

Turtle Head Bend. A battalion from the 7th Cavalry Regiment tried to go around the block, but it never entered the fight. At 1500 on 2 November, Major General Gay, Commanding General, 1st Cavalry Division, reluctantly ordered his command to withdraw, leaving the 3d Battalion to its fate. The remnants of the 3d Battalion fought valiantly through 4 November. Heavily mortared and reduced by repeated infantry attacks, the battalion then attempted its own escape on foot. Only about 200 men survived to rejoin their regiment. Total U.S. losses during the battle numbered approximately 600 men. The regiment also lost twelve 105-mm howitzers, nine tanks, and one tank recovery vehicle. On 3 November, the regiment reported itself at 45 percent strength. Chinese losses probably were also as high as 600.²⁶

The battle at Unsan exemplifies the CCF tactical style. The attack plan was based on thorough reconnaissance, accurate anticipation of the U.S. response, and a well-developed appreciation for the terrain. Stealthy movement permitted the Chinese to silently surround the Americans and achieve partial tactical surprise. Pressing the attack at night, the Chinese rapidly infiltrated the gaps and open flanks in the U.S. lines and established blocking positions on the escape routes to the rear. In addition, the bold Chinese crossing of the bridge over the Nammyon River demonstrated their confidence and cunning knowledge of their foe.

The Chinese published a pamphlet after their victory entitled "Primary Conclusions of Battle Experience at Unsan." The pamphlet cited the CCF's superiority over the U.S. Army in soldiering:

Cut off from the rear, they [the Americans] abandon all their heavy weapons. . . . Their infantrymen are weak, afraid to die, and have no courage to attack or defend. They depend always on their planes, tanks, artillery. . . . They specialize in day fighting. They are not familiar with night fighting or hand-to-hand combat. If defeated, they have no orderly formation. Without the use of their mortars, they become completely demoralized. They are afraid when the rear is cut off. When transportation comes to a standstill the infantry loses the will to fight.²⁷

The pamphlet also emphasized the use of the open V-formation to surround the enemy and the rapid infiltration of the enemy lines in order to slash through to the rear to block escape routes and prevent the advance of relief forces. In addition, it pointed out the value of using stealthy nighttime approaches to achieve surprise.

The battle at Unsan is only one of many operations that illustrate Chinese methods of offensive operations. The CCF attack at Chosin Reservoir against the U.S. Marine 1st Division is another good example of Chinese surprise, infiltration, envelopment, flank and rear attacks, operations at night, stealth, and establishment of road blocks. The great majority of CCF small-unit attacks also possessed these features.

The Defense

Chinese methods of defense basically took two forms corresponding to the two broad phases of the war: the mobile, maneuvering phase from the autumn of 1950 to the autumn of 1951 and the World War I-style tactical stalemate

that existed after the autumn of 1951. The defense practiced during the first phase of the war was described by the G2 of IX Corps, Eighth Army, thusly:

Interrogation of Prisoners of War and a study of captured enemy documents, as well as experience gained in action against the Chinese Communist Forces, have revealed that the underlying difference in concept between UN defense and Chinese Communist defense is that the one system depends upon strong defensive positions with supporting artillery and air cover, while the other, for lack of supporting arms, relies on a more fluid defense which actually takes the form of maneuvering tactics.²⁸

During the initial period before battle lines became fixed in Korea, the CCF did not employ the principle of a main line of resistance or a position defense. Instead, they employed a basic defensive scheme of "one up and two back." In this scheme, the "up" group operated as a screening and delaying force. The two "back" units—out of artillery range—rested, regrouped, restocked, and reorganized for a counteroffensive or the defense. In the meantime, the screening elements conducted low-level limited attacks to confuse the enemy. If faced with a determined UN attack, the screening force offered stiff resistance but did not become decisively engaged. As it fell back slowly, contact was eventually made with the rearward units. If the rearward units still were unprepared, they, too, began a slow withdrawal until more favorable circumstances existed. During this stage of the war, the CCF usually preferred to continue to fall back under pressure until it could launch a counteroffensive rather than to stand fast on a predetermined line.²⁹

A number of defensive principles characterized Chinese operations during this time:

- Defensive units, disposed in great depth, deployed along a narrow front.
- Forward elements played purely delaying roles to gain time while the remaining units prepared a second line of defense.
- Troops built defensive positions strong enough to afford protection from air and artillery attack.
- Soldiers established dummy positions and gun emplacements for the deception of the enemy.
- The Chinese placed light automatic weapons well forward, with the heavy weapons disposed in depth. Troops used heavy weapons primarily in support of a counterattack and fired mainly at night in order to avoid detection by UN air and ground observers.
- Defensive forces were withdrawn to successive defensive positions during hours of darkness only.³⁰

Even under these temporary, mobile conditions, however, the Chinese constructed formidable defensive positions, as described by the IX Corps G2:

(1) An investigation of one CCF position overrun by UN forces revealed 1,120 one-man foxholes, 664 two-man foxholes, 253 three-man foxholes, and 17 pillboxes, all of which could accommodate an estimated 3,250 men. These entrenchments were well camouflaged by logs covered with earth and were well protected against air attack by being positioned behind rocks and trees. The pillboxes were constructed of logs, dirt, and stone. These emplacements afforded maximum protection against mortar and small arms fire, but could be effectively neutralized by artillery or napalm.

(2) The examination of an enemy battalion defense position revealed that the emplacements were well dug-in and organized to a depth of approximately 2,000 meters. Fields of fire covered the slopes and draws and appeared to be well coordinated. A large quantity of ammunition of all types was found at the positions. Weapons and ammunition discovered included: 2 Japanese knee mortars, 6 Bren guns, 12 BARs, 5 U.S. light machine guns, 2 U.S. heavy machine guns, 30-40 U.S. M-1 rifles, 30-40 U.S. carbines, many rifles of foreign make, a large amount of assorted ammunition including 2,000 hand grenades of the potato masher type. The command post was well dug-in on the reverse slope of the hill. Bunkers were well constructed with over-head cover.³¹

This report is also noteworthy in that it reveals how much the Chinese relied on captured U.S. weapons and ammunition and how diverse the assortment of materiel was.³²

During the last two years of the war, the Chinese defense assumed a positional character of remarkable strength. By the end of 1951, the extensive trench network ran fourteen miles in depth.³³ As time passed, the works became more and more impregnable. By hand labor, using ordinary tools, CCF troops fortified the reverse slopes of hills and dug tunnels all the way through to the forward slopes for observation.³⁴ Furthermore, entire units were housed underground with only observers left above ground.³⁵

Placing the main line of resistance underground on the reverse slope reduced the vulnerability of the CCF to observation and direct and indirect fires. Moreover, it permitted the Chinese to support each rear hillside or back ridgeline (and some forward slopes) with supporting fires from adjacent high ground. In the attack, UN forces had to deploy to clear observers and small combat elements from the forward slope, all the while taking fire from enemy mortars and artillery pieces. Once on the crest and descending, the UN forces lost the beneficial effects of their own artillery support and fell victims to heavy direct fire from hidden enemy positions, many of which did not become evident until killing rounds burst out of them. If forced to retreat, the UN forces then had to fall back through the enemy indirect fires one more time. Clearly, reverse-slope defenses have deadly effectiveness for light forces when they are properly constructed and coordinated.

CCF defensive works exploited the terrain fully and followed an irregular shape, often triangular or ladderlike, so that rearward positions could fire in the gaps between the forward positions. Fighting positions lay behind trees, hedges, and natural rock outcrops. Earth mounds conformed to and molded with the existing contours of the land. Fortifications retained a low silhouette so as not to stand out on the skyline. Communication trenches, often covered, connected the most important weapons positions and led back to switch positions.³⁶

The Chinese constructed their fortifications in such a way as to maximize flanking fire, especially by their machine guns, which they considered to be the backbone of infantry firepower. Obstacles covered by fire and observation were placed to the front and flanks to channel the enemy into the fire lanes. The Chinese used mines extensively; most of them were captured from UN stocks or improvised with explosives using a wide variety of containers: glass jars, clay pots, tin cans, wooden boxes, and fuel drums.³⁷

Camouflage was essential, and the Chinese observed meticulous camouflage discipline. The CCF also added to deception through the use of dummy

positions. A Chinese reference manual on field fortifications made several good points on how to incorporate dummy positions into the defensive lines:

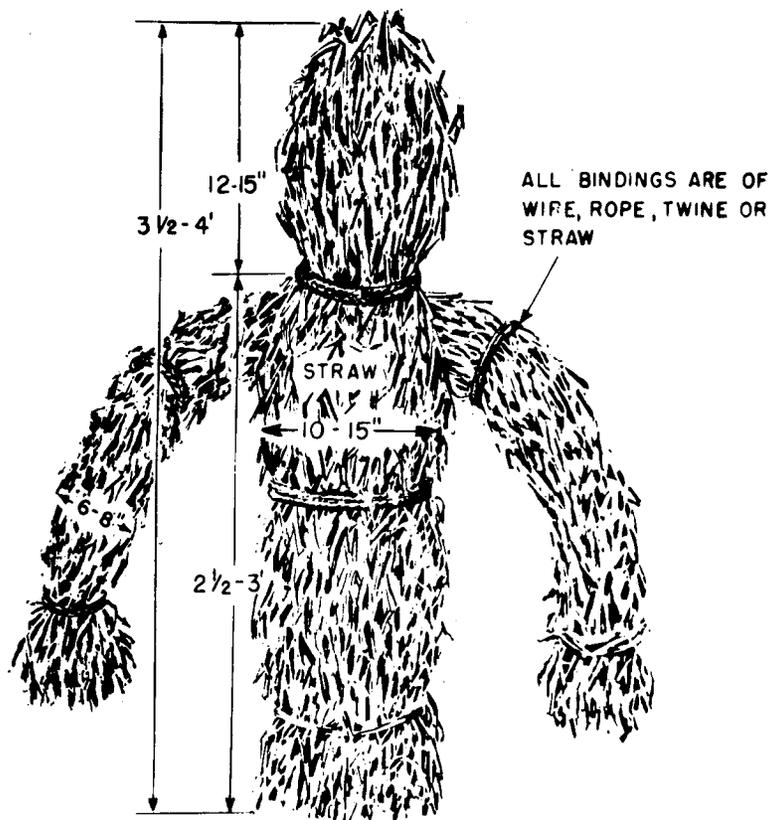
When a structure cannot easily be concealed perfectly, construct many dummy structures so that the enemy will not be able to distinguish the real from the false. These dummy structures will draw enemy fire, disperse enemy fire, and cause them to misuse their forces.

The dummy structure should not be too close to the true structure lest it draw enemy fire to the true structure. Moreover, it should not be allowed to fall into enemy hands.

The dummy structure should also be camouflaged and should sometimes be equipped with dummy soldiers and weapons. . . . The dummy structure need not be perfectly identical. . . . It is only necessary that it agree with the true structure in outward appearance.³⁸

This Chinese manual is quite detailed. It describes how to construct and integrate positions for personnel and weapons of every kind—artillery, antitank guns, even horses. It specifies the man-hours and tools required for the construction and provides several hundred diagrams. A few representative examples of these diagrams are at appendix A to this chapter. Building and camouflaging these fortifications required enormous labor.

Despite attacks by unprecedented levels of fire by aircraft and artillery of all calibers (which was the primary U.S.-UN response to Chinese defenses),



"Strawman" decoy

Chinese positions usually had to be cleared by close-in assault, frequently using flamethrowers. The main defensive positions, however, continued to be screened by strong outposts that could be pushed in by heavy patrolling.³⁹

Tactically, the Chinese fought as tenaciously in the defense as they had in the attack. To conserve ammunition and remain undetected, they held their fire until they were certain of its effectiveness, then opened up with a withering volume of small-arms fire and grenades. Longer-ranged crew-served weapons were employed according to strict distance limitations: 60-mm mortars from 1,000 to 1,500 meters and machine guns from 300 to 500 meters.⁴⁰

Roy E. Appelman, *U.S. Army in the Korean War*, OCMH



Chinese Communist POWs, wearing quilted-cotton winter uniforms and fleece-lined caps

To augment their defenses, the Chinese increased the heaviness of their forces. The Chinese added tank, antiaircraft, and armored car units, reequipped and increased their infantry, and built up their air strength.⁴¹ More artillery and heavy-mortar units were also obtained. Artillery and mortar positions were dug in up to six feet in depth and positioned, often by hand, in unlikely places. Ammunition was similarly revetted and camouflaged. Although the use of indirect fires increased, artillery techniques and effectiveness still remained below that of the UN Command.

Counterattacks also filled an important place in Chinese defensive doctrine. Counterattack tactics generally conformed to the Chinese offensive doctrine described earlier. Following thorough reconnaissance and infiltration, small-unit attacks were conducted at night against the UN flanks and rear. Counterattacks were sometimes conducted as spoiling attacks or to blunt the edge of a UN offensive. The Chinese also conducted immediate counterattacks to retake lost positions. These counterattacks had to be launched early enough in the evening to leave several hours of darkness for the Chinese to repair defensive works by morning.

In their defenses, the Chinese made heavy use of booby traps. Field-expedient and improvised mines and booby traps (for example, dud bombs and mortar shells) proved to be the rule.⁴² The CCF used these sorts of defenses imaginatively. In one case, Chinese troops buried a mortar shell under the ashes of a burned-out fire and placed a small amount of fresh wood on the heap. This inviting sight prompted UN personnel in the area to build a warming fire. The mortar bomb exploded two hours after the fire was lighted.⁴³ The Chinese frequently booby-trapped logs and branches (which were scarce) expecting the enemy to use them in building fires. In another case, the CCF draped a large wire entanglement across a village thoroughfare. Various ends of the wire were connected to hidden grenades. Any attempt to pull the wire out resulted in an explosion. The Chinese were also known to booby-trap dead bodies. UN personnel had to stay alert.

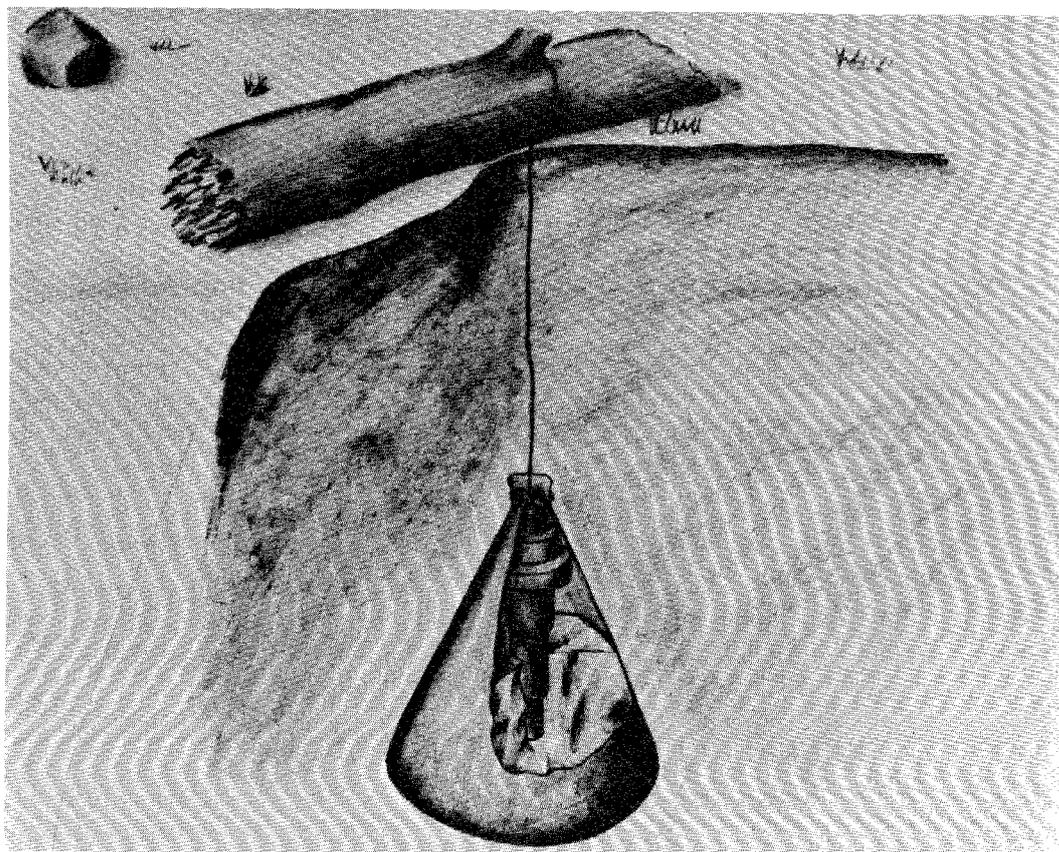
Shattering this tough defensive barrier proved to be a very difficult task. Long, bloody battles, fought over small pieces of ground, found their way into historical lore and legend: Heartbreak Ridge, Pork Chop Hill, Bloody Ridge. In the end, the UN Command—and the United States, in particular—was unwilling to apply the manpower and suffer the casualties necessary to punch through the Chinese defenses and drive them from Korea. Thus, the war ended with two armed camps firmly entrenched and facing each other across a no-man's land of battle-scarred terrain.

Logistics

Had the CCF possessed a modern, well-organized, efficient logistic system comprising motor transport and stocks on the same scale as the United States, the Eighth Army probably would have been annihilated in Korea in the fall and winter of 1950. Instead, the primitive, unreliable logistics of the CCF did not permit it to continue an offensive beyond a period of three or four days. Thus, the CCF could not exploit tactical successes in depth due to its inherent lack of mobility and sustainability. Assaults that required days of buildup, even when they were accompanied by spectacular successes, lost impetus in

just a few days. The Chinese leadership itself acknowledged that poor supply was their greatest difficulty during the war.⁴⁴

Three fundamental weaknesses crippled the Chinese logistic system. The first weakness was organizational in nature. Operating from a poor economic base, they simply did not have the stores of military supplies (particularly ammunition) nor the transport necessary to sustain their large army over long distances.⁴⁵ Second, the portion of Korea under Chinese control was barely able to sustain itself, much less meet the needs of hundreds of thousands of foreign troops. Finally, the entire length of the CCF lines of communication was under constant attack by UN airpower. Depots, truck columns, railroads, trains, transportation junctions, tunnels, and bridges were destroyed time and again by UN aircraft. As a result, Chinese supplies moved almost exclusively at night. Under these debilitating conditions, the Chinese survived by virtue of improvisation, discipline, and sheer perseverance.



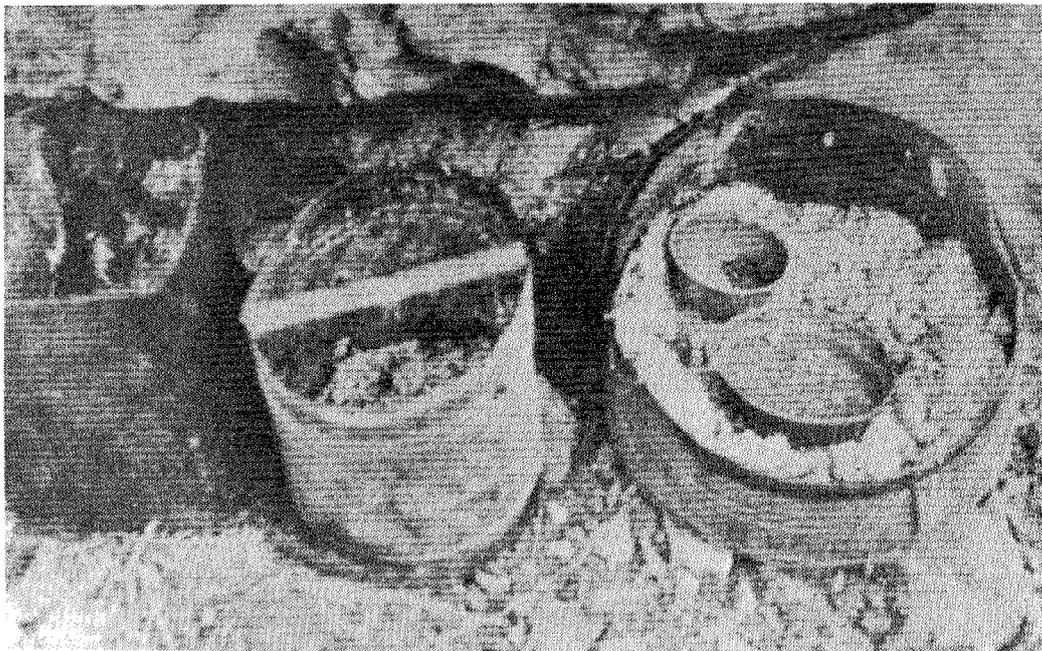
Firewood booby trap

The primary task of the Chinese rear services, as part of their logistic system, was to keep supplies moving forward. Supplies originating in Chinese Manchuria moved by night in trains and truck columns to forward army depots—the trains sheltering in tunnels for protection during the day. Supply points were well camouflaged and protected. Where possible, local supplies

were made available to Chinese units. In support of the CCF's rear services, the North Korean government organized more or less permanent repair teams to rebuild bridges, tunnels, railroad lines, and roads immediately following their damage by air strikes. Prodigious support by North Korean natives also helped immensely. In one instance, thousands of local peasants restored 180 miles of road to truck use within 36 hours. In another case, a 37-foot-high, 150-foot-long ramp composed of earth in rice bags was built to link one end of a blown-up bridge with the near bank.⁴⁶ Naturally, assistance like this enabled the CCF to keep its soldiers in forward foxholes, not in rear areas.

At division level and below, the CCF used the resources at hand to feed and move itself. Supplies moved solely by human and animal muscle power. Groups of Korean porters, under Chinese guard, were organized to carry unit provisions forward and even into combat. Ox carts, camels, and ponies hauled materiel over the restrictive terrain by night. Each soldier began an offensive with a heavy load: 3-days' rations, his bedroll, 4 grenades, 100 rounds of ammunition, and a mortar bomb or 2. The Chinese procured some of their food locally, sometimes by force, sometimes by legitimate means. At times, they required villagers to cook for them. Captured UN supplies were also a ready source of ammunition, equipment, and rations; in many cases, the Chinese replenished their stocks after a successful attack. The Chinese also buried supplies when withdrawing from an area with the expectation that the caches would be dug up and used upon their return.

In the worst conditions, the CCF soldier learned to do without. His self-discipline led him to subsist on meager rations and to forego nonessentials.



Meager Chinese rations

In combat, the Chinese infantryman also learned to pass up promising targets in order to conserve his ammunition for critical times. In fact, there are a few accounts of Chinese soldiers going into the attack without firing their weapons at all. The stoicism, perseverance, and hardiness of CCF light infantrymen stood them well during hard times.

CCF Leadership

How was the CCF able to accomplish as much as it did during the Korean War given the woeful inadequacies of its logistics and the overwhelming superiority of UN firepower? As mentioned earlier, part of the answer lay in the CCF's philosophy of "man over weapons." The application of this philosophy obtained maximum value from the CCF by focusing on its most potent capability—human will. By sheer efforts of will, CCF infantrymen were able to rise above their weaknesses in materiel. The Chinese leadership was able to successfully mobilize the superior human element in its men. Thus, leadership was crucial to the effective small-unit actions that were so critical to CCF operations.

To ensure effective leadership, Chinese combat leaders operated through a number of institutional structures and techniques. So that control would be assured, military leaders had to be true believers. Thus, virtually all cadres were dedicated Communists in good standing. In their person, they represented the establishment and had a personal stake in the official policy, doctrine, and objectives. They were dedicated to the Chinese involvement in the war and to specific CCF methods.⁴⁷

One of the objectives of leaders was to establish "comradely relations" as the basis for actions on the battlefield.⁴⁸ Comradely relations went far beyond what Westerners might describe as unit cohesion. Comradely relations sought the total dedication of individual soldiers through their involvement in the small-group life of a unit—a group life which approached the intensity of a military-religious order. This philosophy incorporated the principles of solidarity, political loyalty, fierce determination, and the ethical responsibility to fight on and endure. Individualism was ruthlessly suppressed in favor of group identity. Soldiers were made to believe that their well-being and survival depended entirely on the small group.

To instill these principles, the CCF leadership used such means as political conversion, indoctrination, and egalitarianism (in terms of uniforms, privileges, and polite forms of address among all ranks). Perhaps the most important technique was an organizational one—the 3x3 cellular organization established within squads.⁴⁹ General James Van Fleet, commander of the Eighth Army, described the value of this arrangement in this way:

The Red Chinese Army is divided at the very bottom into units of three men, with each assigned to watch the others and aware that they in turn are watching him. Even when one of them goes to the latrine, the other two follow. No soldier dares fail to obey orders or even complain. . . . The little teams of three, each man warily watching the others, begin the advance. . . . Yet—although terribly alone in the fight despite the two men at his side, made even more lonely by the doubt whether the two are there to help him or to spy on him—the Red soldier moves ever forward. . . .⁵⁰

Certainly, this account is oversimplified, yet it points out the importance of this controlling device in creating conformity and motivation in the CCF.

This sort of tight organization also facilitated command and control and gave the squad leader three tidy combat groups to use in rapid tactical responses. Its effectiveness for light infantry operations has been of high interest to some Western officers.

Although CCF leaders, particularly the political commissars who were assigned down to company level, attempted to manipulate and control their men, they also showed a true regard for their welfare. Care was taken not to institute arbitrary or harsh discipline. Soldiers apparently had the right to raise legitimate complaints without fear. Furthermore, through precombat briefings, the men were led to feel as though they were participants in the decision-making process; they were more likely than out of loyalty than duty or fear. Group meetings were held during which soldiers were exhorted and encouraged to declare their loyalty to the group and to take oaths. An awards system cultivated soldierly honor and raised soldier prestige. Moreover, the leaders explained to the men why they were in Korea and what they hoped to accomplish, stressing their superior moral position vis-a-vis the UN command.⁵¹

The Chinese cadre also led by personal example. In combat they were in the forefront, exhorting, motivating, and directing their men. In retreat, they were the last to fall back. Furthermore, they suffered the same privations as their men and exhibited courage and determination in all circumstances.

Through the means of unrelenting group pressure, strict organizational controls, moral and political indoctrination, individual co-optation, and personal example, CCF leaders forged the "comradely relations" necessary to execute the particular tactical style of the CCF. The effectiveness of these methods of leadership, command, and control is borne out by the outstanding tactical performances of the CCF small units.

Summary and Conclusions

The main strengths of the CCF in the Korean War were the power of the philosophy of "man over weapons," the skills and abilities of the individual light infantrymen, and the effectiveness of the CCF leadership. The integration of these strengths created a fierce battlefield instrument that achieved remarkable tactical successes, even while hampered by crippling weaknesses.

The Chinese leadership's emphasis on the superiority of its soldiers and its assertion that UN advantages in materiel and weapons were insignificant created confidence in the infantry ranks that they could defeat the UN command. Their confidence proved well founded, at least in the first year of the war, when the Chinese frequently demonstrated superior field craft, almost inhuman endurance, and a sharp appreciation for terrain. Undaunted by weather, terrain, or privation, the CCF, during this stage of the war, pressed the UN Command to its limits. Eventually, however, as the nature of the war changed—particularly as UN lines firmed up and were tied in—these Chinese strengths were nullified.

Another Chinese strength was their marked ability to improvise. The CCF used whatever resources were at hand for the military purposes of camouflage, deception, booby traps, fortifications, and sustenance. The record of CCF operations in the Korean War is one of resourcefulness, of using ingenuity to compensate for lack of materiel. Many U.S. tactical after-action reports note this uncanny Chinese propensity for improvisation.

The most obvious weakness of the CCF was its severe shortage of military equipment for combat support and combat service support. Furthermore, the Chinese were hopelessly outmatched by the UN in firepower, transport, and airpower. The CCF never had enough artillery, trucks, aircraft, signal equipment, medical equipment, or combat stores to support its infantry armies. The Chinese logistic system was also a major weakness. Its inability to sustain offensives beyond three or four days is well documented. Of course, the crushing effect of U.S.-UN airpower and long-range artillery on Chinese lines of communication must not be overlooked.

A further Chinese debility was their tactical rigidity. This weakness characterized CCF patrolling, in that flank and rear guards were not used, and routes were reused even though patrols showed repeated vulnerability to ambushes. Tactical rigidity was also the result of the Chinese lack of signal equipment. Lacking adequate communications, the Chinese maintained attacks even when outcomes appeared hopeless, thus taking excessive casualties.

These weaknesses were all magnified during the last two years of the war. Once the UN Command had established a solid defensive line from coast to coast backed by huge volumes of indirect fires and airpower, Chinese shortcomings proved more damaging. Furthermore, the Chinese advantages in tactical maneuver, infiltration, and stealth lost their value. The CCF was no longer able to take objectives by slipping through thin lines to attack the enemy flank or rear. The Chinese occasionally conducted human wave attacks out of frustration with this situation.⁵²

Ultimately, the CCF suffered an erosion of morale. By maintaining unchallenged command of the sea and the air, inflicting continuous damage to lines of communication, and delivering shocking bombardments against Chinese line units, UN forces, through their technical superiority, finally asserted their massive advantages.

By the autumn of 1951, the CCF leadership could no longer deny that its deficiencies in materiel doomed it to a tactical stalemate at best. Realizing its impotence, the CCF lost its psychological advantage over the UN forces and began to suffer a morale problem. UN firepower had equalized the manpower imbalance and, in the final analysis, negated Chinese strengths. Thus, the Korean War represents the limits to which the "man over weapons" philosophy can be carried.

Finally, it is important to reiterate that, aside from their initial strategic intervention, Chinese light infantry armies *could not* operate at the operational level of war. Deficiencies in long-range weapon systems, sustainability, and transport prohibited the development of a capability for deep maneuver by the CCF. When coupled with the devastating deep interdiction of UN air forces and the lack of maneuver space, these deficiencies imposed a tactical ceiling on CCF operations. Even though the CCF offensives of 1951 involved several

armies of hundreds of thousands of men, they assumed a tactical character, albeit on a huge scale. The fitful start-and-stop pattern of attack, regroup, restock, and attack limited the CCF to a series of short-range tactical successes that were eventually blunted by the firepower and defenses of the UN Command.

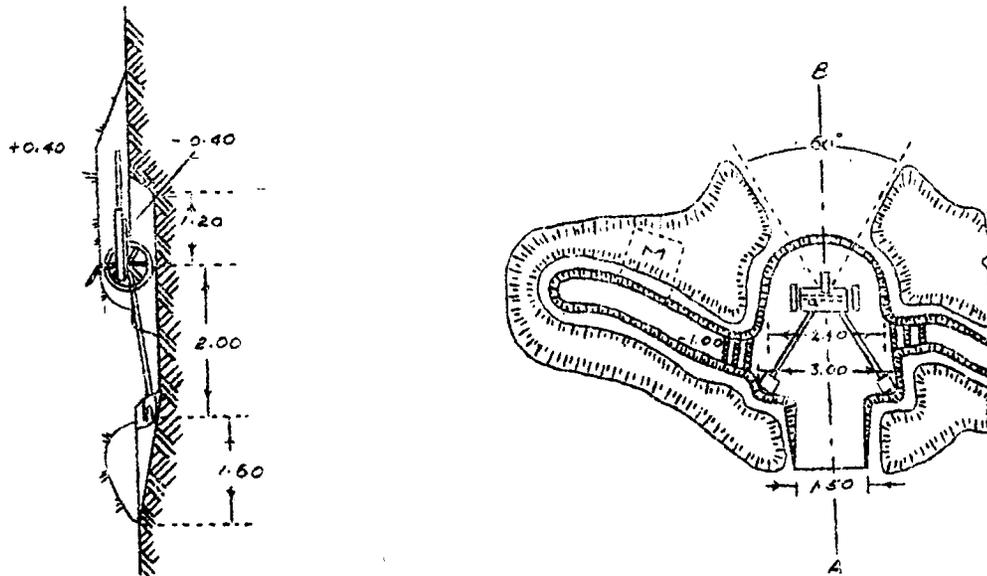
Appendix A*

Illustrations of CCF Fortifications

Illustration 50. Emplacement for 37 mm anti-tank gun.

Cross section view from A-B

Top view



Note: Amount of dirt excavated: 3.68 cu m.
Time of completion: 9.49 man hours.

63
UNCLASSIFIED

RESTRICTED

*Source: U.S. Army, Corps of Engineers, Intelligence Division, "Enemy Field Fortifications in Korea," no. 15, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, January 1952), 2-6; *Chinese Communist Reference Manual for Field Fortifications*, translated by the Military Intelligence Section, General Staff, Far East Command, 1 May 1951, 63, 64, 112, 178.

UNCLASSIFIED

Illustration 51.
Emplacement for artillery.

Figure 1: A simple one

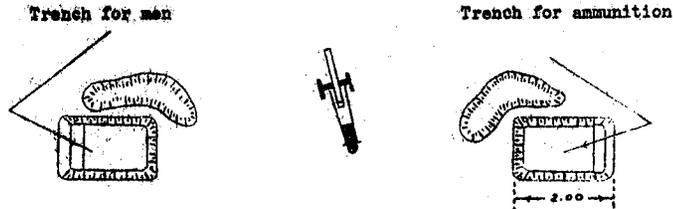
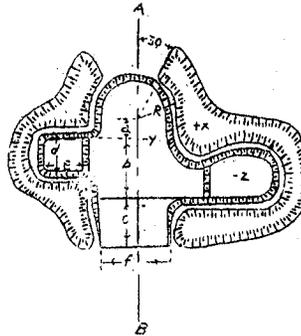


Figure 2. A complete one: A-B a primary line



Note 1. Amount of dirt excavated and time required for completion:

Type of weapon	Amount of dirt excavated	Time of completion
75 mm Howitzer	6.85 cu m	17.81 man hours
Field gun	20.62 cu m	53.61 man hours
Mountain gun	13.88 cu m	36.09 man hours
150 mm Howitzer	45.44 cu m	118.14 man hours
100 mm Cannon	43.20 cu m	112.32 man hours

64
UNCLASSIFIED

UNCLASSIFIED

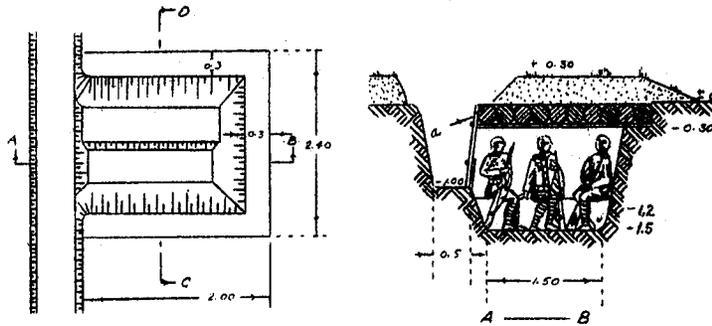
228. Excavated type of light shelter.

The excavated type of light shelter is dug simultaneously with the trenches, and then the cover is placed over it. In case of necessity, the cover could be erected first, then the shelter dug after the trenches are completed.

Illustration 101. Excavated type of light shelter.

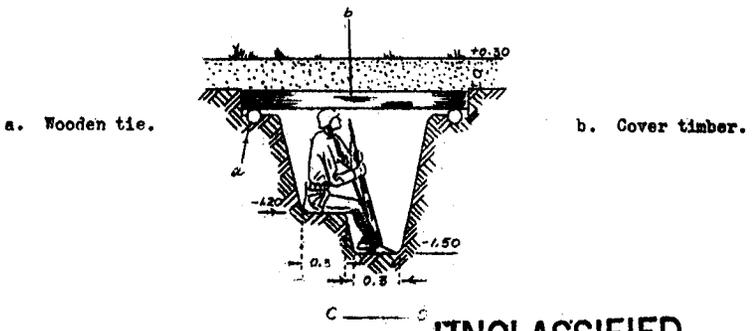
1. Plane view.

2. A-B Cross section.



a. The door board is used to protect personnel against enemy enfilade and bullets.

C-D Cross Section

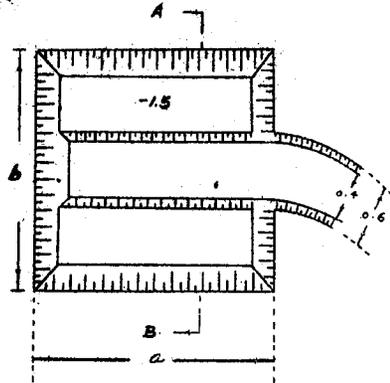


UNCLASSIFIED

UNCLASSIFIED

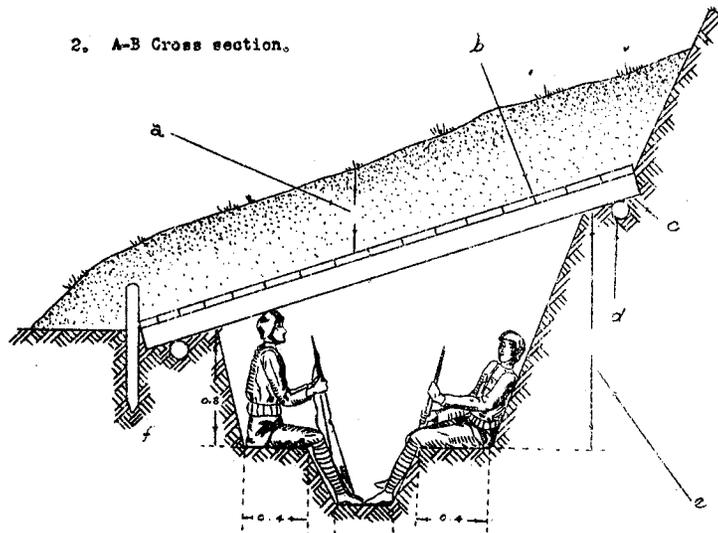
Illustration 104. Reverse
Slope Light Shelter (gentle slope).

1. Plans view.



- a. Approximately 2.00
- b. Varies according to topography.

2. A-B Cross section.



- a. Approximately over 50 cm
- b. Cover board
- c. Rafter
- d. Wooden tie
- e. Approximately 1.5
- f. Base board

UNCLASSIFIED

118

~~RESTRICTED~~

UNCLASSIFIED

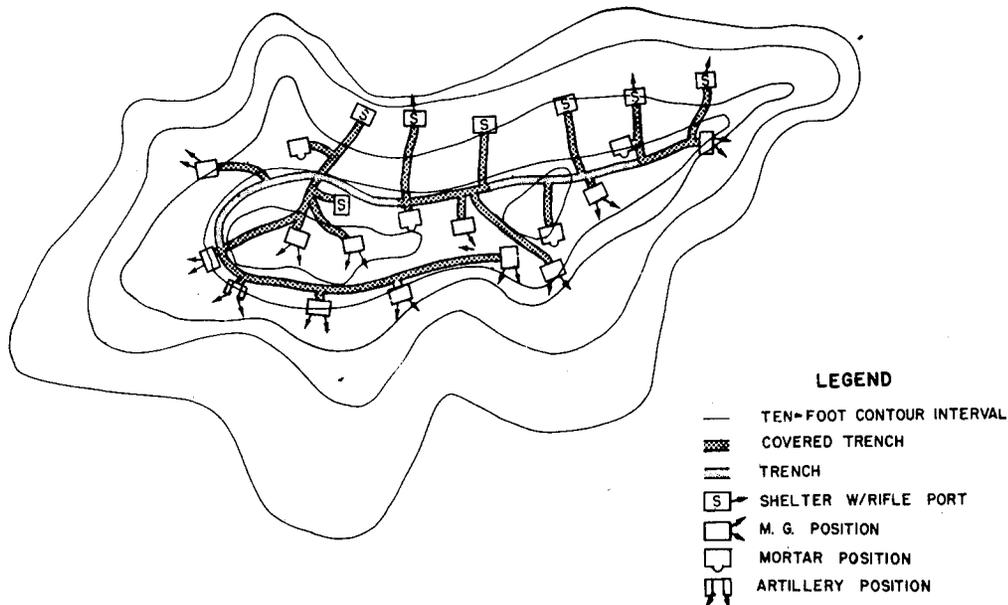


Fig. 1. Typical hill defense system.

2. Types of Emplacements

a. Trenches -- Trench systems (Figure 2) are extensive and well-laid-out on the enemy-defended hills of Korea. Each hill has one main communication trench following the contour of the reverse slope. From the main trench, short connecting trenches branch off to emplacements and shelters.

The main trench has heavy overhead cover at short intervals; it also has small-arms positions and 1-man shelters cut into its walls. In most cases, the connecting trenches are well-covered; they are tunneled wherever possible, especially between positions on the reverse and forward slopes (Figure 3). All the trenches, average 5 to 6 feet in depth and $1\frac{1}{2}$ to 2 feet in width. The overhead cover for the trenches is formed by a 3- to 6-foot layer of logs and earth. The tunnels are not dug to any standard depth below the surface. They are generally

UNCLASSIFIED

~~RESTRICTED~~

UNCLASSIFIED

RESTRICTED

2 feet wide by 3 feet high, although some are only 2 feet square. All the tunnels are shored with timber, wherever necessary.

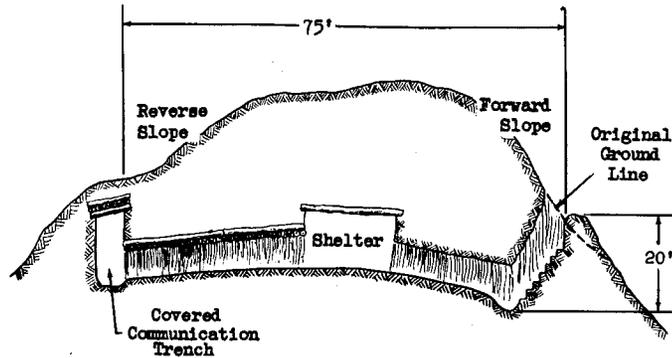


Fig. 3. Tunnel between forward and reverse slope positions.

b. Rifle Positions -- Individual rifle positions are located on both the forward and reverse slopes for all-round defense (Figure 4). In some cases, three or four positions may be interconnected by tunnels, especially where a sharp ridge line exists to make extensive tunneling unnecessary.

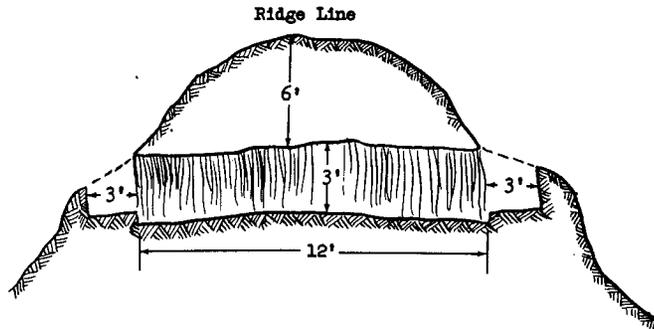


Fig. 4. Individual rifle positions connected by a tunnel.

c. Troop Shelters -- Troop shelters have no standard size. They are normally built on reverse slopes and in many cases they serve as alternate firing positions. These shelters have a capacity of two to eight men, and have a headroom of only 4 to 5 feet.

The overhead protection of these shelters ranges in thickness from 3 to 12 feet and consists of many layers of logs and a cover-layer of earth. Logs 4 to 10 inches in diameter have been found placed in the overhead protective cover. Logs up to 13 inches in diameter serve as support posts. A cross section of a typical troop shelter is shown in Figure 5.

UNCLASSIFIED

3

RESTRICTED

~~RESTRICTED~~

UNCLASSIFIED

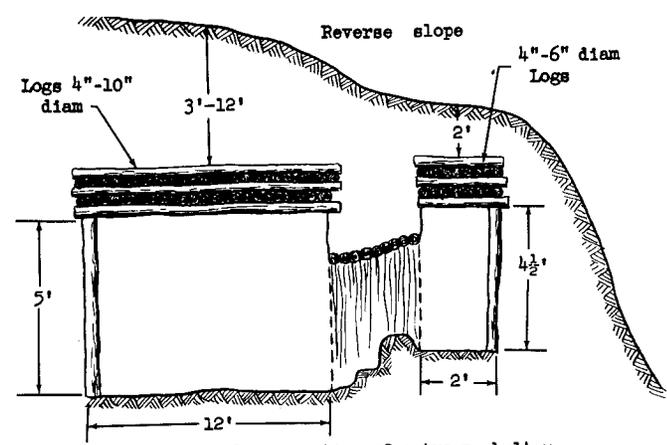


Fig. 5. Cross section of a troop shelter.

d. Mortar Emplacements -- Where the terrain permits, mortar emplacements are usually sited on the reverse slopes. Occasionally, they may be found on the forward slopes. The emplacements (Figures 6 and 7) are dug about 4 feet deep and provided with overhead

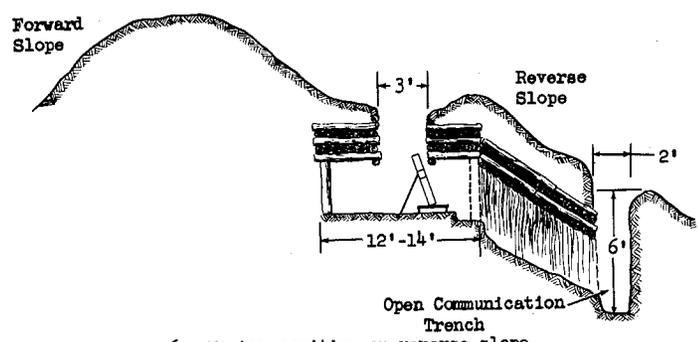


Fig. 6. Mortar position on reverse slope.

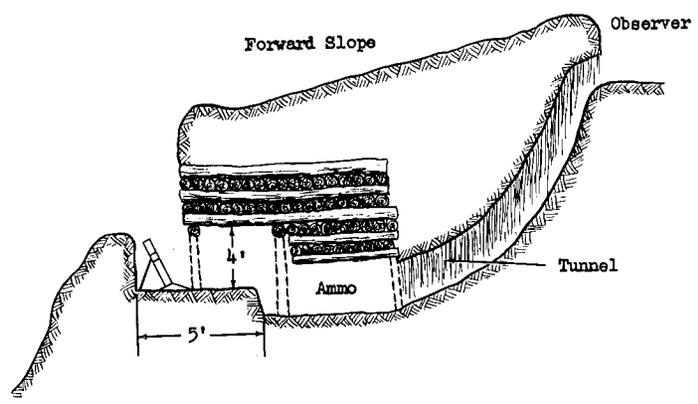


Fig. 7. Mortar position on forward slope.

~~RESTRICTED~~

UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

~~RESTRICTED~~

cover for the crew. Most mortar positions are sited to cover dead areas in the field of fire of flat trajectory weapons on the forward slopes.

As an example of diverse materials used in construction, one mortar emplacement was found with an overhead cover formed by a piece of sheet iron. The mortar was fired through a square opening in the sheet iron, which, however, offered less protection than the conventional log-and-earth covering.

e. Machine Gun and Automatic Weapon Emplacements -- These types of emplacements are quite numerous; wherever possible they are positioned in depth along the forward slopes of hills and their crests (Figure 8). They are the ordinary cut-and-cover type of emplacements, with the emphasis on cover.

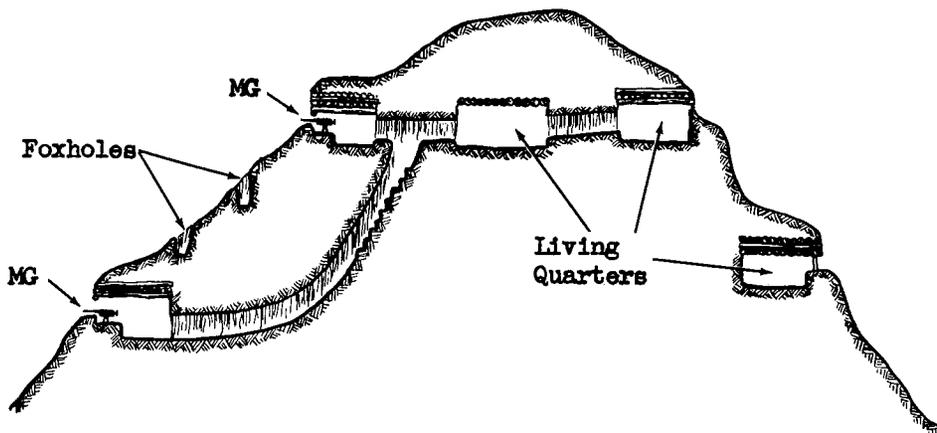


Fig. 8. Cross section of hill, showing machine-gun emplacements and shelters.

NOTES

Chapter 2

1. S. L. A. Marshall, *The Military History of the Korean War* (New York: Franklin Watts, 1963), 5.
2. Matthew B. Ridgway, *The Korean War* (Garden City, NY: Doubleday and Co., 1967), 4.
3. Alexander L. George, *The Chinese Communist Army in Action: The Korean War and Its Aftermath* (New York: Columbia University Press, 1967), vii.
4. Figures 3—5 and table 3 are taken from an unidentified publication by the U.S. Army Far East Command, reproduced by the 8218th Engineer Topographic Detachment. These materials were filed loose in U.S. Army, Forces in the Far East, "Chinese Communist Ground Forces in Korea. Tables of Organization and Equipment," 1953.
5. Marshall, *Korean War*, 33.
6. U.S. Army, IX Corps, G2, *Enemy Tactics, Techniques and Doctrine* (Seoul, Korea?, 24 September 1951), 4. Hereafter cited as *Enemy Tactics, Techniques and Doctrine*.
7. Ibid., 6. See also U.S. Army, Corps of Engineers, Intelligence Division, "Enemy Camouflage Practices in Korea," no. 8, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, September 1951), 1—4, hereafter cited as "Enemy Camouflage Practices in Korea." The Corps of Engineers, Intelligence Division author information is hereafter cited as CE, IQ.
8. S. L. A. Marshall, *The River and the Gauntlet* (New York: William Morrow and Co., 1953), 9.
9. "Enemy Camouflage Practices in Korea," 4.
10. *Enemy Tactics, Techniques and Doctrine*, 5.
11. Ibid., 52.
12. Ibid., 10.
13. Ibid., 9.
14. S. L. A. Marshall, *Commentary on Infantry Operations and Weapons Usage in Korea, Winter of 1950—51*, Project Doughboy, Report no. ORO-R-13 (Chevy Chase, MD: Operations Research Office, Johns Hopkins University, 1952), 5.
15. Marshall, *River and the Gauntlet*, 58—59.
16. CE, IQ, "Stream-Crossing Expedients of NKPA and CCF Foot Troops," no. 10, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, October 1951), 1—4. See also *Enemy Tactics, Techniques and Doctrine*, 7. For an actual tactical account of Chinese techniques in crossing shallow rivers, see chapter 3, "The Affair at Chinaman's Hat," in Marshall, *River and the Gauntlet*, 41—55.
17. U.S. Army, 8th Army (Korea), Historical Section, *Special Problems in the Korean Conflict and Their Solutions* (Seoul, Korea?, 1952), 105—6.
18. George, *Chinese Communist Army*, 3.
19. Lynn Montross and Nicholas A. Canzona, *U.S. Marine Operations in Korea, 1950—1953*, vol. 3, *The Chosin Reservoir Campaign* (Washington, DC: Historical Branch, G-3, U.S. Marine Corps, 1957; St. Clair Shores, MI: Scholarly Press, 1976), 92.
20. *Enemy Tactics, Techniques and Doctrine*, 17—20. Most of the text and figure 6 in this section are drawn from this document.

21. Marine Colonel A. L. Bowser as quoted in Montross and Canzona, *Marine Operations . . . Chosin Reservoir*, 92.
22. U.S. Army, 8th Army (Korea), *Enemy Tactics* (Seoul, Korea?, 1 November 1952), 12A, 48A.
23. *Enemy Tactics, Techniques and Doctrine*, 37–38. A CCF division was normally supported by only one artillery battalion. Close support during an attack generally did not occur. Infantry requests for fire first went through the infantry battalion commander before entering artillery channels.
24. Ridgway, *Korean War*, 186.
25. Marshall, *Commentary*, 99.
26. The preceding account of the Battle of Unsan is summarized from Roy E. Appleman, *South to the Naktong, North to the Yalu*, United States Army in the Korean War (1961; reprint, Washington, DC: Office of the Chief of Military History, Department of the Army, 1973), 689–708.
27. T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: Macmillan Co., 1963), 300–301.
28. *Enemy Tactics, Techniques and Doctrine*, 22.
29. Ibid.
30. Ibid., 23.
31. Ibid.
32. The CCF entered Korea already armed with a large collection of U.S. and Japanese weapons captured during World War II and the Chinese Civil War.
33. Marshall, *Korean War*, 70.
34. Ridgway, *Korean War*, 186.
35. Marshall, *Korean War*, 70.
36. *Chinese Communist Reference Manual for Field Fortifications*, translated by the Military Intelligence Section, General Staff, Far East Command, 1 May 1951, 5–11. Also, CE, IQ, “Enemy Field Fortifications in Korea,” no. 15, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, January 1952), 1–7.
37. CE, IQ, “Chinese Communist Mine Warfare,” no. 5, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, April 1951), 1–7; and CE, IQ, “Enemy Improvised Mines in Korea,” no. 18, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, August 1952), 1–11.
38. *Chinese Communist Reference Manual*, 3–4.
39. U.S. Army Field Forces, “Dissemination of Combat Information—Essential Reports,” (1951), 3–4.
40. *Enemy Tactics, Techniques and Doctrine*, 23.
41. George, *Chinese Communist Army*, 199.
42. *Enemy Tactics, Techniques and Doctrine*, 15; and CE, IQ, “Booby Traps Employed by the NKPA and CCF,” no. 12, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, December 1951), 1–5.
43. Ibid.
44. U.S. Army, I Corps, G2, “CCF Logistical Capabilities: A Study of the Enemy Vehicular Effort on I Corps Front” (Seoul, Korea?, 28 June 1952), 15. See also U.S. Military Academy, West Point, Department of Military Art and Engineering, *Operations in Korea* (West Point, NY, 1953), 14, 37.
45. Ibid., 2.
46. CE, IQ, “Chinese Communist Engineers,” no. 19, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, November 1952), 10; CE, IQ, “Military Construction Practices by the Enemy in Korea,” no. 16, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, March 1952), 3; and CE, IQ, “Railroad Repair and Reconstruction by NKPA and

- CCF," no. 17, in *Engineer Intelligence Notes* (Washington, DC: Army Map Service, June 1952), 1—11.
47. George, *Chinese Communist Army*, 53.
 48. *Ibid.*, 27.
 49. *Ibid.*, 51.
 50. *Ibid.*, 52.
 51. *Ibid.*, 127—59. The author stresses the strong, favorable impact of political indoctrination and precombat briefings on the morale and sacrificial attitudes of CCF troops.
 52. Gerard H. Corr, *The Chinese Red Army: Campaigns and Politics Since 1949* (New York: Schocken Books, 1974), 89.
-

BIBLIOGRAPHY

Chapter 2

- Appleman, Roy E. *South to the Naktong, North to the Yalu*. United States Army in the Korean War. 1961. Reprint. Washington, DC: Office of the Chief of Military History, Department of the Army, 1973.
- Chinese Communist Reference Manual for Field Fortifications*. Translated by Military Intelligence Section, General Staff, Far East Command, 1 May 1951.
- Collins, Joseph Lawton. *War in Peacetime: The History and Lessons of Korea*. Boston: Houghton Mifflin Co., 1969.
- Corr, Gerard H. *The Chinese Red Army: Campaigns and Politics Since 1949*. New York: Schocken Books, 1974.
- Fehrenbach, T. R. *This Kind of War: A Study in Unpreparedness*. New York: Macmillan Co., 1963.
- George, Alexander L. *The Chinese Communist Army in Action: The Korean War and Its Aftermath*. New York: Columbia University Press, 1967.
- Gugeler, Russell A. *Combat Actions in Korea*. Rev. ed. Washington, DC: Office of the Chief of Military History, U.S. Army, 1970.
- Hermes, Walter G. *Truce Tent and Fighting Front*. United States Army in the Korean War. 1966. Reprint. Washington, DC: Office of the Chief of Military History, U.S. Army, 1973.
- Marshall, S. L. A. *Commentary on Infantry Operations and Weapons Usage in Korea, Winter of 1950—51*. Project Doughboy. Report no. ORO-R-13. Chevy Chase, MD: Operations Research Office, Johns Hopkins University, 1952.
- _____. *The Military History of the Korean War*. New York: Franklin Watts, 1963.
- _____. *The River and the Gauntlet*. New York: William Morrow & Co., 1953.
- Montross, Lynn, and Nicholas A. Canzona. *U.S. Marine Operations in Korea, 1950—1953*. Vol. 3. *The Chosin Reservoir Campaign*. Washington, DC: Historical Branch, G-3, Headquarters, U.S. Marine Corps, 1957; St. Clair Shores, MI: Scholarly Press, 1976.
- Ridgway, Matthew B. *The Korean War*. Garden City, NY: Doubleday and Co., 1967.
- U.S. Army. 8th Army (Korea). *Enemy Tactics*. Seoul, Korea?, 1 November 1952.
- U.S. Army. 8th Army (Korea). Historical Section. *Special Problems in the Korean Conflict and Their Solutions*. Seoul, Korea?, 1952.

- U.S. Army. I Corps. G2. "CCF Logistical Capabilities: A Study of the Enemy Vehicular Effort on I Corps Front." Seoul, Korea?, 28 June 1952.
- U.S. Army. IX Corps. G2. *Enemy Tactics, Techniques and Doctrine*. Seoul, Korea?, 24 September 1951.
- U.S. Army. Corps of Engineers. Intelligence Division. *Engineer Intelligence Notes*. Washington, DC: Army Map Service, 1951—1954.
- Individual issues cited below:
- No. 5. "Chinese Communist Mine Warfare." April 1951.
- No. 8. "Enemy Camouflage Practices in Korea." September 1951.
- No. 10. "Stream-Crossing Expedients of NKPA and CCF Foot Troops." October 1951.
- No. 12. "Booby Traps Employed by the NKPA and CCF." December 1951.
- No. 15. "Enemy Field Fortifications in Korea." January 1952.
- No. 16. "Military Construction Practices by the Enemy in Korea." March 1952.
- No. 17. "Railroad Repair and Reconstruction by NKPA and CCF." June 1952.
- No. 18. "Enemy Improvised Mines in Korea." August 1952.
- No. 19. "Chinese Communist Engineers." November 1952.
- No. 23. "Demolition Equipment Employed by the CCA and NKA." March 1954.
- U.S. Army. 1st Cavalry Division. *The First Cavalry Division in Korea, 18 July 1950—18 January 1952*. Atlanta, GA: Albert Love Enterprises, 195?.
- U.S. Army. 3d Division. *3d Infantry Division in Korea*. Edited by Max W. Dolcater. Tokyo?, 1953.
- U.S. Army Field Forces. "Dissemination of Combat Information—Essential Reports." 1951.
- _____. "Report of Army Field Forces Observer Team Number 6." 7 April 1952.
- U.S. Army. Forces in the Far East. "Chinese Communist Ground Forces in Korea. Tables of Organization and Equipment." 1953.
- U.S. Military Academy, West Point. Department of Military Art and Engineering. *Operations in Korea*. West Point, NY, 1953.
- Whiting, Allen S. *China Crosses the Yalu: The Decision to Enter the Korean War*. New York: Macmillan Co., 1960; Stanford, CA: Stanford University Press, 1968.
-