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"FUNDAMENTALS OF THE REVERSE SLOPE DEFENSE"

Captain Allen H. Wood III  
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PREFACE

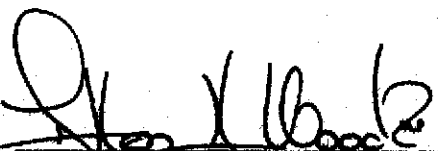
30 January 1956

The incentive to develop this particular subject is derived from a genuine interest in and, heretofore, no little misunderstanding of the basic concepts and the mechanics of defending a piece of terrain from the "back of the hill". The entire article is based on research of publications located in the Infantry School Library and is, therefore, entirely academic in nature.

Many thanks to those busy ladies of TIS Library for their patience and assistance with this monograph. And a loud amen for those cross reference files.

And now, in an effort to protect those gentlemen below listed who might otherwise suffer from the broad sweep of the author's brush, the following absolvment is inserted:

"The point of view expressed in this paper is that of the author - not necessarily that of the Infantry School or the Department of the Army".

  
ALLEN H. WOOD III  
Captain, Infantry

## INTRODUCTION

This monograph is yet another endeavor to sell the fundamentals and concepts of the reverse slope defense to the platoon leaders, the company commanders, and the battalion commanders of the Infantry. This presentation also carries the fond hope that these same people will promote these principles to their units in the form of training - provided they buy the factors herein proffered.

Defensive tactics, as employed by US Forces in Korea, were a radical departure from the World War II defensive concepts. The cordon, or unbroken line, type of defense was so much a part of our undeveloped defensive doctrine that it took quite some time and experience to instill the American Rifleman and his officers in the "strong point" concept of controlling key terrain.

So it is that all too many of the commanders of small infantry units still think solely of the forward slope of a strong piece of terrain when they envision the positioning of men and weapons for a defensive operation. The intent of this paper is to demonstrate to all the many advantages of the reverse slope defense. No attempt is made to replace the forward with the rear slope, only the contention to employ the latter to augment the former.

The advantages, disadvantages, plans and conduct will be presented, discussed and, finally, illuminated by a combat example from the North African Campaign in 1943.

## DISCUSSION

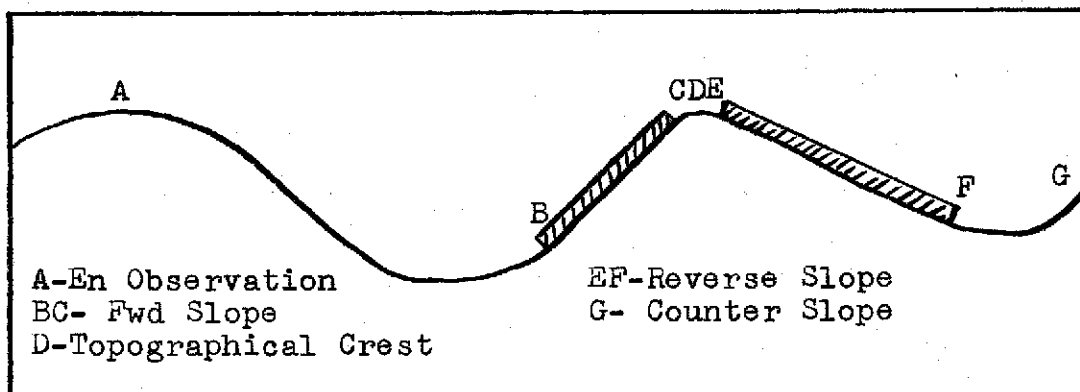
There are no startling revelations in this article, but rather a sharing of some common truths. When you take a dollar bill from your pocket to make a purchase, you do not consider the bill as having a front and a back. It is an entity in your mind. Yet many infantry commanders can not quite bring themselves to the point of considering a piece of terrain in that light. Visualize, if you will, a hill mass, all of it, as one homogeneous area that you are required to defend. If it can best be held by placing the main battle positions on the forward slope, then do just that. If, however, this goose egg inscribed on your map by the regimental commander appears difficult to retain from the forward slants, then please consider the following contentions.

This monograph is, precisely, an effort to demonstrate that under certain conditions of terrain, troop disposition, or tactical situation, or a combination of these factors, the reverse slope of a parcel of ground is more tenable than is the conventional forward slope.

First, let the author define a reverse slope for your consideration. "The reverse slope is that portion of the slope masked from the enemy fire or observation or both, by the topographical crest, and extending back from that crest only to maximum effective range of rifle fire."  
(6:130)

The two main points bearing on this concept throughout the discussion are: (1) the outstanding advantage of

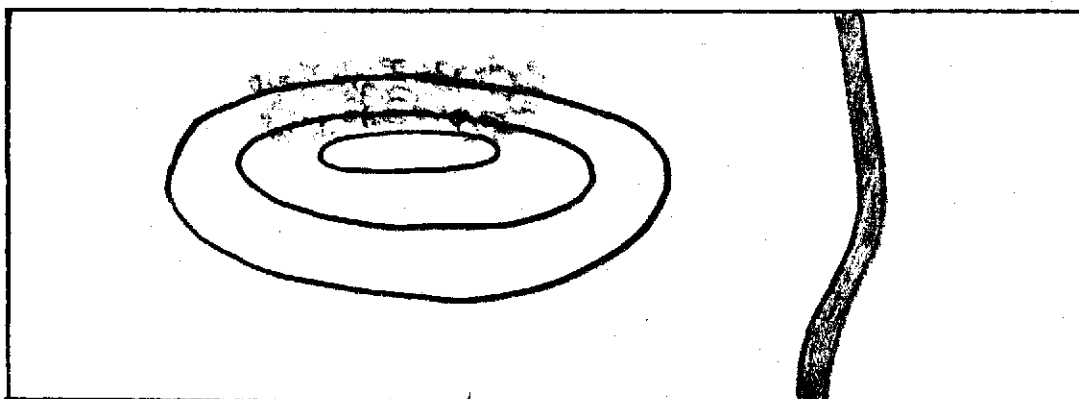
the reverse slope is the cover and concealment that it offers the defender; and (2) the position is valid only as long as the defender can dominate the crest.



(Figure 1)

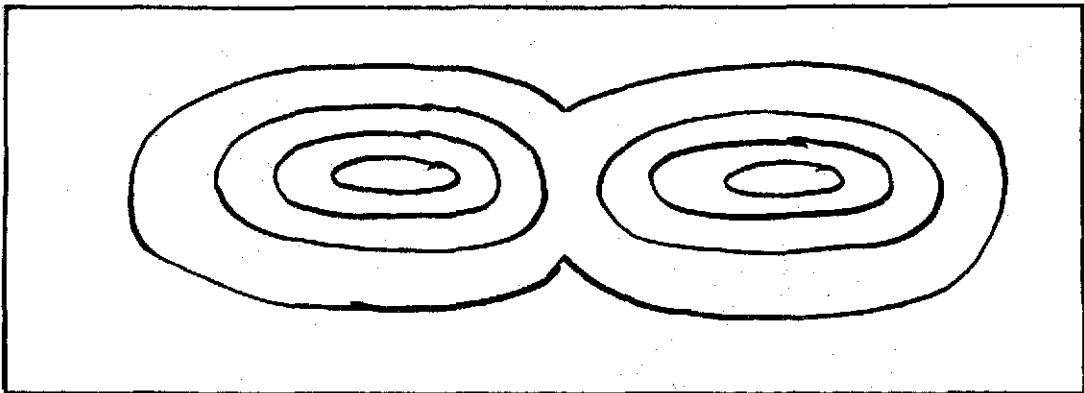
TERRAIN

Let us examine the types of terrain that best lend themselves to reverse slope consideration. There are some three general configurations of the ground that invite our attention. The first is the isolated hill having good fields of fire on the rear slope and to the flanks but poor similar considerations on the forward slope. Our initial chunk of dirt is even more effective if there is one or more natural obstacles to the flanks or if the terrain on the flanks does not offer good observation for direction of fires into the defensive position. (Figure 2)



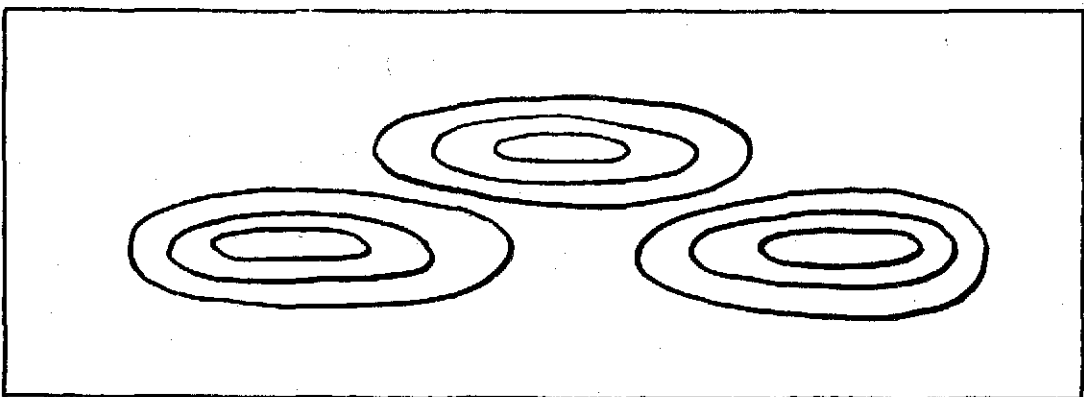
(Figure 2)

Next is the series of mutually supporting hills running generally perpendicular to the enemy's axis of attack. (Figure 3)



(figure 3)

Finally, consider an area where the hill masses do not prescribe a straight line pattern. This type of terrain utilizes a portion of the defensive troops on the forward slopes and still others on the rear slopes of the same general battle position. (Figure 4)



(Figure 4)

#### TROOP DISPOSITION

There might very plausibly be occasions when, because of limiting points established by higher authority, it would be impossible to move to the forward slope of a likely knob, and, therefore, unless the senior commander can be persuaded to the contrary, digging will commence

on the rear slope.

It might also come to pass that a unit would form a salient or a re-entrant into the normal trace of the defensive line if it were to form on the front of the hill. Again, the reverse slope is feasible.

#### TACTICAL SITUATION

Under the considerations of plausibility from the tactical situation viewpoint, there appear to be three valid conditions favoring the reverse slope.

Two of these conditions appear more often when the defender is assuming a retrograde attitude, either temporary or sustained. The lack of air support and predominant artillery backup is usually manifest in these unhappy periods when the attacker is enjoying air supremacy. These are trying times for the defender to be in the open. The second situation presents itself when the attacker enjoys an overwhelming direct fire edge over the defender. In both these above instances, defensive positions on forward slopes are subject to constant, intense fires both day and night. The tremendous pressure on the defenders need not be further described.

The third situation arises when the forward slopes have not as yet been taken or when it is deemed unnecessary to take them.

We have reviewed the conditions of terrain, troop dispositions and tactical situations that favor the use of the reverse slope. Let us now consider the outright advantages and disadvantages indigenous to this concept.

#### ADVANTAGES

1. The enemy cannot make a detailed plan of attack



on the position because he does not have observation into the battle position. Only by air can he discern the disposition of troops and weapons. This is, of course, provided that he knows of its presence at all.

2. The enemy's direct fire weapons are completely masked by the crest.

3. In the absence of required observation for effective artillery and mortar fire, the enemy's high angle fires are going to be ineffective at best. Again, air is his only means of observation.

4. The defender has a tremendous element of surprise in his favor. Not only does he not disclose his main battle position by premature firing, but when he does open fire, the attacking infantry is within accurate killing range of the defender's rifles and crew served weapons.

5. With the crest masking the activities of the position, the defender can continuously work on improving the fighting holes and weapon emplacements, clear fields of fire, and develop obstacles. Perhaps equally important is the fact that the men are not pinned down to their holes and can move about with relative freedom. This is a big morale factor.

6. Finally, it offers extensive latitude in the employment of the reserves. Their movement to counter-attack positions will not be as normally harrassed by artillery and mortar fire as it might be under normal conditions of visability. (All references support these contentions)

## DISADVANTAGES

This concept, as well as nearly all others, is not without some undesirable features. These are not entirely prohibitive, however, and can be compensated for to a considerable degree as will be shown in the discussion of the planning and conduct phases. These disadvantages are:

1. Observation of the enemy from the main battle position is limited to the attacking waves only.

2. The reverse slope defense is more vulnerable to night attack because sounds are less discernable from the back of the crest than they are from the front.

3. Mine fields and obstacles on the forward slopes are difficult to cover with any fires and are impossible to cover with direct fires from the main battle position. (All references support these contentions.)

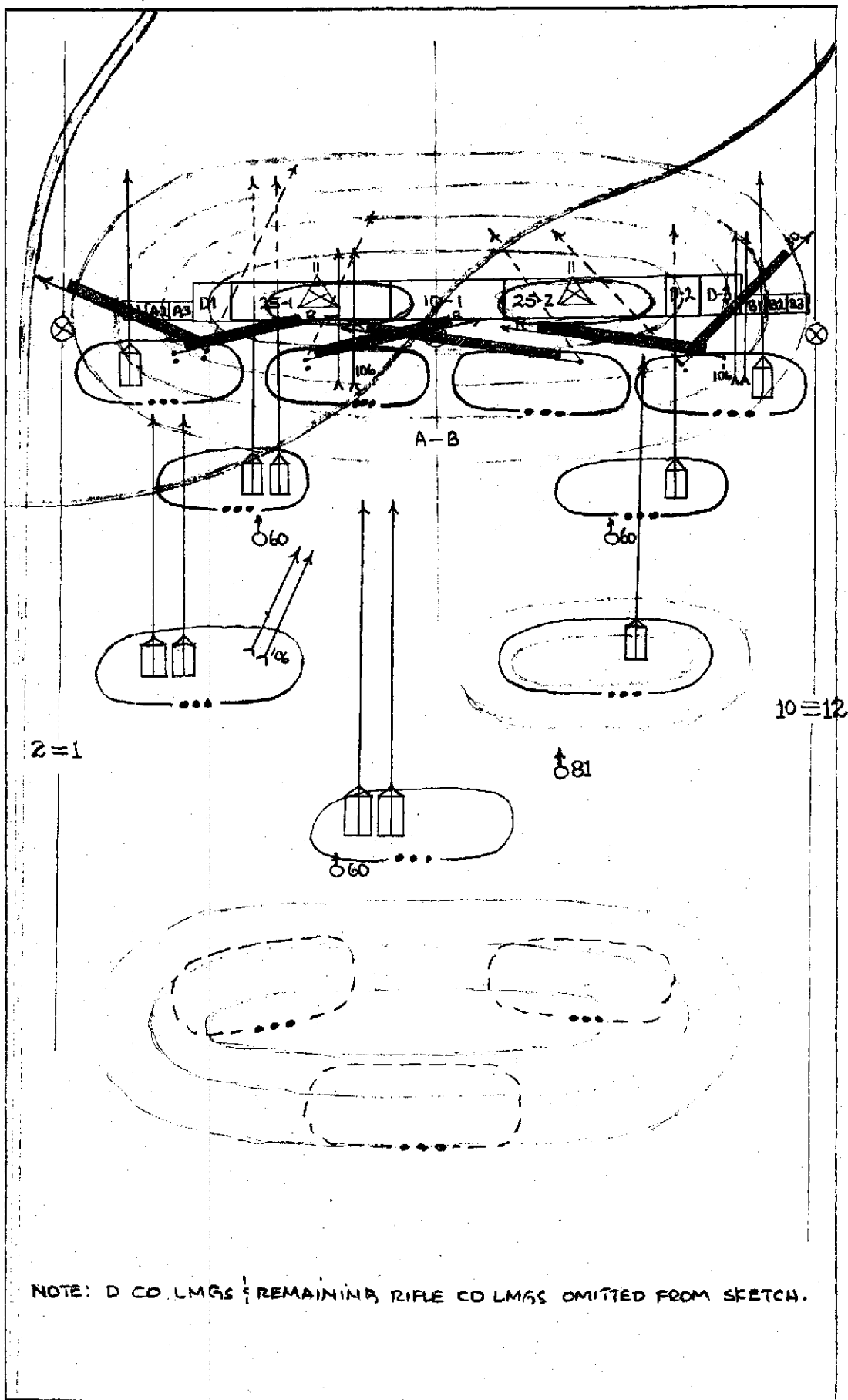
## PLANNING THE DEFENSE

Following the basic precept that unless we hold the crest we must mortgage the position, and unless we can counter-attack and retake the crest we will have to foreclose the entire defensive position, let us discuss the planning of this defense.

In establishing the size of units capable of conducting this operation, this author holds that the span runs from platoon through battalion. The platoon is the smallest unit in that it is the first element having sufficient organic and/or attached weapons capable of supporting an operation of this nature. The battalion is the largest for the sole reason that it appears improbable

that terrain suitable for a regiment or division would ever present itself. History shows only one example of a regiment and none of a division. The author does not rule out the ability of a regiment to conduct a reverse slope defense, merely the probability of ever being presented with the occasion. A diminution of the planning factors will present similar solutions for both company and platoon size situations. (Figure 5)

The basic consideration during the planning and conduct phases is the crest. This is the focal point of the entire defensive position. It also serves as a base point for measuring distances to features such as main battle positions and observation and security elements of the unit. As we must be able to deliver killing rifle fire onto the crest, the main battle position should be located, ideally, between 200 to 400 yards down from the crest. Don't recoil at this rigid limitation on distance, for they are ideal distances and not guide figures as such. If the fields of fire are more fertile up or down the slope, then employ them to good advantage. There are two limiting factors as to how far up or down you can go. The position must be sufficiently behind the crest to be out of range of hand grenades thrown from just over the front slope of the hill. It must also be close enough to be within effective rifle range of the crest. Therefore, the outside planning figures appear to be from 100 to 500 yards of the crest. Beyond these distances we do not control the crest by fire from the primary positions.



(Figure 5)

Throughout this discussion, the model unit will be an infantry battalion with two platoon of tanks attached and an allocation of two 105 barrages and one 4.2 barrage.

Because the enemy is masked by the crest and observation is nill, the primary consideration of the main battle position becomes fields of fire.

Machine Guns are employed in the conventional manner. Some slight departures from norma are noted in placing the heavy guns on the flanks to enable them to deliver grazing fires on the forward slopes of adjacent hills. As is customary, all other machine guns are assigned primary targets and areas of fire on the crest and final protective fires designed to interlock just short of the crest.

Anti-Tank Weapons are a must on the flanks. Not all of them, of course, but that is the primary consideration for location. Additional weapons are located on the interior of the battalion to cover likely armor approaches and, secondarily, in depth to add to anti-tank defense.

Tanks are employed with one section attached to each front line company and one platoon attached to the reserve company. Front line sections are assigned AT roles primarily to the flanks and the platoon with the reserve add the depth and provide shock action for counter-attack.

Mortar and Artillery barrages are placed on the crest. Concentrations are planned for long range delaying fires, in the areas of generally recognizable foot approaches, and on the forward slopes of the defensive position. Not much change in detail, is there? No, the basic plans for the defense of a rear slope differ ever so slightly from

the standard concept. The one outstanding differential is observation.

Planning the employment of the observation and security elements of the defending force and their supporting fires is the one big ace in the hole for minimizing the three inherent disadvantages of this form of defense. Not unlike the O&S elements of the conventional defense, the mission of the outlanders is to provide early warning, direct delaying fires, harrass and deceive and delay the approach of the enemy.

The security forces are positioned well forward of the position on likely armor and foot approaches and are augmented by forward observers to direct delaying fires.

The observation elements on the forward slopes of the hill are reinforced with riflemen and automatic weapons during the daylight hours. The tanks and anti-tank weapons are moved to the front and forward flanks during this same period to provide effective long range anti-tank defense. During the hours of darkness, the observation elements are strenghtened even more forcefully. The majority of the front line platoon personnel are moved to supplimentary positions on the forward slope and only a skeleton force from these platoons is left in the battle position. In this manner, the threat of night attack is greatly diminished. Routes of withdrawal from these positions are situated so as to move around the flanks of the hill rather than over the crest.

Mines, Barriers and Obstacles are placed forward of the crest, on the crest, and to the flanks thereof. When

time is available, all conventional devices of the above category are employed to strengthen the position. When time is not plentiful, the following priority of construction is recommended:

1. A grenade screen fifty yards in front of the front line platoon positions. The enemy will lob grenades from over the crest immediately after his first repulse and thereafter whenever he can.

2. Anti-tank and anti-personnel mines fields to cover the flank entrances to the main battle position.

3. Barbed wire in front of the supplementary positions on the forward slopes.

4. Anti-tank and anti-personnel mine fields forward of the hill to be covered by the security forces and to aid as an early warning device against approaching enemy at night.

5. Road blocks, abatis, bounding fougasses and other devices as time will allow.

Patrolling requirements are as constant for the reverse slope defense as they are for any other form. It is, however, even more important in its assistance to the early warning mechanism of this defense than it is in other forms.

Counter-Attack Plans are laid on to regain the crest by attacking through either front line company position or by attacking around either flank. The acute need for celerious employment of the counter-attack force is brought to bear by one factor - observation from the crest. Should the enemy seize the crest and establish himself

thereon, the original advantage of being able to move the reserve swiftly and without observation will be lost unless the reserve is rapidly employed. Tank-infantry counter-attack against an enemy not yet supported by their own armor has a tremendous edge over infantry in the open.

Flank Protection is at all times a major concern of the defensive commander. The front is relatively secure compared to the flanks. The following excerpt from the files of military history pretty well summarize the strength of the front and the cause for concern for the flanks:

"The Jap is adept at using the reverse slope defense. On one occasion a rifle company got to the crest of a hill with no resistance. The enemy had entrenchments on the crest and reverse slope and swept the crest with knee mortar and machine gun fire. Our outfit could not move over the crest and attempts to flank the crest by moving up the side spurs met with failure. The position was eventually taken by containing the enemy with mortar fire, making a wide envelopment, and surrounding the area".(1:all) If the enemy cannot crack your front, his next attempt will be your flanks.

#### CONDUCT OF THE DEFENSE

With the units and weapons emplaced as discussed in the planning phase, the enemy starts his attack. The security forces bring fire on the advancing troops, delaying and harrassing them, but with determined effort, the enemy moves on. The security forces are slowly driven back and eventually withdraw into the battle position by routes around the flanks of the hill. Now the reinforced



observation elements on the forward crest take the enemy under fire. Long range and high angle fire, both anti-tank and high explosive, is poured into the advancing columns and takes a deadly toll. Still the enemy and his diminishing armor support pound forward. Our tanks and 106s pull out and move back into their primary positions, leaving the machine guns, 57s and riflemen to cover the mine fields and tactical wire. Still the enemy bloodies his way forward. Under intensive and overpowering direct fire delivered on the forward slopes by the enemy, the machine guns and 57s haul back to their number one holes. Only a few riflemen remain, sniping away at the on-crawling enemy infantry and slowing their painful advance.

The word goes out to pull in all the observation elements and the main battle position readies itself for the large charge. All is quite still for a moment or two. Then, the enemy pours over the bald crest and as his first wave clears the crest and starts down, the battle positions break their silence. Bigbarrages fall up and down the crest pock-marking the stunned ranks. Those few forward of the crest not caught up in the fury of the barrages are vivisected by the murderous machine gun and rifle fire. As the enemy reels from the crest, the barrages are lifted and the forward slope concentrations, already surveyed in, chop up the troops as they move back. Those enemy throwing grenades from the now quiet side of the crest are thwarted by the grenade screens in front of the defensive positions.

This is how the initial attack might come and might

be repulsed. Should a second attack succeed in gaining the crest, then we must counter-attack as planned and do it swiftly before the enemy can get a complete picture of our battle position. Should the enemy pull out and attack from the flank, the preponderance of anti-tank fire on the flanks should place you in good stead for defending these areas. Again, should he penetrate the position from any direction, counter-attack rapidly and forcefully.

I have painted perhaps an over rosy picture of this reverse slope concept. The ingredients are basic and proven and there does not seem to be any good reasons why a well planned and conducted defense of a reverse slope can not be highly successful.

#### COMBAT EXAMPLE

This is the story of a young infantry commander who conducted a whole of a reverse slope defense without even knowing that he was conducting one, per se.

"Before World War II we gave little thought to reverse slope defense; most of us had not heard of it. Soon after the beginning of the North African Campaign, we began to hear a lot about the "new form of defense" the Germans were using and how difficult it was to overrun. At the same time our troops, who were defending on the forward slopes, were beginning to feel the effect of enemy direct fire weapons and observed artillery fire. Actually, our officers, especially the junior officers, knew very little about organizing this form of defense except from what they had seen of overrun German positions; and yet, by applying the principles they knew for defense, they

were successful.

Here was an example of a lieutenant who was forced into a reverse slope defense because of the circumstances, and who organized a successful position. The time and place was March 1943 in North Africa. (1st Platoon, Company "K", 18th Infantry) The 18th Infantry, Gafsa and El Guettar having been captured, was attacking east along the Gabes Road. As the regiment approached the hills just east of El Guettar it was ordered to occupy a defensive position.

The first platoon of Company "K" was ordered to organize a hill to the flank, off by itself. The hill was small, about 200 yards wide, with a gentle slope both front and rear. The rear slope was cut by a small wadi, a ditch about four feet wide by five feet deep, which paralleled the crest of the ridge.

It was at the foot of this hill that Lieutenant 1st Platoon found himself, with his platoon, on a chill grey morning of 22 March. The forward slope was under scattered small arms fire from enemy positions in the desert. The Lieutenant knew, from G-2 channels, that the German 10th Panzer was somewhere out front and that he could expect a tank attack anytime that day.

Knowing that he had to do something about getting in to position, he climbed to the crest of the hill to reconnoiter the forward slope. His reconnaissance, however, was cut short when the enemy opened fire on him. Rolling back under cover, he thought his situation over. He knew he couldn't place his platoon on the forward slope until dark

because of the fire and yet he had to have some tank protection before the Germans attacked.

Realizing he had to make use of any possible tank obstacle, he again crawled up to the crest to check the forward slope. There wasn't a thing he could use except the wadi to his rear. It would make an excellent obstacle if only it were on the forward slope. Suddenly he began to look at the area with new eyes. The Germans had been defending on the reverse slopes and theirs had been tough positions. If he organized on the reverse slope, behind the wadi, the troops could prepare their positions during daylight because the crest would conceal them. Also, the wadi would give him that added tank protection.

He put the platoon in along the wadi, placing his men five yards apart. Each man dug a foxhole in against the forward bank. He placed the grenadiers of the right and left squads on the flanks of the platoon. (Rocket launchers too) The grenadier from the center squad was detached and sent to the right flank. The 60mm mortar squad (attached) found a depression in the wadi wall near the platoon CP. The lieutenant split his LMG section and emplaced one on each flank of his battle position.

He checked his BARs to see that they could cover the entire crest from their places in the wadi, organized two OPs on the crest, and turned things over to the platoon sergeant while he dug himself a hole.

By dark, the prophesied attack had not materialized, and the lieutenant was pretty well satisfied with his hasty fortifications. He still felt a bit left-wingish with

his platoon behind a hill and now he realized an opportunity to improve his position. He called his NCOs together and issued an order.

"One exception to our original plan. The two light machine guns will shift their positions as much as necessary to let them fire across the front as well as to the flanks.

The second squad will establish a two man OP 500 yards straight to the front. Relieve the OP every hour so that everyone will get his chance to dig in."

By midnight, the digging was completed and the lieutenant split the rest of the night into two watches, letting half the platoon sleep during each watch.

The expected attack by the 10th Panzer began at 0400 23 March. The tank elements overran the 18th Infantry's outposts and passed completely through the sector to engage the artillery positions in the rear.

The lieutenant was awaked about 0600 hours by the sound of motors and steel tracks ringing on rock. The Platoon Sergeant, up on the crest, was growling, "Pass the word to hold everything. I will personally brain the man who opens up."

The lieutenant, coming up, informed the sergeant he was taking over. He further stated that the German Infantry would be along soon and the platoon would stay put.

The Mark VIs lumbered up the valley on both sides of the hill and disappeared in the platoon's rear. Things were quiet for a long time. The sun climbed to full daylight.

At last, a man in the right forward squad, squinting hard into the sun, called, " Here they come."

A line of huge black beetles waddled through the dust crawling up the valley. Armored infantry in half-tracks. At about 700 yards, dust began to kick up on the hill top and slugs zinged off rock outcroppings here and there. Some of it was more than small stuff.

The man next to him was hit. The Lieutenant made his decision. "Back into the wadi. Pass the word, and move".

The platoon slide back over the crest and scrambled to cover in the wadi. The lieutenant yelled, "Hold your fire. Don't open up until you hear me fire".

The sounds of motors approached. There was a grinding of clutches and a deeper roar as the half-tracks mounted the slope. Then the noise paused and came no closer. The lieutenant guessed that the enemy was still a couple of hundred yards away.

There was a breathless five minutes in the wadi. Then a German Officer and his runner appeared on the crest. The lieutenant gave him time, by squeezing a bit too long, to jerk up his arm to wave his man forward. The Platoon Sergeant got the runner.

German Infantry poured over the crest and the MIs and BARs started to chatter in earnest. No German made it far enough forward to rate the wadi as a grave.

In the course of the next hour, three more attacks came doggedly over the crest. After the failure of the last, the now educated survivors stayed behind the crest

and threw grenades over.

A warning system, improvised on the spot, worked perfectly. When a german grenade flew over the hill the men who saw it bellowed and everybody ducked.

After every explosion a shower went back over the crest in the other direction. The lieutenant had a lot of centerfielders in the platoon and the germans' arms were no match for theirs.

The 60mm squad was lobbing them over the crest with dispatch and enthusiasm. By mid-morning, the Germans were gone from the forward slopes.

The Germans returned to the attack at 1400. They had looked over the ground carefully and this time they meant to take it. They sent a squad around the left of the hill and drove up the valley on the right with a company in half-tracks.

The lieutenant's eyes, as well as his mind, were on the hilltop. He wasn't too worried about his flanks. His confidence in his disposition was justified. The light machinegun and the BAR in the left squad handled the detachment around their way with ease. Over on the right flank, the rifle grenadiers had a field day. They stopped the half-tracks and then the light machinegun and the rifles plastered them.

The Germans tried hard. They scattered from the half-tracks and did their best to work up the hill on foot. But there was little or no cover and they found it a bloody, hopeless project. Their few survivors got out as best they could and gave up the whole attack as a bum deal.

By 1700 all attacks ceased. The Panzer Infantry was unable to assault any American battle positions in the left of the valley because of their inability to crack this forward strong point. It cost the Germans 500 dead and five half-tracks while the Americans suffered one death and seven wounded, and six of these walked back." (2:9-11)

#### CONCLUSIONS

1. That under certain conditions of terrain, troop disposition, or tactical situation or combinations of these conditions, the reverse slope of a hill is more tenable than is the conventional forward slope.

2. The main advantage offered by a reverse slope is the cover and concealment that it offers.

3. The outstanding tactical consideration in the employment of the reverse slope defense is that the crest must be held or quickly regained or the position is lost.



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