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The Proof of the Pudding

Testing United States Infantry Doctrine in Tunisia

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THE TIME-WORN statement that "the proof of the pudding is in the eating" has its counterpart in war, where we can say with the same tolerance for variations in recipes, "The test of doctrine is success in battle."

In Tunisia our standard recipes for success in battle, as set forth in Field Service Regulations and the minor manuals, were tested. As with puddings, it was found that radical departures from standard recipes usually resulted in failures, whereas by following the cookbook even our inexperienced chefs found they could make pretty fair pudding.

However, as they began to rediscover the functions of the various ingredients of battle, they began also . to master the technique of adjusting recipes for a hot oven and for changes in barometric pressure.

Tucked away in paragraph 920 of FSR, in the section devoted to "Mountain Operations," is this recipe: "Within its terrain compartment, each tactical group makes its *main effort* along the crests and slopes or by a combined advance along the heights and valleys. It is particularly important that early possession of the heights on each side of the defile assure protection to the troops operating within the defile."

One of the lessons learned in Tunisia was that this recipe is not limited to mountain warfare nor peculiar to it, but is applicable wherever hills and valleys form terrain compartments. Our forces found that "in order to advance successfully, troops had to avoid natural corridors of approach, which were invariably mined and heavily defended, and work along the ridges and high terrain features. In this way the enemy was forced to abandon strongly defended positions at the heads of corridors, valleys, and natural approaches." "To advance along valleys was disastrous. Taking to the ridges was tedious, strenuous business, but it saved hundreds of lives and gave us physical possession of the high ground. Four times this resulted in the collapse of strong positions. . ."

This, while conforming to FSR on mountain operations, at first glance seems to contradict the doctrine of attack as outlined elsewhere in FSR and in Appendix II of FM 101-5. Actually, however, there is no specific contradiction, although apparently the recipe as written elsewhere got a number of inexperienced cooks into trouble. For instance, the whole discussion of boundaries in the attack in Appendix II of FM 101-5 gives the impression that the main effort is made in the center of the corridor. It doesn't say so, but the average reader would so interpret it.

Here the lesson to be learned on the basis of combat experience is that while corridors into the enemy

position do favor the attacker by limiting the lateral fields of fire, and while boundaries between units in attack should still follow the crests, the technique of utilizing corridors should be to capture the sides of the ridges. If concealment in the center of the corridor is such as to mask completely the maneuver of infantry, then penetration up the corridor under such concealment may be the quickest way to flank the slopes and reduce enemy positions thereon. If such concealment does not exist in the corridor it is clearly not sound tactics to penetrate between ridges still held by the enemy. As long as enemy observation of movement in the corridor is possible, artillery and mortar fire from areas outside the corridor as well as from the corridor itself can make any movement in force very costly. If concealment does not exist, or is inadequate, attack along the ridges is clearly indicated.

Here the problem eventually resolved itself to the question of control of observation. Of all the lessons learned in Tunisia, this was the most clear-cut and definite: control of observation is often the decisive element in battle.

Throughout FSR the importance of observation is stressed, but what is not brought out is its often *decisive* effect on operations. Observation, it is true, is listed as one of the points to be checked and considered in analyzing terrain. But in Tunisia it was found that instead of being merely a means to an end, control of observation was often the decisive element, and might well be considered the primary mission of an attack.

For instance: indecisive action had continued for ten days in the El Guettar area, until finally our forces captured a hill from which the Germans had been observing the battlefield. Almost immediately the whole German defense of the area crumbled and they withdrew—not so much from the effect of American fire actually directed from this hill as from their realization that the change in control of dominant observation was decisive.

The lesson to be learned here is only a shift in emphasis, but the realization of the decisive possibilities of control of observation may affect the choice of objectives for attack and may aid in the concentration of effort at the decisive point. In Tunisia, "seizure of dominant terrain features as intermediate and final objectives became the core of infantry commanders' plans. Specific effort to capture key points for artillery observation posts was emphasized. . ."

Our forces soon found, however, that occupation of these key terrain features or the capture of them from the Germans presented new problems not specifically covered in FSR. Jerry was invariably prepared to deliver artillery concentrations on positions he had vacated and on all prominent crests and elevations. "In the attack on ———, advance elements stood up on the skyline instead of continuing down the forward slope and digging in. Artillery fire came down almost immediately, causing many more casualties than were suffered in taking the position." The lesson here is not only that it is unhealthy to stand up on the skyline, but that where possible any grouping of troops on or near prominent crests, landmarks, or captured positions must be avoided, for the Germans habitually prepare artillery fire for all such points.

FSR states (paragraph 554): "Artillery and air observers search for probable assembly areas of hostile reserves so that enemy preparation for counterattack may be broken up by artillery fire and air attack. If the attack is unable to make further progress, the captured terrain is organized for defense and held until the attack can be continued."

Experience in Tunisia showed, however, that infantry elements cannot depend too heavily on the complete repulse of enemy counterattacks by artillery fire and air attack. "The Germans invariably launch an immediate counterattack to regain lost ground, and precede such attack with prepared artillery fire. Advancing units had to take immediate measures for the organization of captured ground for defense." Such measures should be taken so far as possible as the attack progresses, since cessation of the advance may only result from the counterattack itself, at which time it is a little late to start thinking about defensive measures. In the attack all supporting weapons should be employed in such a manner as to facilitate their being switched to defensive fires if the advance be terminated by counterattack, and planning for such defensive fires must be concurrent with the advance. In this connection, some distribution in depth of all heavy and automatic weapons was found to be essential in the attack as well as in the defense.

In the organization of positions for defense or against counterattack our forces found that the habitual occupation of forward slopes was costly and often ineffective. They learned from the Germans to occupy reverse slopes in defense, with shorter fields of fire, but with prepared artillery and mortar fires laid on the crests in front. This change appeared to many to be a startling innovation. And it was, when viewed in the light of the stereotyped forward slope defense commonly employed in training exercises.

But it was not startling, not new, in the light of FSR on defense. To quote (paragraph 606): "Consideration of concealment may, however, make it desirable to select a reverse slope. Such a location is

practicable when possession of the crest to the front is not essential to the observation of artillery fire."

That is the key. The experience of our troops in Tunisia was that the reverse slope position was tactically superior, but such positions can be taken only where observation from other ground is assured.

In the matter of tanks as employed with infantry, there appears to be a divergence between FSR and the experience of our troops in Tunisia. This divergence, however, is simply a matter of interpretation and degree. FSR states (paragraph 1147): "... Tanks should not be tied too closely to foot troops. If so restricted, their mobility is sacrificed and they become a vulnerable target for antitank weapons."

In spite of this doctrine, however, experience in Tunisia—and it has been borne out in later operations—was that "infantry support has been indispensable to the tank action, especially in consolidating the ground overrun by tanks." It was found that "their employment should follow the principles of cooperation, teamwork, and coordination required for the infantry-artillery team."

This experience should of course be analyzed in terms of the terrain over which the Tunisian campaign was fought. It is probably safe to say that the more broken the terrain, the closer the degree of cooperation necessary between infantry and tanks. In this connection it is interesting to note that the Germans, long advocates of massed armor, in Tunisia habitually employed tanks in small groups working closely with infantry, although where terrain favored tank action they were quick to mass them in greater numbers and to use them with greater flexibility.

In spite of some divergences, due largely to modifications made necessary by local conditions, our basic doctrine was found to be remarkably sound, considering the tremendous development of new techniques of warfare during our years of peace. It is a tribute to the judgment and wisdom of our military leaders that drastic revisions have not been necessary. Our most serious shortcomings are not in the lack of sound doctrine but in the misapplication of that doctrine under the stress of combat.

For instance, FSR states (paragraph 553): "... Under cover of the supporting fire, the assault unit advances close to its objective. When the supporting fires are lifted from the objective the assault unit overruns the hostile resistance in a single rush. Any delay in launching the assault after the fires lift allows the enemy to man his defenses."

This seems clear-cut enough. Yet in Tunisia, "in early action the infantry often allowed artillery concentrations to lift so that 500 yards or more had to be traversed before closing with the enemy. This al-

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lowed the German to come up out of his dugout and recover from the effect of the artillery and man his weapons. As a result our attack was often repulsed with heavy losses."

Later, however, at _____, "the __th Infantry stormed the hill following the artillery at 100 yards. They took only three casualties from our artillery and overran the position with the bayonet before the defenders had recovered and manned their guns. No casualties were suffered other than the three mentioned above."

In general, this experience is typical of our development into a smoothly functioning, efficient fighting team. It isn't what we don't know, but what we don't apply that causes reverses on the battlefield. Our problem is principally one of training men to make intelligent use of the soundest basic doctrine possessed by any army.

The British 25-pounder Field Howitzer

PARE WHEL LIMBER TRAL UMBER TRAL

[From an article in The Sphere (London) 27 March 1943.]

ONE of the best all-round field guns of its kind in the world is the British 25-pounder field howitzer. It has shelled tanks at forty yards range and enemy positions eight miles away with equal effectiveness. Weighing about a ton and three-quarters, costing nearly £3,000 (\$12,000), it is made with such precision that its own crew can virtually rebuild the gun in the dark, in the desert, anywhere, replacing worn or damaged parts with new, using only the tools that each crew carries with them.

The normal gun crew consists of five men, but the gun can be, and often has been, worked by one man alone in case of necessity. It has a range of elevation to forty-five degrees. The barrel is about seven feet long from breech to muzzle, and on firing it may recoil as much as forty inches. The "recuperator" or shock absorber on which the barrel is operated contains a three-cylinder, oil-dampened, compressed-air device, and at the end of the recoil the pressures in the recuperator may rise to 2,000 pounds per square inch. The rather thin-looking shield which protects the crew is actually a piece of very high-quality armor plate which has withstood penetration when fired on at ranges as close as 200 yards. The complete outfit really consists of three units: the gun tractor, which is a very short-wheel-base lorry with a high ground clearance; the limber; and the gun. The tractor is a totally enclosed vehicle, known in the British Army as a "quad," which has a speed of forty miles per hour and can negotiate rough ground very nearly as well as a tank. Hitched to a towing hook at the rear of the "quad" is the gun limber, and hitched to this, in turn, is the gun itself, which is always towed tail first. The gun can go into action within a few seconds after the "quad" has halted. It is little more than a matter of knocking open the two quick-release hooks on the towing gear, and the gun can be fired on its wheels as soon as it is brought to bear.

Mounted on the limber will usually be seen the camouflage nets and the circular steel firing platform. Although the 25-pounder's trail gives it a very wide arc of fire, it is still often not wide enough for modern war. The stock method of German tanks when attacking a gun position is to make attacks from the flank or even from the rear. By mounting the gun on a steel table, one man can quite easily slew it around on its own pivot, and the gun has an arc of fire all around the compass.