support the front line regiments. Of note is the fact that the 9th and 38th Infantry Regiments were also attacked on the same night by other forces. The 94th Regiment assault thus removed much of the available artillery that might have been used to support the forward US regiments. Fourth, Able Company retained its position largely due to a strong (platoon size) reserve which was positioned for timely counterattack. Fifth, the cooks in the kitchen area realized that they too were soldiers and established a second defensive belt to assist in the overall defense. Finally, the decisive blow dealt to the CCF came from the attached tanks. The tanks were able to deal with the enemy mass at close range when protected by the infantry. The combined arms team prevailed on this battlefield. (7)

SECTION III

THE ENVIRONMENT

General. The Korean peninsula extends approximately 600 miles southward from the Chinese mainland toward Japan. It is divided generally along the 38th parallel into the two Koreas. These two countries are separated by a 4000-meter-wide Demilitarized Zone (DMZ) which runs for 241 kilometers from the Yellow Sea on the west to the Sea of Japan on the east.

Topographically, the land of South Korea was very well described by early Europeans as "a sea in a heavy gale" due to the large number of successive mountain ranges that cover the peninsula. South Korea is approximately 70-80 percent uplands and mountains. The remaining 30 percent consists of lowlands and plains, which are predominantly on the west coast and along the major rivers. The Taebaek mountain range,

which runs from north to south along the eastern coast, dominates the country. Practically all of the remaining mountain ranges in Korea run to the southwest off of the Taebaek. This determines the drainage basins and direction of flow of all sizeable rivers—generally to the southwest. (8)

Firepower. The military significance of the terrain on firepower is clear. The mountainous nature of the terrain makes it a "country of defilade." When the heights of major peaks are taken, the occupying force will usually find the valley floor out of effective small arms range. If the lower points on the hill are occupied, the draws and fingers combine to create more dead space than terrain where grazing fire can be obtained. Extended grazing fire can normally be achieved only in the valley floors where it does little good. Defilade further reduces line of sight intervisibility to the extent that few weapons can be used at maximum range. During the Korean War, this lack of line of sight often allowed the skilled enemy soldier to approach to within 10 or 15 meters of a position before being detected. The surprise thus obtained had an understandable shock effect on the defender.

High angle of fire systems are an imperative in terrain such as is found in Korea. Artillery, mortars, grenade launchers and grenades were among the most effective weapon systems used in the Korean War. Artillery, however, has a unique problem in Korea; it is often difficult to find sufficient flat ground in which to position it. S.L.A. Marshall described this well in his book The River and the Gauntlet.

"This was a chronic ailment in all Korean operations...the valley was almost barren of flat spaces given over to cultivation. The hills virtually overlapped one another. The dry stream beds were uneven. The sharpness of the ridges limited all horizon. In such country mortars are indispensable. But it was never intended for artillery."(9)

Mobility. The terrain also has an adverse effect on mobility. The major roads run generally north to south along the few valley floors available. As these roads cross the north-south ridges, or as fingers from the higher hills extend east and west towards these roads, choke points are formed through which not more than a single vehicle can pass at a time. These occur regularly every 2-3 kilometers. The U.S. Army exposed a vulnerability in developing a dependence on roads. Technology led the Army to motorization and thus to a dependence on vehicles, which caused the roads to be critical. Such a force is ripe for ambush. T.R. Fehrenbach also highlighted this vulnerability in This Kind of War."

"But American troops, physically unhardened for footmarches were roadbound. They defended on roads, attacked on roads, retreated on roads. If their vehicles couldn't go, they did not go either... In American society the best weapon against a convertible may be another convertible, but in Korea it is apt to be a pair of legs."(10)

Our dependence on roads is still strong and the number of paved roads has not increased sufficiently to reduce the impact of this problem. An associated problem is cross-country mobility. Vehicular cross-country movement is almost impossible except in the few available valleys. The hills and ridges are too steep to climb and the preponderance of the flat ground is transformed into rice paddies at

the first thaw. Movement, except in winter, is very much restricted to the roads.

Protection. The impact of terrain on protection deserves mention as it has both positive and negative aspects. The rolling terrain, as previously mentioned, creates defilade everywhere and as such provides protection against most weapon systems to varying degrees. Direct fire weapons have reduced effective ranges and indirect fire systems have to fire high angle to engage targets on the back sides of hills and are thus also reduced in effectiveness. The decreased intervisibility also hinders the capability of forward observers to call for and adjust fires. Limited flat ground and an inability to move cross country combine to make Intelligence Preparation of the Battlefield (IPB) much simpler for both sides. Artillery fire into almost any flat ground of substantial size in the enemy's rear will disrupt or destroy the soft targets positioned there.

The backbone of Korea is granite although considerable deposits of sandstone and slate are also found. The impact is that entrenchments are difficult to dig in the uplands and mountains. Further, Korea has very few trees of significant size. Therefore, materials for the construction of overhead cover do not exist. Protection from accurate airburst artillery or mortar fire is difficult to achieve without sufficient time to burrow within the foxhole.

Communications are also affected by the terrain in that most means available for tactical communications are line of sight, which is exceedingly difficult to maintain in Korea. When communications are obtained, particularly on low power, it is even more difficult for an enemy, normally situated at a greater distance than the intended receiver, to intercept the transmission from a ground based platform.

The impact is that "terrain shielding" can be used to protect communications to a degree.

A final protection effect of the Korean terrain is that it is quite easy to integrate obstacles and minefields with the terrain, which for the most part serves as a major obstacle to movement. This is particularly true in constricted areas where it is virtually impossible to bypass a disabled vehicle in the chokepoint.

Leadership. The effect of the environment on leadership is primarily manifested through the fragmentation of command and control. The terrain denies visual, and to a degree audio, linkage between a commander and his subordinate units. As an example, during the defense of Chinaman's Hat in 1950 the company commander of Able Company, 23rd Infantry Regiment could not hear the rifle fire or bugles from the attacking force even though he was only 300 meters away. This could have had a disastrous impact on his defense. A further effect of the environment which fragments command and control is the severe degradation that the terrain has on line of sight communications. Tactical radios suffer drastically reduced effective ranges. Wire normally has to be laid along roads and is easily cut. Face to face coordination is difficult due to transit times by ground means.

SECTION IV

THE ENEMY

General. The military doctrine of the NKPA exhibits both Soviet and Chinese influence. In general, the focus of a military operation is on the destruction of the enemy's strength rather than the seizure of a specific piece of terrain. A second tenet of the doctrine is

conservation of one's own force. A third is the coordination of conventional and unconventional operations. Through the use of unconventional forces in the enemy rear, a large combat multiplier is applied to enhance conventional force effectiveness. A final example of Soviet and Chinese influence is the belief that decisive results can only be achieved through the offense. The Korean imprint on this tactical doctrine reinforces the Soviet and Chinese influence and was derived primarily from the Korean War and the anti-Japanese partisan operations of the 1930s and 1940s. The NKPA has a firm belief in the value of unconventional forces.(11) To this end, the North Koreans have amassed an unconventional force of approximately 100,000 men.(12)

Combined Arms. The principal combat arm of the NKPA is the infantry, which is supported by armor and artillery forming a combined arms team. Principally because of terrain, the infantry is primarily dismounted. Armor is found at all echelons within the army. As previously stated, it primarily supports infantry operations. Examples of operations in which major armored formations could be expected include a DMZ breakthrough or in the limited Korean terrain favoring its use. Artillery, typical of the Soviet norm, is used to mass fire on enemy positions, strong points and obstacles. Rolling barrages are typical in support of an attack. The doctrine does not, however, dictate preparatory fires as a matter of course. The element of surprise is held in such high regard that these fires may be withheld in order to achieve that surprise. Additionally, artillery may be used in the direct fire mode against targets of opportunity such as observation posts, antiarmor weapon system emplacements, ground surveillance radars and bunkers. Artillery can also be placed in

direct support of combat forces in a manner similar to Soviet doctrine.

Tactical Doctrine Overview. North Korean tactical offensive doctrine is derived from the infantry-centered structure of the NPKA. Firepower and maneuver best describe this doctrine with regimental operations being the norm and the regiment forming the basic maneuver element. The regiment, which is normally organized in two echelons, uses one of four formations. The first has three battalions forward in a single echelon. The second formation has two battalions forward and one back. A third, to be used in the attack on a narrow front against a prepared position, is to have three battalions in column. A final option available to the regimental commander is to have one battalion forward and two back. This is normally used when a double envelopment of the enemy force is intended.(13)

Envelopment. The envelopment is one of two major forms of maneuver employed successfully in the opening stages of the Korean War and as a result is preferred. The North Koreans employ two different types of envelopment. The single envelopment uses a fixing force and a single main attack in the enemy rear. The double envelopment differs from the single in that two main attacks are directed against the enemy rear. The envelopment is normally conducted during hours of limited visibility to reduce enemy observation and thus vulnerability to artillery and air. Further, rugged terrain is favored in order to avoid enemy armor as well as effective direct and indirect fire support. The aim of the envelopment during the Korean War was to establish a roadblock in the enemy rear(14). These roadblocks were combined with ambushes of varying sizes up to division with the intent of destroying the retreating enemy in a piecemeal manner. S.L.A Marshall described how effective this tactic was in The River and the

Gauntlet where a Chinese division ambushed the 2d Infantry Division resulting in thousands of casualties in less than a twenty-four hour period.(15) Enveloping regiments typically attack on a sector approximately 1500-4000 meters wide and twice as deep. Battalions attack on a 700-2000 meter axis; companies on 500-700 meters; platoons on 100-200 meters and squads on 50-70 meters.(16) These frontages would be compressed against well prepared positions and less compressed against a retreating enemy.(17)

Penetration. The penetration is a form of maneuver generally used to exploit over-extended enemy lines. The objective of a penetration is often to drive through the defense to destroy enemy reserves. This form of maneuver was attempted repeatedly during the Korean War, particularly in the defense of the Fusan perimeter during which ROK infantry divisions were required to defend on fronts of from 12-20 miles wide. US divisions during the same defense were required to defend on even wider fronts. Typical of North Korean doctrine, infiltration tactics were used to facilitate the attempted penetrations.(18)

Norms. Influenced by Soviet doctrine, the NKPA attempts to adhere to norms in the conduct of tactical operations. In the offensive an infantry force ratio of 4-6:1 is desired. The force ratio norm for armor is 3-5:1, while the artillery norm is estimated to be 6-8:1. Higher ratios are desired against prepared positions.(19) A fire support density of 80-100 tubes per kilometer of front for the main attack is further prescribed. Secondary attack requirements are for 40-60 tubes per kilometer. Mortars and artillery are used in this calculation.(20) The North Korean doctrine calls for the use of a

combination of conventional and unconventional forces to serve as combat multipliers to achieve the desired ratios.

Surprise and Deception. A final aspect of North Korean tactical doctrine which requires mention is the strong emphasis placed on surprise and deception. During the Korean War, information was obtained from the local Koreans as well as military sources to enhance surprise. Both voluntary and involuntary means were used. One deception measure used by the NKPA was in clothing soldiers in foreign uniforms. This was particularly effective against non-ROK units due to the racial, cultural and linguistic similarities between the North and the South Korean peoples. The willingness of the North Korean government to continue to employ this tactic was demonstrated in 1968 when a platoon of North Korean soldiers attempted an assault on the South Korean capital dressed in South Korean police uniforms. Slight variations in North and South Korean accent led to the detection and failure of that operation. Another tactic employed was the use of English by the NKPA to assist in closing in on US positions. This was employed with some success despite the limited exposure the North Koreans had to English at the time. It is safe to assume that this capability has been enhanced, given North Korean expectation of US involvement in any future conflict. A final tactic used to surprise and deceive the enemy was to infiltrate "plain clothes" platoons through enemy lines dressed as workers and farmers. These units would move in small groups or individually with the refugee traffic, reunite as required and conduct operations in the enemy rear. (21)

Summary. The NKPA is infantry-centered with a significant tank and artillery capability. Mass and firepower typify operations, although the term "human wave", used to describe the mass formations employed

during the Korean War, is inaccurate. In fact, a lack of communications means at that time necessitated the formations in order to provide adequate control. Dispersion today would be somewhat greater although "echelons en masse" would still characterize a North Korean assault. (22) Infiltration and unconventional warfare will be an integral part of any offensive operation. These are proven techniques which remain valid. The indirect approach is further emphasized in the envelopment, which serves as the major form of offensive maneuver. The next section will deal with means to overcome the terrain and enemy.

SECTION V

THE DEFENSE

"The object of battle is the destruction or defeat of the enemy." (23)-Clausewitz

General. Battle is directed to the disintegration of the opposing force. In Korea, the environment continually acts as a barrier to cohesion. The defense must, therefore, focus on ways to overcome disintegration at the same time that maximum combat power is applied against the enemy. A generic look at the terrain and enemy has provided some insight into the military significance of each. It remains, however, to examine the specific impact of each on a defending US Army unit and to offer some possible solutions in countering these adverse effects. (24)

Overcoming Terrain Effects on Firepower. The problem for the attacker is twofold. First of all he must use defilade terrain to minimize the direct fire weapons effects and thus greatly reduce vulnerability until the last few yards. The NKPA and CCF used the

rugged terrain and night operations to accomplish this.

Once the attacker has minimized his vulnerability to direct fire weapons, he must do so with indirect fire weapons. Figure C-1 exhibits the indirect fire capability of the light infantry brigade and serves as a basis for examining the problem. The figure has breakpoints for the effective ranges along the left hand margin. The controlling element is listed along the bottom. The Claymore is listed twice to indicate that although it is primarily a squad weapon, the platoon leader, more so than the squad leader, controls this weapon when it is placed out with observation posts or in mechanical ambushes. The vertical line marked (a) indicates an initial communications vulnerability point. The company, spread over the rugged terrain, experienced this communications failure on numerous occasions during the Korean War. Line (b) indicates an even more tenuous communications lash-up due to greater communications ranges over the same terrain. The interesting part of the matrix, however, is in its display of light infantry force vulnerability. The more effective weapons are those listed to the right of the table. The denial of weapon systems to the right of line (c), i.e. the brigade systems, was accomplished by emphasizing night and low visibility operations. This is still an effective approach today in that fielded air and attack helicopter systems do not have a greatly improved night capability, nor has our tactical illumination increased. In fact, the company does not possess the organic illumination capability with the 60mm mortar that it had with the 81mm. The enemy further negated much of the effectiveness of the systems to the right of line (c) through infiltration attacks which targeted mortars and artillery. Counterbattery fires also reduced indirect fire effectiveness, as did

the reduced ability of observers to acquire and adjust on targets in limited visibility.

The enemy also sought to reduce vulnerability by pushing acquisition range in the direction of arrow (e) using infiltration techniques. Invariably, the first indication of an attack came within 350 meters and often within 10-15 meters of a position. Mutual support between positions was difficult or nonexistent due to extended frontages and, as a result, squads and platoons were left to fend off much larger formations with their organic weapons. Massed formations previously unengaged by weapon systems at higher levels had to be engaged at close range using only squad and platoon weapons incapable of engaging great numbers of targets. This resulted in overrun positions or, at best, severe casualties and the birth of the term "human wave assault."

Three solutions to this problem are suggested. First, push the engaging weapon systems arrow in the opposite direction of (d), i.e. ensure more systems get into the fight. The principal means of doing this includes better communications equipment capable of operating in rugged terrain and coping with the associated lack of line of sight. The platoon, company and battalion require this communications equipment the most for indirect fire and reserve coordination. Better illumination capability within the company and battalion will enhance close air and attack helicopter effectiveness at night until such time as adequate night vision equipment is available for these systems. The second solution is to push the acquisition range in the opposite direction of arrow (e), i.e. detect the enemy at greater range so that he can be engaged, destroyed, disrupted or canalized to an area

selected by the defender. Technologically, this can be done with better sensing systems. Additionally, the battalion and brigade must be provided information from higher echelons as soon as it becomes available. Troop movement information is extremely perishable, especially for targeting purposes, and must be relayed at the earliest moment; analysis can follow. Companies, platoons and squads require portable sensors which can be remotely emplaced. Tactically, aggressive patrolling as well as finding and maintaining contact with the enemy will go a long way toward alleviating this problem. One technique used in the Korean War, the combat outpost, will be discussed.

Enemy firepower can be overcome principally through the proper use of terrain. Artillery is best countered through counterbattery fires. Related to this is the use of preemptive fires directed against artillery. This is possible in that artillery systems are, for the most part, restricted to roads, require an open area to establish a position and have predictable ranges. The examination of these factors on a map sheet within a given sector will result in very few possible positions. These should be targeted. Placement of artillery units and critical assets in defilade or in rear slope positions, where practicable, is also to be pursued.

Overcoming Terrain Effects on Mobility. The American Army habitually relies on mechanical means to support it. Troop movement, resupply and major weapon systems are all very restricted where rugged terrain all but denies cross-country movement. This problem is partially resolved through the use of the helicopter. A further tactical solution involves the use of specialized vehicles such as the Korean tractor which has a small trailer with power supplied to the

wheels. Companies positioned on ridges could make good use of this vehicle in ammunition resupply and to a limited extent casualty evacuation. The more important solution, however, is to change the mind set. A force which focuses on a road without regard to the surrounding terrain will be enveloped. Once enveloped, another vulnerability is exposed. The NKPA and CCF which enveloped and infiltrated US units established roadblocks knowing that the retreating American forces would blindly withdraw along the roads, vulnerable to ambush. Movements which do require roads must have helicopters, infantry or both screening the ridges while the tanks, when available, lead softer vehicles on the roads between the ridges.

Cross-country movement in Korea follows natural lines of drift. Creeks, ridges and roads were principally used by both sides during the Korean Conflict. The same avenues of approach would be used today because the terrain dictates it for any extended movement. To move in another manner causes great expenditure of energy needed for the engagement. The solution, when defending, is to pay particular attention to these avenues in constructing the defense. One solution for necessary movement is to move on the side of a ridge down from the crest avoiding the valley or creek at the bottom. By moving parallel to the ridge in this manner, natural lines of drift are avoided and exhausting cross-compartment movement is minimized.

Overcoming Terrain Effects on Protection. Entrenchment is difficult in Korea, as previously mentioned, due to the granite deposits and a lack of materials with which to build overhead cover. Units must, none the less, dig in immediately upon objective seizure or be decimated by airburst artillery. Possible solutions include the

use of explosives to expedite foxhole construction. An approach might be an individually issued "foxhole construction charge." Another solution would be the use of prefabricated overhead cover which, though not inherently fragment proof, would provide a foundation for reinforcement by dirt or sandbags. (25)

Overcoming Terrain Effects on Leadership. Command and control is fragmented by the rugged Korean terrain. The decision by the NKPA to attack at night caused further fragmentation. Although improved tactical communications systems will assist in reducing this effect, the real essence of the problem is tactical. The result of fragmentation in Korea was that squads, platoons and companies fought isolated battles. The principal tactical solution, therefore, is to push the available combat power down to the level of the unit doing the fighting. To the extent possible, squads and platoons must be well balanced and self-contained in both direct and indirect fire weapon systems. As seen in figure C-1, this is not the case and so a serious shortfall occurs inside 350 meters.

Overcoming Enemy Infiltration. An appropriate counter to enemy infiltration and envelopment tactics is all around security at all levels. The perimeter defense is the most effective approach, although rear and flank security in defensive positions is the minimal acceptable precaution. (26) Units should always expect an attempt by the enemy to envelop their position. The battle is fought not only by the infantry, but by all elements in the unit. (27) In particular, artillery and mortar units were and will continue to be primary targets. These elements must provide their own defense. The artillery must instill in their units two longstanding artillery traditions: "continue the mission" and "defend the guns." (28) Rear area units must

likewise be prepared to fight their own battle against a rear area threat. Headquarters and trains are the most vulnerable in that restrictive terrain combined with thermal and electronic signature make them easy to locate.

Overcoming Enemy Penetration. Penetrations can best be countered through a defense in depth. Timely reserve commitment is very much tied to time-distance relationships which serve as the principal element of friction in this maneuver.(29) To the extent possible, each echelon needs to retain a reserve. These reserves need to be placed well forward to facilitate timely employment. The basic principle of remaining far enough to the rear to avoid the premature decisive engagement of the reserve still holds true. A general rule of thumb would be to place the reserve one terrain feature to the rear of the supported front line unit such that direct fire effects are eliminated. Cross-corridor mobility remains the second major consideration in timely reserve commitment. Withdrawal plans must be developed and rehearsed. Specific routes for all elements down to squad level must be determined. These routes should be overwatched by other elements, but minimally by indirect fires. Enemy tanks must move along roads in Korea. As previously described, these roads have chokepoints at regular 2-3 kilometer intervals. Armored kill zones (AKZ) which integrate mines, antitank weapons, obstacles and chokepoints are essential to stopping tanks. AKZs used in this manner will, as a minimum, slow the pace of the tanks to the rate of the infantry moving along the ridgelines.

Overcoming Enemy Echelons en Mass. Overcoming enemy "echelon en

masse" attacks, which were commonly referred to as "human wave" assaults, required effective, responsive weapons as previously described. Secondly, mines and obstacles must be integrated into the defense to multiply combat effectiveness by slowing the enemy advance which in turn enhances both direct and indirect fire weapons effectiveness. Reserves must be available either to provide depth at the point of attempted penetration or to counterattack to destroy the massed enemy.

Countering enemy night operations again has both technological and tactical solutions. Technologically, night observation devices, portable sensors and improved illumination capability are required. During the Korean Conflict, the NKPA and CCF moved by night and hid in the feeder valleys during the day to avoid detection. This tactic was very successful and as such facilitated surprise and concentration of force by the enemy as troops in several of these valleys massed at a decisive place and time. During the day the enemy would withdraw outside of front line patrol range to consolidate and prepare for the next night's activity. The major means to counter this is through tactical audacity. Day and night patrolling must occur to gain and maintain contact with the enemy. The approach used to overcome the withdrawal of the enemy beyond normal patrolling range from the FEBA was to dispatch a combat outpost (COP) of platoon or larger size which would establish a perimeter defense and serve as a launch point for patrolling. This outpost was located within artillery range but was stationed well forward of lines to shorten required patrolling distances. (30)

In summary, the following are proposed as elements of a successful defensive scheme in Korea.

**Units which fight isolated must be given, organically, the means with which to fight.*

**Natural lines of drift which include roads, creeks and ridges are the main avenues of approach and must be covered.*

**Defending units which do not entrench with overhead cover or reduce vulnerability to artillery through terrain usage will not survive.*

**Reduced tactical mobility caused by lack of roads as well as rugged terrain reduces reserve responsiveness. Plans for positions in depth and reserve employment must accommodate this.*

**The enemy will attempt to envelop and penetrate. The defensive plan must account for all-around and rear area security.*

**The enemy will attempt to concentrate to attack designated objectives. Night operations will be the norm. The defensive plan must have aggressive reconnaissance, especially at night, to preclude the undetected massing of the enemy force. The defense must also be agile at all levels to react to enemy concentration.*

Light Defense Overview. The baseline principle for the light infantry defense discussed here is threefold. Light infantry must be agile, it must use equipment and tactics which multiply its combat power, and it must have a shock effect capability within 300 meters. Agility begins with the screening force.

The Screening Force. The focus of the screening force is to gain and maintain contact with enemy forces in sector. The division lacks sufficient power and mobility for a covering force forward of the FEBA, yet must detect and begin to bring fire to bear on the enemy to disorganize and attrit him as he approaches the FEBA. To do this, combat outposts (COP) should be placed forward along a division integrated combat outpost line (COPL) The COP are controlled by the front line brigades in sector. This is done for two reasons. First,

this provides better fire support to the outpost along a narrower front and shorter call for fire distances. Secondly, the integration of the combat outpost, the battalion screening force and the FEBA is essential to hand off contact with an approaching enemy or to launch an operation to relieve a COP. The COPL must be within supporting artillery range to ensure survival of the outpost. This limits the range to approximately ten kilometers. This distance extends the normal patrol range forward of the FEBA, yet provides a safe haven for returning patrols.

The COP should consist of a fortified defensive position with an inner and an outer perimeter, if possible. The outer perimeter should be as large as mutual support allows. The inner perimeter should be as far inside the outer perimeter as possible with two constraints. First of all, the distance should not exceed the supporting capabilities of the individual weapons on the inner perimeter, i.e. a maximum range of approximately 350 meters. On the other hand, the inner perimeter must be in sufficient depth to not be decisively engaged by the same fires as the outer perimeter. The ideal minimal distance would be in the 100-150 meter range. Terrain and the strength of the outpost will effect this. The outpost functions as a strongpoint from which patrols are dispatched to locate the enemy. Returning patrols thus have a friendly forward line to return to when required. When enemy forces are massed to eliminate a COP, relief operations of battalion or larger size might be required and should be planned. (31)

The main battle area (MBA) picks up the battle along a forward screen line which is manned by security elements from the forward battalions. The resources available to perform this mission include

the scout platoon, radars and elements forward of the line companies. The scouts possess the greatest mobility in the battalion and as such should be used in a mobile screen to the extent possible. This allows the MBA security area to be extended further forward than it might otherwise be. Radars are primarily night movement detection devices. The state of the art is such that they should be used to augment information received from forward security elements but should never replace it. Soldiers must go forward and physically detect the approaching enemy and, where possible, deal him a blow which either cripples or disorganizes him.

The Squad. The focus of the squad in the defense is simply to hold ground or to destroy enemy forces. To accomplish this, the squad has nine men assigned, of which eight would typically man the front line. Placing 20-25 meters between positions dictates a squad frontage of 60-75 meters. The squad has been built around the machinegun in terms of its organization and accordingly, the squad defense should be built around this same weapon system. Terrain is selected, weapons are emplaced, and protective wire is laid to enhance the effectiveness of the machinegun. If an M60 machinegun is assigned to the squad sector, the SAWs should be positioned to support the M60 to deny the enemy the opportunity to seize it. When an M60 is not attached, the SAWs lie at the heart of the squad and must be capable of mutual support. The real advantage of the M60 mounted on a tripod compared to the SAW is that it can provide effective grazing or point fire with minimal aiming by the gunner. Thus, M60 fire can be effective even under conditions of returned fire which would preclude aimed fire with the SAW. The grenade launcher and the hand grenade rank next in importance. The grenadier has preassigned defilade targets with firing stakes to ensure

accurate night fire. The individual soldier's lethality at short range begins with the Claymore and hand grenade. During the fighting along the Chongchon River on 25 November 1950, Baker Company, 9th Infantry Regiment was attacked by a massed enemy. In his analysis of this and other actions, S.L.A. Marshall determined that "so far as as the garrison could judge, the carbine fire was not hitting home, and it was the grenade that was saving them, while spoiling enemy unity." (32) The M16 is to be used for aimed fire. The rifleman's priorities are first to engage any enemy attacking his position and second to deny the enemy access to the machinegun.

Fire discipline is critical in countering the stated threat. The NKPA and CCF were masters at probing unit locations to find critical emplacements and gaps. (33) The premature firing of a machinegun at a probing element was sure to cause either a concentration of force or a positioning of an enemy machinegun to suppress the friendly gun. Once the friendly machinegun was out of action, enemy mass overwhelmed the position. Solutions include the use of the hand grenade to investigate noises and to engage the 1st wave which is probably after the machinegun. The crew served weapon then fires when required or against the 2d wave, if possible. The point is that the returned fire should suit the threat. One enemy soldier deserves engagement from one or two riflemen, not a platoon. A squad is engaged by a platoon, not a company. (34) Fire discipline is a squad leader function.

The Platoon. The focus of the platoon is again to deny the enemy a given piece of terrain or to destroy him outright. The platoon, like the squad, is purely a fighting element. It has a "platoon leader" and not a "platoon commander." The light infantry platoon must not allow

itself to meet a force of equal size or larger on equal terms. To this end, the platoon places "armed OPs" forward with several Claymore mines placed in banks and fired simultaneously or sequentially against an approaching enemy. In this manner, two soldiers in an OP position can have the firepower of several hundred. The shock effect this would have on a unit conducting a night attack could easily disorganize the attack to the point that it does not occur.

The platoon should retain a reserve or a position in depth to preclude penetration. The reserve should not be smaller than a fire team, built around a SAW, or larger than a squad. The initiative in the platoon defense lies in the ability to continue to defend or break contact and withdraw at will. The reserve serves to assist in retaining this initiative. Loss of initiative can lead to destruction.

Fire support for the platoon is centered primarily on the two organic machineguns, although during the Korean War occasions arose in which more firepower was required. In these instances units improvised with such field expedients as fougasse drums and grass fires to deal with a massed enemy. (35) Until the lethality of the platoon is again increased, such techniques must remain in the platoon tool bag.

The platoon must develop its protection plan to the same extent it does the lethality of the defense. The first protection measure is overhead cover. The obvious reason is to avoid enemy artillery. Another is to be able to employ another system against the enemy i.e. friendly artillery fire called upon the defensive position. In the battle to retain Outpost Eerie, this tactic saved the day. (36) The second protective measure is to determine positions from which enemy fire can dominate the position. If possible, these must be incorporated into the defense. When this is not possible, indirect

fires must be plotted on these positions. The NKPA and CCF were masters at crew served weapons emplacement to support an attack.

"An army of stags led by a lion is more to be feared than an army of lions led by a stag."(37)

Leadership at the platoon level is well expressed by this statement attributed to Chabrias, a 4th Century BC Athenian General. Fighting the effects of disintegration requires a disciplined, innovative style of leadership. Platoons must retain the discipline to conduct extended operations despite fatigue. Entrenchment must occur automatically day or night. Information discipline requires leaders to ensure that subordinates understand the intent of orders and to the extent possible rehearse them. Innovation requires not only ingenuity in weapons improvisation and position selection, but also measures designed to confuse, disorganize and deceive the enemy. Platoon leaders in the Korean Conflict made good use of whistles and flares to confuse enemy night control measures.(38) Such innovative measures contribute to the overall disintegration of the enemy force.

The Company. The focus of the company is twofold. First it retains ground; second it is the first echelon which transcends battle drill and employs tactics.

In the defense in Korea it must constitute a reserve, preferably of squad to platoon size. The reserve should initially be positioned far enough to the rear not to be engaged decisively by the same fire that the front is receiving. One terrain feature to the rear serves as a guide. The distance to the rear should consider the required time for the reserve to move to the front if required. The tradeoff is

responsiveness versus reduced vulnerability of the reserve. The commander should, however, consider placing the reserve in an initial position in depth across a major avenue of approach in his sector. When the reserve is employed against an enemy which has penetrated a position, it is attempting to regain the initiative for the company at a given point. The only advantage it has is knowledge of the terrain. To take advantage of this, the reserve must rehearse, and if necessary, mark counterattack routes to possible employment areas. The reserve must emphasize shock when employed in order to regain the initiative. In addition to rifles and machineguns, this is done through extensive use of the hand grenade, especially at night. In this manner, a "rolling barrage" effect can be obtained which denies the enemy the opportunity to return aimed fire at short range. The Chinese realized the value of this tactic and organized their platoons to take advantage of it in the attack. In addition to rifle and machinegun squads, the CCF formed grenade discharger squads which carried grenades to throw. (39) The effect was that of carrying very short range artillery in the assault.

The company cannot afford to lose communications with the platoons. A loss of communications denies supporting fires, denies reserve commitment, and disintegrates the defense. The three means of communications which a company must always have are radio, platoon runner positioned at the company CP, and wire. Pyrotechnic signals should be used only as a backup in that they are difficult to observe and are prone to be confused with enemy signals.

Innovative defensive techniques which deny the enemy the opportunity to apply the full extent of his combat power on the company position at a given time should be considered. One technique which is

particularly useful in Korea is the reverse slope defense. The reverse slope might be preferred when the forward slope lacks cover and concealment. Another instance would be when the reverse slope has better fields of fire. A third use would be as a supplemental defensive position to deny enemy penetration of a position. The key in each instance is to control the crest of the hill. The advantages thus gained are in denying the enemy observation and direct fire on the defensive position. Further, enemy indirect fires cannot be accurately adjusted. Finally, the enemy will be committed piecemeal in the attack as he crests the hill.(40)

The Battalion. The battalion focuses on coordinating company engagements, ascertaining enemy intentions and synchronizing the battalion battle. To accomplish its mission the battalion has three rifle companies and a headquarters company which contains four 81mm mortars, four TOWs and a scout platoon with the capability to be motorcycle mounted. The lack of firepower causes the employment of these assets to be critical. The scouts must be employed forward or on a flank to find the enemy or to prevent his attacking the battalion from an unexpected direction. Armored Kill Zones (AKZ) must be constructed within the battalion area to integrate terrain, obstacles, mines and antitank fires for the battalion. This remains under the control of the battalion commander in that it involves coordination of company, artillery, engineer, antitank and air assets. The objective of the AKZ is to gain the synergistic benefits of the simultaneous use of these assets.

The battalion reserve varies from platoon to company size and is positioned in depth in the same manner as the platoon reserve. If a

centralized battalion reserve is utilized, the major consideration is its timely employment. Time distance factors are such that a reserve positioned a kilometer to the rear of the area of desired employment might require half an hour or more to make that movement at night. The situation at a given point can change significantly during that period of time. Late commitment of the reserve can cause it to fail. On the other hand, the premature commitment of reserves can cause it to be in response to a diversionary attack and lead to failure as well. The solution proposed is to afford the rifle companies the opportunity to hold a small reserve to react to local situations. The battalion reserve is then held 1000-2000 meters to the rear and is prepared to react to major situations along the battalion front after the battalion commander has had ample time to determine the enemy main effort. The placement of the reserve in this manner allows the commander to err on the side of late reserve commitment without disaster.

The Brigade. The light infantry brigade is primarily a level of concentration. The brigade focuses on the acquisition of external resources to assist the forward battalions in their battle. These resources include attack helicopters, air cavalry, additional artillery and tactical air support. Simultaneously, the brigade plans and conducts operations to steal the initiative from the enemy. Deep operations to destroy enemy artillery and command and control are examples. These assets are easy to detect as previously discussed and have a major impact on the outcome of front line assaults. Means available to the brigade commander to accomplish this include artillery, battlefield air interdiction, attack helicopters, air assault and ground raid. The brigade is capable of this level of planning in that it is the first tactical level not totally engulfed in

the battle.

The second function of the brigade is the establishment and commitment of the brigade reserve. The composition of the reserve ranges from a company to a battalion. The reserve will be positioned 2-4 kilometers to the rear of the FEBA and as a result may require transportation to assist in movement if employed.

A major concern at the brigade level is the preservation of the direct support artillery battalion. Counterbattery fires and timely displacement are components of protection. An additional measure must be taken to ensure the survival of the artillery against an infiltration threat.

"Artillery to justify its existence must do two things in connection with the accomplishment of its supporting mission to its infantry; it must continue to serve its guns while under counter battery fire without taking cover and it must fight as infantry to prevent its guns from falling into enemy hands during close-in ground attack."(41)

This quote by BG G.B. Barth, commander of the 25th Division artillery during the Korean War, emphasizes the need for this security. BG Barth recommended a defense platoon be provided by each battery. This platoon would occupy the surrounding high ground during the day and give warning of the approaching enemy. During the night, this platoon moves back within the defended perimeter, mans machineguns and becomes a mobile reserve. A second recommendation was to habitually displace in sufficient time to allow the battery two hours daylight to establish its position. This position includes protective wire covered by machineguns firing enfilade fire, and prepared positions for the guns. A case of hand grenades was carried by each gun section. Instead

of destroying guns in the event of a successful local ground attack, BG Barth directed his men to simply remove critical parts. He reasoned that the enemy lacked transportation to move the guns and that eventually his men would counterattack to regain control of them. During his tour in Korea, batteries were continually subjected to local ground attack. On all but one occasion the guns were retained or retaken. In the one case where the guns were lost, the artillery unit was awarded the Presidential Unit Citation for the defense of their guns. (42) The bottom line is that our artillery is as easy to template as the enemy's. Further, an enemy which has infiltrated would have little trouble locating a firing artillery battery to attack.

This section has examined means in which a defender might overcome the impact of the Korean terrain on the defense and react to an enemy adept at infiltration and penetration tactics. A structured defense emphasizing depth, agility and counterstroke has been proposed with specific focus and tactical considerations for the light infantry brigade. Conclusions for this analysis are categorized as doctrinal, organizational and tactical.

SECTION V

CONCLUSIONS

General. Light infantry doctrine as expressed in FC 7-13 (Light Infantry Battalion and Brigade Operations) and FC 7-15 (Light Infantry Squad and Platoon Operations) proposes a multitude of defensive techniques. It does not, however, tie the techniques to a specific terrain and enemy. The conclusions of this paper relate specifically to the light infantry in Korea,

yet may have application elsewhere against an infiltration enemy in rugged terrain. This paper does not conclude that a positional defense constitutes the only or best use of light infantry in Korea. Rather, the defense is assumed and the following conclusions are reached. Other missions such as a stay behind force for rear area operations, screening force, or rear area protection force are viable yet beyond the scope of this paper.

Doctrinal. Doctrinal conclusions are as follows.

**The light infantry is exceptionally suited to strategic deployment to a mid-intensity environment such as Korea.*

**It is well suited for employment off of main armor avenues of approach. Its doctrinal employment in this case should be in the uplands and mountains where its tactical mobility is on a par with the enemy it faces.*

**The strength of this force is in its stealth and capability to perform indirect operations such as the ambush or raid against the enemy. To the extent possible, the employment of this force in the defense should take advantage of these skills.*

**Light units do not possess the combat capability to perform a covering force mission, especially during hours of limited visibility. Without augmentation, a screen is the normal operation. In order to effect a screen at desired ranges from the FEBA with dismounted troops, techniques such as the Combat Outpost Line should be reviewed for possible adaptation.*

Organizational. Several organizational implications arise from an examination of a light infantry defense.

**The light infantry is organizationally fragile at every level in the sense that every echelon has only the minimum essential personnel assigned when at full strength. A nine man squad does not have to suffer many casualties to be severely degraded. The light infantry must receive priority and be manned*

at full strength to offset its austere structure.

*Several weapon systems are manned by highly skilled, critical soldiers. For example, the TOW gunner exists in very low density, operates a critical weapon, and is not easily trained or replaced. The short term solution is to ensure maximum cross training on critical weapon systems such as machineguns, mortars, Dragons and TOWs. The long term solution is to avoid weapon systems which require a high degree of skill to operate. The weapon systems for this unit must facilitate cross-training so that critical systems can be manned by any soldier in the unit in the midst of a battle.

*Weapon systems must be improved in terms of lethality for the battle under 300 meters. Battle in Korea against echelons en mass requires weapon systems which generate the same firepower in a short period of time as would normally be applied over distance. Such weapon systems would overcome short target exposure times and would have a degrading effect on the will of the enemy to continue the fight. The Claymore is this type of weapon. Another might be a broad beam laser which would temporarily flash-blind an attacking enemy force. More thought is needed in this area to take advantage of technological possibilities.

*Lighter radios with more capability in rugged terrain such as mountains and forests are required for the light infantry. All of the elements serve to disintegrate the cohesion of a light force in Korea. Dependable communications are especially critical to a force which is to a large degree dependent on external sources for its firepower.

*Units down to the lowest level should be organized with the assets with which they need to fight. The squad should have an organic, belt-fed machinegun. The platoon and company need dependable, responsive illumination and indirect fires.

Tactical. Tactical implications are as follows.

*To overcome the tendency of the terrain and enemy to disintegrate cohesion, training should emphasis initiative down to the squad level.

*Road marching and cross-country movement are imperatives. The enemy routinely marches in excess of thirty miles per day in the rugged terrain. The light infantry must be capable of exceeding the physical

capabilities of this known enemy.

- *Training should as closely approximate combat conditions as possible. Live fire tactical exercises should be routine.
- *HUMINT must be routinely solicited to augment austere collection capability. The North Koreans did this with success.
- *Ground sensors must be available in quantity to a low tactical mobility light force to detect an infiltration enemy in rugged terrain. The Korean terrain swallows up units; sensors help to cover unavoidable gaps between positions. Infiltration lanes can likewise be covered.
- *The light infantry scout must possess mobility which exceeds that of the ground mounted soldier, if the scout is to be capable of providing timely information to the commander. Organic motorcycles are a viable solution.
- *Light forces cannot weather the effects of artillery when exposed. Defilade and reverse slope positions must be used when appropriate. The lack of cover and difficulty in digging in Korea make better entrenching means and overhead cover a must.
- *Every light soldier is a fighter. Cooks, clerks and drivers are all expected to fight on a porous battlefield.
- *Expect a 360 degree war. All-around security is a must at every position.
- *The rugged terrain slows the responsiveness of reserves to respond. When possible, maintain a reserve down to platoon level.
- *Do not allow the enemy to concentrate. Search him out and engage him to disorganize him. Helicopters, artillery, TACAIR, EW and ground action are possible means.
- *The approach to training which will lead to success in this theater is epitomized as follows.

"It is admittedly terrible to force men to suffer during training or even sometimes, through accident, to kill them. But there is no other way to prepare them for the immensely greater horror of combat." (43)

APPENDIX A

South Korea	North Korea
Ground Forces	
543,000 personnel (includes 23,000 Marines)	600,000 personnel
5 corps headquarters	8 corps headquarters
20 infantry divisions	35 infantry divisions
1 mechanized infantry division	3 motorized infantry divisions
2 armored brigades	4 armored brigades
2 independent infantry brigades	12 infantry and light infantry brigades
7 special forces brigades	22 special forces brigades
2 antiaircraft artillery brigades	3 antiaircraft artillery divisions
7 tank battalions	2 tank divisions and 2 independent tank regiments
36 artillery battalions	100 artillery battalions
2 surface-to-surface missile battalions	4 surface-to-surface missile battalions
2 surface-to-air missile brigades	82 rocket battalions
1 army aviation brigade	1 river-crossing regiment
860 medium tanks	5 airborne battalions
570 armored personnel carriers	2,500 medium tanks
2,076 field artillery pieces	150 light tanks
5,300 mortars	1,000 armored personnel carriers
	4,000 field artillery pieces
	9,000 mortars
Naval Forces	
25,000 personnel	31,000 personnel
0 submarines	15 submarines
10 destroyers	0 destroyers
8 frigates	4 frigates
6 corvettes	0 corvettes
9 missile attack craft	18 missile attack craft
9 minesweepers	0 minesweepers
24 amphibious craft	94 amphibious craft
38 coastal patrol types	370 coastal patrol types
Air Forces	
32,600 personnel	44,000 personnel
330 fighter/fighter bombers	530 fighter fighter bombers
60 F-4 D/E	390 MiG 15/17/19
220 F-5 A/B/E/F	120 MiG 21
50 F-86F	20 SU-7
20 antisubmarine warfare craft	85 light bombers
12 reconnaissance aircraft	
Air Defense	
80 HAWK surface-to-air missiles	250 SA 2 surface-to-air missiles
45 Nike Hercules surface-to-air missiles	

Sources: Based on information from *The Military Balance 1980-1981*, London, 1980, p. 71; *Jane's Fighting Ships, 1980-81* (Ed., John Moore), London, 1980, pp. 298-300; and *Korea Annual 1980*, Seoul, 1980, p. 99.

Table A-1. Orders of Battle for the Armed Forces of South and North Korea. (44)

APPENDIX B

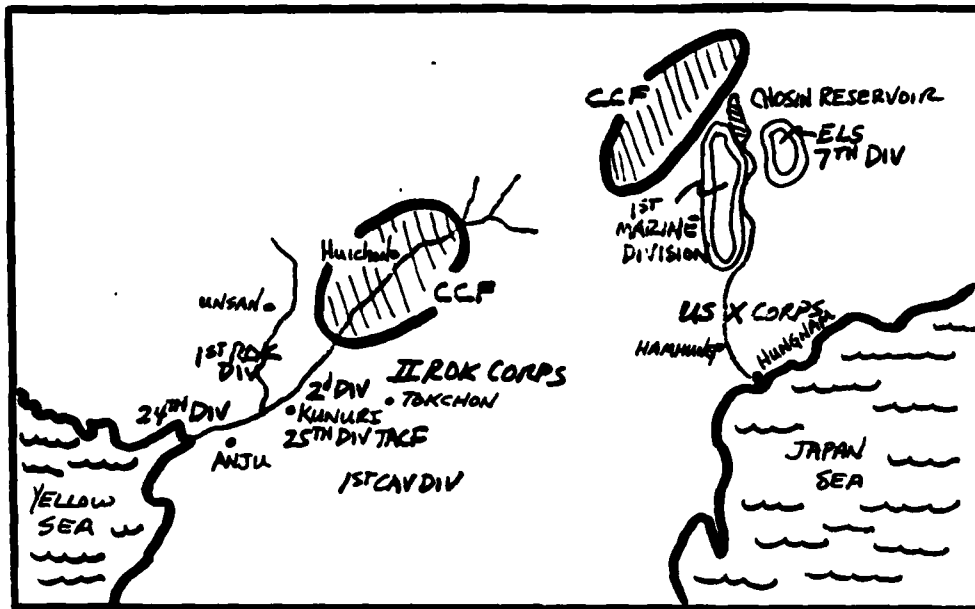


Figure B-1. UN Dispositions as Battle Opened. (45)

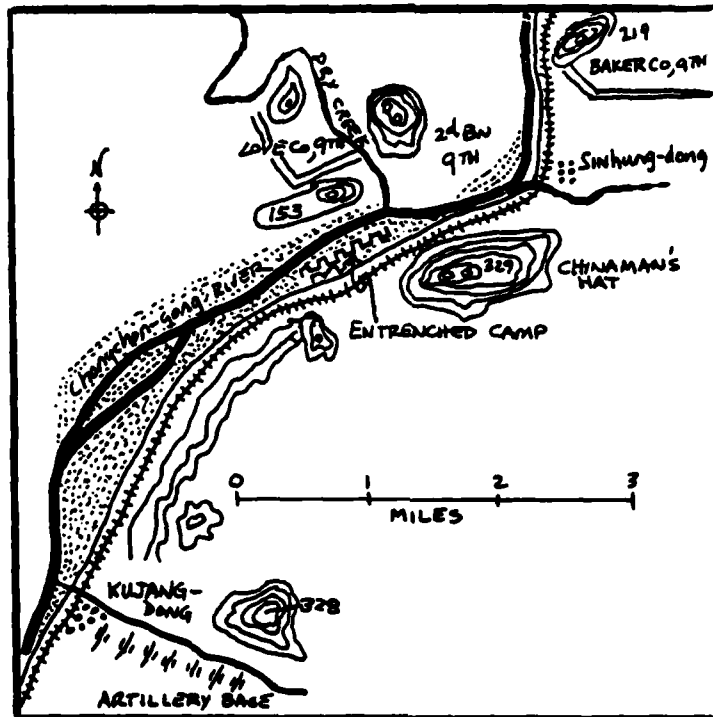


Figure B-2. Positions Along Chongchon River. (46)
Showing Artillery Main Base and Entrenched Camp.

APPENDIX C

SYSTEMS
(d) Engaging Wpns Systems

RANGE (m)	←-----				TACAIR ATKHEL	A C O / E N G A G E
	(a)	(b)	(c)			
15000					TACAIR ATKHEL	:
3500					TACAIR ATKHEL 105mm	
2400			81mm		TACAIR ATKHEL 105mm	:
350			60mm	81mm	TACAIR ATKHEL 105mm	:(e)
100	GL		60mm	81mm	105mm	:/
50	CL GL	CL	60mm	81mm	105mm	
0	HG CL GL	CL	60mm	81mm	105mm	
	SQUAD	PLATOON	COMPANY	BATTALION	BRIGADE	

HG=Hand Grenade; CL=Claymore; GL=Grenade Launcher;
60mm=Company Mortar; 81mm=Battalion Mortar;
105mm=DS Artillery; ATKHEL=Attack Helicopters;
TACAIR=Tactical Air

*NOTE: The range bands are approximate in order to account for the distance some of these weapons are normally employed behind the FEBA.

Figure 1. Light Infantry Defilade Weapon Systems

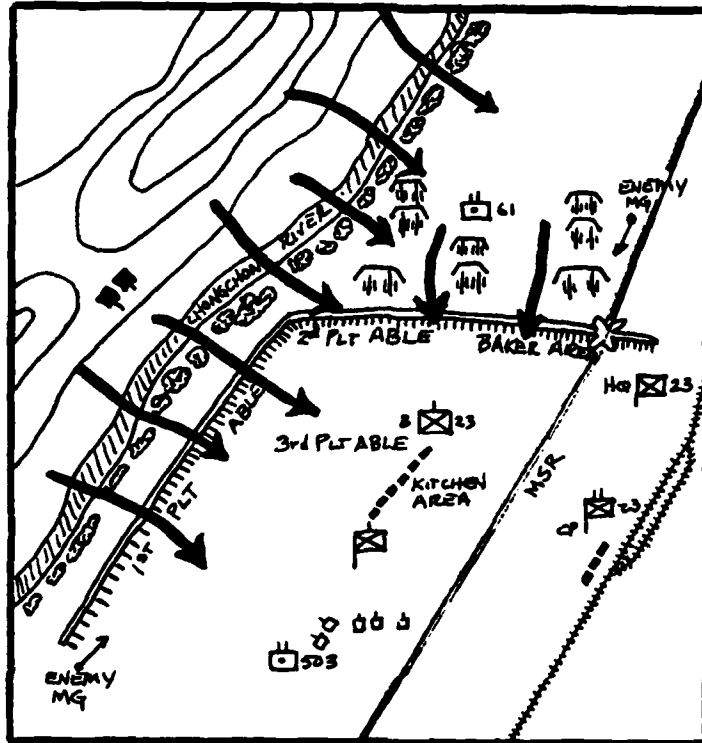


Figure B-3. Chinaman's Hat, The Camp and the Action, 25-26 November 1950. (47) The Chinese crossed the Chongchon in seven parallel columns to attack the entrenched camp.

ENDNOTES

1. Wickham, GEN John A. Jr. "Light Infantry Divisions," CSA White Paper 1984, (Ft Leavenworth:HQDA,1984) p.1.
2. Fehrenbach, T.R., This Kind of War, (New York:Macmillan,1963), p.17.
3. Ibid, p.120.
4. Damon, MG Sam and Krisler, BG Ben "Army of Excellence: A Time to Take Stock"Armed Forces Journal International" (May 1985) pp.86-94. This article was written under the Damon/Krisler pseudonym by an active duty US Army general officer.
5. Fehrenbach, p.660.
6. Marshall, S.L.A. The River and the Gauntlet, (New York:Time Inc,1953), p.46.
7. Ibid pp.39-53. The account of the engagement at Chinaman's Hat was developed from The River and the Gauntlet. A broader account of the battle explaining the full events of the day as it affected the 2d Infantry Division can be found in Fehrenbach, This Kind of War, pp.303-324.
8. U.S. Department of the Army Pamphlet 550-41, South Korea, A Country Study, (Washington D.C.:HQDA,1982) pp.50-54.
9. Marshall, p.39.
10. Fehrenbach, p.155.
11. U.S. Department of the Army Field Manual 34-71, Opposing Force Training Module: North Korean Military Forces, (Washington D.C.:HQDA,1982), p.5-1.
12. U.S. Department of the Army Pamphlet 550-81, North Korea, A Country Study. (Washington D.C.:HQDA,1981) p.231.
13. FM 34-71,p.5-3.
14. Ibid, p.5-3.
15. Marshall, pp.251-348. This is also described by Fehrenbach in This Kind of War on pp.325-350. Marshall gives a more in-depth treatment of this operation in which the 2d Division was forced to "run the gauntlet" on 30 Nov 50.
16. FM 34-71, p.5-3.
17. Ibid, p.5-3.

18. Ibid, p.5-3.
19. Ibid, p.5-3.
20. Ibid, p.6-2.
21. Fehrenbach, p.388.
22. FM 34-71, p.5-4.
23. Clausewitz, Carl von, On War, edited and translated by Howard, Michael and Paret, Peter, (Princeton, N.J.:Princeton University Press,1976), p.227.
24. The ideas in SECTION V "The Defense" were derived from multiple sources. The initial inspiration resulted from the author's experience during a recent tour as a brigade S-3 with the 2d Infantry Division in Korea. Coming to grips with the Korean terrain and an enemy armed with a tactical doctrine suited more to Europe than to Korea indicated early on that more study was required. The writings of S.L.A. Marshall, T.R. Fehrenbach, and Russell A. Gugeler served as a starting point to gain a "feel" for combat in this theater. Insight gained from tactical discussions with BG Charles Getz, ADC 2d Inf Div and COL James B. Byrnes, Cdr 2d Bde, 2d Inf Div, initiated an attempt to transform historical accounts into tactical procedures. Observation of two excellent battalion commanders- LTC Ted Chilcote, Cdr 1st Bn, 23rd Inf, and LTC Jim Montano, Cdr 1st Bn, 38th Inf, during field exercises and ARTEPS afforded the opportunity to view the application of tactics and the evolution of techniques on the ground. Major gaps were then filled by researching after action reports and articles covering "lessons learned" written by Korean War veterans after the conflict. The final step was to attempt to analyze the terrain, enemy and resources available to derive a meaningful approach to the defense in Korea. Space and time limitations preclude a more in depth analysis; that work continues. The analysis is mine and as such any errors in application are mine and not that of those persons providing input.
25. Canby, Steven L., "Classic Light Infantry and New Technology," DARPA Contract No. MDA 903-81-C-0207. (1981) p.90.
26. Barth, BG G.B., Tropic Lightning and Taro Leaf in Korea. (Athens, Greece:HQDA, 1953), p.94. Additionally, several articles from The Combat Forces Journal and The Infantry School Quarterly contain combat tips, several of which discuss artillery perimeter defenses. Chief among those found in the bibliography include Badger, LTC Thomas J., "Infiltractics," Combat Forces Journal (Feb 51) pp.16-19.; Gugeler, pp. 154-165.; Lavoie, LTC Leon, "The Artillery

- Perimeter, "Combat Forces Journal (Oct 51), pp.25-27.
27. Flynn, CPT John R., "Battle Facts for Your Outfit: Combat Tips from Korea," Combat Forces Journal (Feb 51), pp.14-16.
 28. Barth, p.94.
 29. Hughes, "A Combat Captain Speaks," The Infantry School Quarterly (Jan 53) p.84.
 30. Gugeler, Russell A. Combat Actions in Korea, (Washington D.C.:HQDA,1970),pp.222-235. This is an excellent description of the actions of Outpost Eerie, a combat outpost.
 31. Josey, CPT Claude K. "Perimeter Defense", The Infantry School Quarterly. (Jul 53), pp.54-62.
 32. Marshall, p.33.
 33. Hughes, CPT John C. "Lessons for Leaders", The Infantry School Quarterly (Oct 53), p.66.
 34. Hughes, "A Combat Captain Speaks", p.83.
 35. Marshall, p.102.
 36. Gugeler, p.222-235.
 37. Ibid, p.183.
 38. Ibid, p.67.
 39. Ibid, p.234.
 40. Jackson, MAJ Charles A. "Reverse Slope Defense", The Infantry School Quarterly. (Jan 56), pp.32-38. This is an excellent article covering the advantages, disadvantages and development of a reverse slope defense. MAJ Jackson was an Infantry battalion commander in the Korean War.
 41. Barth, BG G.B., Tropic Lightning and Taro Leaf in Korea. (Athens, Greece:HQDA,1953), p.94.
 42. Ibid, p.94.
 43. Fehrenbach, p.189.
 44. DA Pamphlet 550-41, p261.
 45. Marshall, p.15.
 46. Ibid, p.41.
 47. Ibid, p.45.

BIBLIOGRAPHY

Books and Manuals

- Alford, Jonathon Mobile Defence: The Pervasive Myth: A Historical Investigation. London: Kings College, 1977.
- Appleman, Roy E. South to the Naktong-North to the Yalu. Washington D.C.: HQDA, 1961.
- Barker, A.J. German Infantry Weapons of WWII. London: Arms and Armour Press, 1969.
- Barth, BG G.B., Tropic Lightning and Taro Leaf in Korea. Athens, Greece: HQDA, 1955.
- Clausewitz, Carl von, On War. edited by Howard, Michael and Paret, Peter, Princeton, N.J.: Princeton University Press, 1976.
- English, John A. A Perspective on Infantry. New York: Praeger Publishers, 1981.
- Fehrenbach, T.H. This Kind of War. New York: Macmillan, 1963.
- Greenfield, K.R., Palmer, R.F., Wiley, D.I. The Organization of Ground Combat Troops: The U.S. Army in WWII: The Army Ground Forces. Washington D.C.: HQDA, 1947.
- Gugeler, Russell A. Combat Actions in Korea. Washington D.C.: HQDA, 1970.
- Harper, LTG Sir G.M., Notes on Infantry Tactics and Training. London: Sifton Praed, 1921.
- Hart, B.H. Liddell A Science of Infantry Tactics Simplified. London: William Clowes, 1923.
- Hart, B.H. Liddell The Rommel Papers. London: Collins, 1953.
- Hermes, Walter, U.S. Army in the Korean War: Truce Tent and Fighting Front. Washington D.C.: GPO, 1963.
- Junger, Ernst The Storm of Steel: From the Diary of a German Storm Troop Officer on the Western Front. London: Chatto and Windus, 1921.
- Kearsey, LTC A. Simple Tactics. Aldershot: Gale and Folden, 1951.
- Kinsman, LTC J.H. Tactical Notes. Dublin: E. Ponsby, 1914.
- Lloyd, Alan A Review of the History of Infantry. London: Longmans, Green, 1908.

- Lucas, James Sidney Alpine Elite: German Mountain Troops of World War II. New York: Jane's, 1980.
- Marshall, S.L.A. Fork Chop Hill. New York: William Morrow and Co., 1956.
- Marshall, S.L.A. The River and the Gauntlet. New York: Time Inc., 1953.
- Marshall, S.L.A. The Soldier's Load and the Mobility of a Nation. Quantico, VA: The Marine Corps Association, 1980.
- Miksche, F.O. Atomic Weapons and Armies. New York: Praeger, 1955.
- Miksche, F.O. Attack: A Study of Blitzkrieg Tactics. New York: Random House, 1942.
- Ney, Virgil Organization and Equipment of the Infantry Rifle Squad from Valley Forge to ROAD. Fort Belvoir: USACORG, 1965.
- U.S. Department of the Army Field Circular 7-13, Light Infantry Battalion and Brigade Operations and Battalion Operations and Battalion Artep and Mission Training Plan. Ft Benning: USAIS, 1985.
- U.S. Department of the Army Field Circular 7-15, Light Infantry Squad and Platoon. Ft Benning: USAIS, 1984.
- U.S. Department of the Army Field Circular 100-1, The Army of Excellence. Ft Leavenworth: USACACDA. 1984.
- U.S. Department of the Army Field Manual 34-71, Opposing Force Training Module: North Korean Military Forces. Washington D.C.:HQDA, 1982.
- U.S. Department of the Army Pamphlet 550-41, South Korea, A Country Study. Washington D.C.:HQDA, 1982.
- U.S. Department of the Army Pamphlet 550-81, North Korea, A Country Study. Washington D.C.:HQDA, 1981.

Articles and Periodicals

- Abshire, LT David "Reflections on Patrols in Korea." Combat Forces Journal. Jul 54, pp.20-22.
- Averill, MAJ Gerald P. (USMC) "Run the Ridges and Win." Combat Forces Journal. Oct 52, pp24-28.
- Badger, LTC Thomas J. "Infiltactics." Combat Forces Journal. Feb 51, pp.16-18.
- Bently, Captain L.W., McKinnon, Captain D.C. "The Yom Kippur War

- as an Example of Modern Land Battle." Canadian Defense Quarterly. 1974, pp13-19.
- Boatner, MAJ Mark B. III "Lessons From Korea: Countering Communist Artillery." Combat Forces Journal. Sep 53, pp.24-25.
- Brudvig, COL Dale K. "The Division May Be 'Light', But Can It Fight?" Army Times. 10 Sep 74, p.21.
- Canby, Steven L. "Light Infantry in Perspective." Infantry. July-August 1984. pp28-31.
- Chew, A.F. "Beating the Russians in Snow." Military Review. Jun 80, pp.38-47.
- Clagett, MAJ Robert H. "What Good Is a Machine Gun?" Combat Forces Journal. Oct 52, pp.28-30.
- Crowell, MG Howard G. Jr. and Bates, LTC Jared L. "Heavy-Light Connection: Division" Infantry. July-August 1984, pp.15-19.
- Cocklin, LTC Robert F. "Artillery in Korea." Combat Forces Journal. Aug 51, pp.22-27.
- Cullinan, LTC Michael, "Light Armour in Light Force Operations." Armor. July-August 1985, pp.16-19.
- Cunningham, PFC Cleve "Improvised Illumination." Combat Forces Journal. Feb 53, pp.28-29.
- Damon, MG Sam and Krisler, BG Ben (pseudonyms) "Army of Excellence: A Time to Take Stock." Armed Forces Journal International. May 85, pp.86-94.
- Deputy, GEN William E. "The Light Infantry: Indispensible Element of a Balanced Force." Army. June 1985, pp.26-41.
- Deputy, GEN William E. "One-Up and Two Back?" Army. January 1980, pp.20-25.
- Durante, CPT Arthur A. "A Heavy Mortar for a Light Division" Infantry. January-February 1984.
- Editor, "Combat Tips." The Infantry School Quarterly. Jan 53, pp.53-55.
- Editor. "Infantry Division(Light)." Infantry. March-April 1984, pp.14-16.
- English, LTC John A. "Thinking About Light Infantry" Infantry. November-December 1984, pp.19-25.
- Flynn, CPT John R. "Battle Facts for Your Outfit: Combat Tips from Korea." Combat Forces Journal. Feb 51, pp.14-16.

- Foss, MG John W. "Light Infantry Has a Definite Place on the Battlefield" Army Times. 29 October 1984, p.21.
- Galvin, LTG John R. "Heavy-Light Forces and the NATO Mission" Infantry. July-August 1984, pp.10-14.
- Gordon, Michael R. "Light Doesn't Mean Easy." Military Logistics Forum. May 1985, pp.28-33, 57.
- Haupt, COL Jerome L. "Heavy-Light Operations-An Added Viewpoint." Armed Forces Journal International. May 1983, p.85.
- Holden-Rhodes, MAJ J.F. "Light Infantry: New Application of An Old Concept." Military Intelligence. April-June 1985, pp.10-12.
- Hollingsworth, LTG James F. "The Light Division-Light Enough to Get There-Mobile Enough to Survive-Lethal Enough to Win-We Need It Now." Armed Forces Journal International. October 1983, pp.84-90.
- House, CPT Jonathan M. "Designing the Light Division 1935-1944." Military Review. May 1984, pp.39-47.
- Hughes, CPT John C. "A Combat Captain Speaks." The Infantry School Quarterly. Jan 53, pp.78-88.
- Hughes, CPT John C. "Lessons for Leaders." The Infantry School Quarterly. Oct 53, pp.65-71.
- Editor. "Infantry Division(Light)." Infantry. March-April 1984, pp.14-16.
- Jackson, MAJ Charles A. "Reverse Slope Defense." The Infantry School Quarterly. January 1956, pp.32-38.
- Josie, CPT Claude K. "Perimeter Defense." The Infantry School Quarterly. Jul 53, pp.54-62.
- Killebrew, MAJ Robert B. "Has Light Infantry Really Had Its Day?" Army. December 1979, pp.44-49.
- Lavoie, LTC Leon F. "The Artillery Perimeter." Combat Forces Journal. Oct 51, pp.25-27.
- Lehman, Douglas K. and O'Neil, Robert J. "Two Views on the Rifle Squad: Keep It Small-Eight Years Later." Infantry. May-June 1980, pp.18-21.
- Lindsay, MG James L. "Commandant's Notes: The Infantry Division(Light)." Infantry. January-February 1984, pp.2-3.
- Lopez, Ramon "The US Army's Future Light Infantry Division: A Key Element of RDF." International Defense Review. Issue Number 2 1982, pp.185-192.

- Ludvigsen, Eric C. "Elite Light Divisions Among Major Factors in '85 Budget." Army. April 1984, pp.34-39.
- Lynch, COL George E. "Give Infantry More Firepower." Combat Forces Journal. Aug 51, p.17.
- Lynch, COL George E. "Use Your Weapons." Combat Forces Journal. Mar 51, pp.9-11.
- Marshall, BG S.L.A. "Man Against Armor." Armor. Jan-Feb 1980, pp.30-36.
- Mathews, MAJ Richard T. "The Load of the Individual Soldier." Combat Forces Journal. Oct 52, pp.12-16.
- McCaffrey, COL William J. "Combat Tips: Report on Korea." The Infantry School Quarterly. Jul 52, pp.68-73.
- Mildren, COL Frank T. "What Has Korea Taught Us?" The Infantry School Quarterly. Oct 53, pp.6-13.
- Motley, James B. "Heavy-Light Forces: Assessing the Challenge." Infantry. January-February 1985, pp.12-13.
- Munter, Otto "Do We Need the Light Infantry?" Europaeische Wehrkunde. West Germany: February 1980, pp68-73.
- Newell, LTC Clayton R. "Heavy-Light Forces: Divisions or Brigades?" Infantry. January-February 1985, pp.12-13.
- Neller, CPT R.B. "New Look for 13-Man Squad?" Marine Corps Gazette. Oct 85, pp.46-47.
- Perez, COL Gines "On Top of the Ridgeline." The Infantry School Quarterly. Jan 53, pp.56-63.
- Petraeus, CPT David H. "Light Infantry in Europe: Strategic Flexibility and Conventional Deterrence." Military Review. December 1984, pp.35-55.
- Phillips, CPT William D. "The Light Leader's Course." Infantry. January-February 1985, pp.35-37.
- Pykosz, CPT Edward H. "The George Method." Combat Forces Journal. Apr 54, p.46.
- Reed, John "US Army Role for the Light Division." Armed Forces Journal. February 1985, pp.65-68.
- Roseman, CPT D.M. "Protecting Reconnaissance Assets." Marine Corps Gazette. Oct 85, p.41.
- Shugg, BG R.P. (Ret) "Is Firepower a Four-Letter Word in Today's US Army?" Armed Forces Journal International. Jul 85, pp.59-60.

Simpkin, BG Richard E. "Tank Hunting." Infantry. July-August 1984, pp.23-27.

Simpkin, BG Richard E. "The Heavy Force/Light Force Mix-Up." Armor. July-August 1985, pp.37-41.

Smith, LTC Edward C. "The Infantry Need for Mortars." Military Review. Dec 81, pp.29-31.

Sullivan, LTC Thomas J. "The 7th Infantry Division (Light): A Division in Transition." Military Intelligence. April-June 1985, pp.23-25.

Wass de Czege, COL Huba "Three Kinds of Infantry." Infantry. July-August 1985, pp.11-13.

Wood, LTC Jack B. "Heavy-Light Connection: Brigade." Infantry. July-August 1984, pp.19-22.

_____, "The Employment of Non-mechanized Infantry: Report of a Symposium Jointly Sponsored by the RUSI and the Commander ACE Mobile Force, (LAND)." RUSI. London: December 1980, pp.56-69.

Documents

Canby, Steven L. "Classic Light Infantry and New Technology." DARPA Contract No. MDA 903-81-C-0207. 1981.

Luttwak, Edward N. "Historical Analysis and Projection for Army 2000." TRADOC Contract No. DABT 58-82-C-0055. May 1983.

Luttwak, Edward N. "Strategic Utility of US Light Divisions, A Systematic Evaluation." TRADOC Contract No. DABT-60-84-C-0099. May 1985.

Muenter, Otto "Do We Need the Light Infantry?" Europaeische Wehrkunde. February 1980, pp.68-73.

Uhle-Wetter, Franz "Battlefield Central Europe: Danger of Overreliance on Technology by the Armed Forces." Unpublished. 1950.

Wickham, GEN John A. Jr. "Light Infantry Divisions." CSA White Paper 1984. HQDA, 1984.

END

FILMED

6-86

DTIC