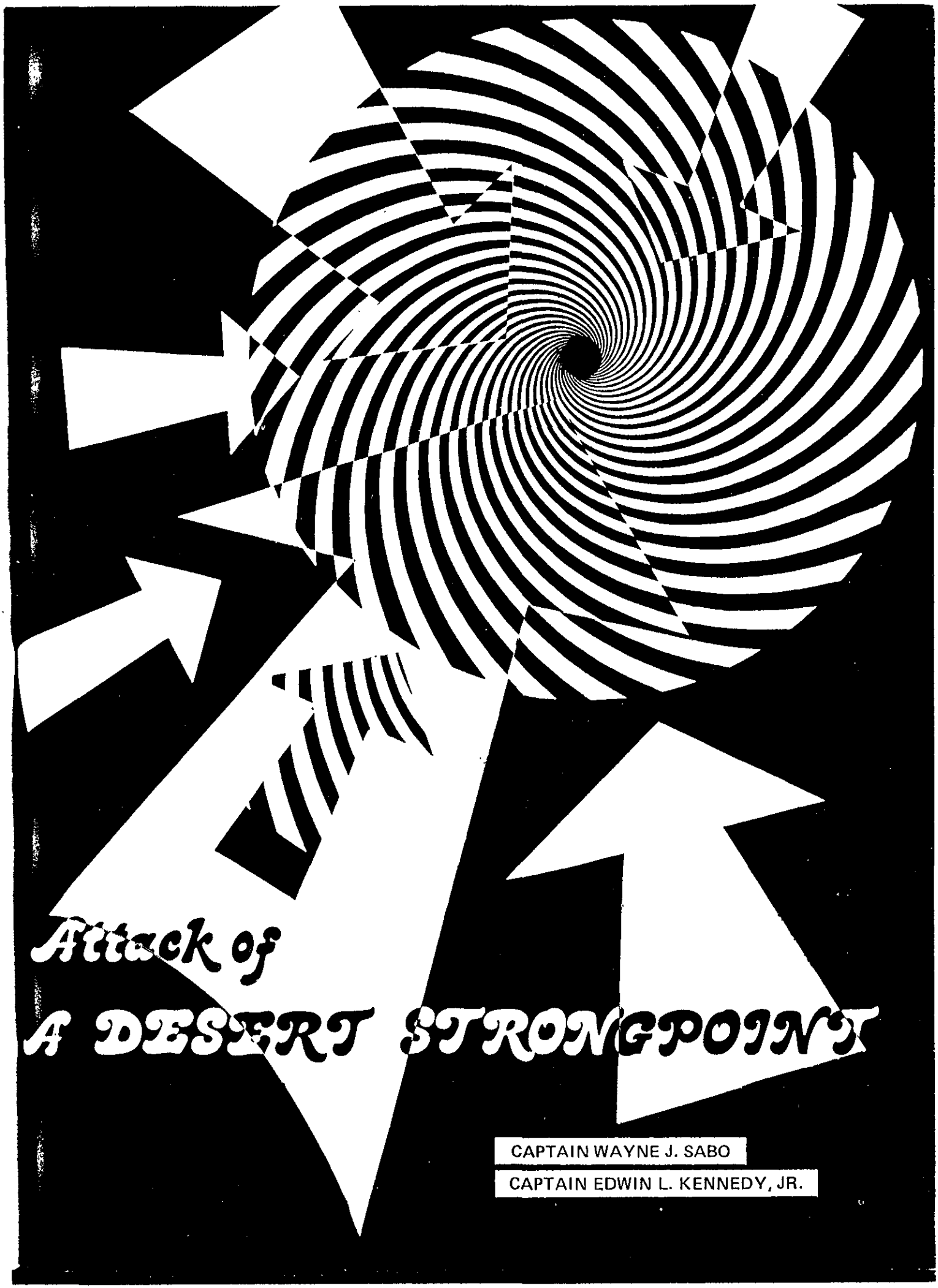
Attack of
A DESERT STRONGPOINT
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The Army's battlefield of the future may be anywhere in the world, and its units must be prepared to fight on it no matter what its terrain or its climate. At the moment, national interests have dictated that the Army pay particular attention to areas such as the Middle East where large desert areas exist. Accordingly, more and more of the Army's training efforts, particularly at the National Training Center at Fort Irwin, California, are being devoted to training units to fight in desert areas.

Unfortunately, one subject that is not usually discussed in either today's training literature or training programs is the proper way for armor and mechanized infantry units to conduct assault breachings of desert fortifications. And nowhere in that literature are there detailed descriptions of the kinds of fortifications that are most likely to be found in the deserts of the Middle East.

Although desert strongpoint fortifications have played an important role in several wars of the past, including World War II, they could usually be bypassed. But in more recent wars such strongpoints have become more important for several reasons: the extended ranges of antiarmor weapons, the predominance of open terrain, and the ability of the opposing forces to create mobile reserves. During the 1973 Mideast War, for example, strongpoints became an important consideration for the attacker, and some valid lessons have been learned from these experiences.

Two major types of strongpoint fortifications were identified during the early stages of that war. These featured a 360-degree defense, combined arms integration, extensive obstacle systems, and mutual support.

One of the two made only a brief appearance. It had a circular construction with a central command post and with trenches radiating from the center like the spokes of a wheel. These, in turn, led to semi-circular trench systems. The faults of this type of fortification became evident when it was found that the ground level trenches were poor locations from which to gain extended fields of fire, because they could be suppressed or isolated and then reduced. Besides, trench systems did not lend themselves to the terrain. The ground was either too hard or rocky for ditching machines or too soft and sandy to support trench systems.

It was because of the nature of the terrain that the other type of strongpoint fortification came into being. This was the *pita*, so-called because of its similarity to the round loaves of bread baked by the inhabitants of the Mediterranean area. It provided the answer to many of the problems of the other type of fortification, and it is the one that is in general use throughout the Middle East today (see Figure 1).

The pita is formed by bulldozing the topmost layer of soil from the inside and outside of a planned fortification to form a circular berm. The benefits are immediately apparent. Unlike the trench system used with the other type of fortification, the berm provides an excellent obstacle to vehicle movement and acts as an excellent firing platform. In fact, in relatively flat or open terrain the berm itself becomes the "dominant" terrain from which a defender can obtain excellent observation and fields of fire. The berm's height — some three to five meters above the desert floor — also helps to negate the effects of heat haze in the summer by providing a raised firing platform.

The pita does have some weaknesses. Although its circular shape offers all around security, it also limits the number of weapons a defender can bring to bear on a particular field of fire. And while it can be quickly constructed, the basic pita does require a lot of labor and material resources if any kind of improvements at all are going to be made to it. For example, positions dug into the top of the berm and connected with trenches, overhead cover for those positions, bunker complexes, and obstacle systems will all call for the commitment of considerable numbers of men and amounts of material. Standard barrier and obstacle systems — antitank ditches, mines, protective wire — are used with each pita.

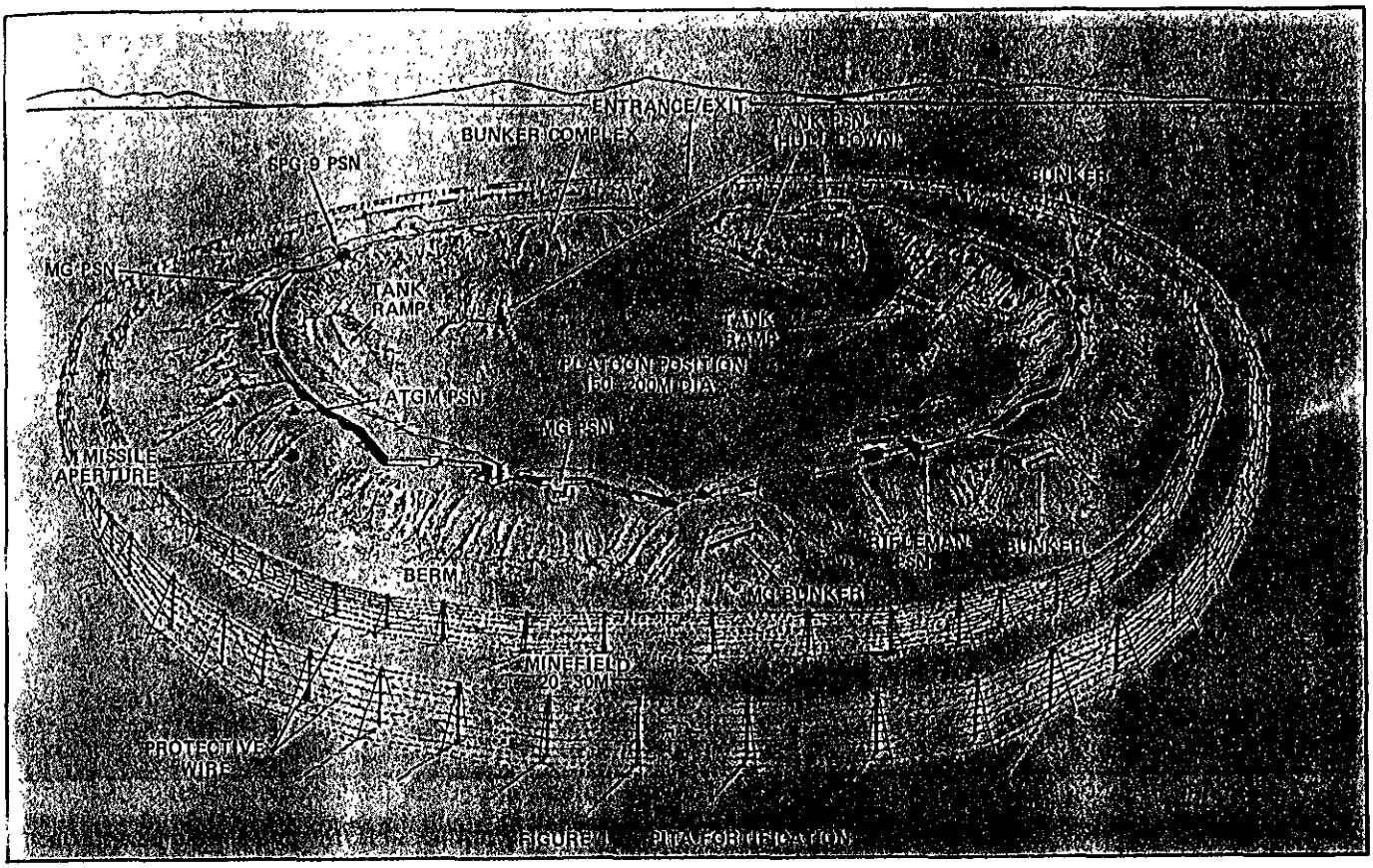
In addition to the system of protective wire and personnel mines that surrounds the pita itself, a series of major obstacles is normally placed across the armor avenues of approach to the pita (see Figure 2). Out 400 to 500 meters in front of the pita is the first of these — an antivehicle minefield 80 to 120 meters deep. This minefield protects the approach to an antitank ditch, which is designed to halt an attacker or to canalize him into the pita's crew-served weapons' fields of fire. Additionally, the berm on the far side of the ditch acts as an initial defensive position for infantry skirmishers.

A number of pitas are usually built at the same time one to two kilometers apart, and these are echeloned with some three to four kilometers between echelons. Each echelon is organized into battalion and company defense sectors, and the pitas within each echelon are mutually supporting. Second echelon forces may also provide supporting fires in depth to prevent the flanking or encirclement of a first echelon pita.

Although the positioning of pitas one to two kilometers apart may seem excessive for preventing infiltration by an attacker's infantry elements, their primary purpose is to form an obstacle to armor movement. The pita itself is a physical obstacle to mounted movement, because its walls are too steep for tracked vehicles to climb over.

The typical pita is organized around the combined arms concept of infantry and armor and is designed to facilitate the use of armored vehicles from within. Thus, tank firing ramps are usually built along the inside walls to permit the tanks to fire out of the pita from hull defilade positions. Antiarmor elements cover the armor avenues of approach from positions built into the walls of the pita. Antitank guided missiles (ATGMs) are located in firing ports in the berm and are usually provided with some kind of overhead cover. Mortars can be easily sited within the pita, where they are relatively safe from an attacker's direct fire.

Direct fire small arms positions are also usually placed in covered positions with firing apertures. Machineguns are most often given this type of position, while rifle pits are located along the top of the berm in a trench line. Recoilless weapons are put in firing positions along the



top of the berm to allow for their backblasts.

Pitas vary from platoon to company size, with the platoon size being the most common. The diameter of the interior of the platoon fortification ranges from 150 to 200 meters. One opening, for entrance and exit, located toward the defender's rear, is protected by weapon emplacements. Armored vehicles that operate initially outside the fortification can move inside to their prepared positions when the situation demands it. Bunker complexes for command and control and for troop quarters are built into the side of the berm. Supplementary positions are also constructed when there is time, and these allow the strongpoint's forces to shift around inside the pita without being exposed to an attacker's direct fires.

It was found during the 1973 war, and confirmed since then, that bypassing or neutralizing a pita is difficult at best, because an attacker is actually going up against a belt of fortifications. He must, therefore, force his way through each defensive belt, the first of which is generally the best prepared. Once he breaks through the first belt, he must then retain the initiative and, more important, the momentum of his attack if he is to overcome the second and third belts. But the task is not an impossible one. If the attack is forced home vigorously, pitas can be overcome and the defensive belts disrupted.

SUPPORT EQUIPMENT

Conducting an assault against such a defensive system requires meticulous planning and an abundance of special support equipment. Engineer support is especially critical. Unfortunately, some of the Army's present supporting equipment leaves a lot to be desired.

The projected charge demolition kit, M157 (a tank-emplaced bangalore torpedo), for instance, is bulky and difficult to handle and assemble under battle conditions. In fact, in a desert environment, the M157 is not a desirable system to use for breaching an obstacle.

The projected charge demolition kit, M173 (boat charge), is better for breaching, even though it, too, has some drawbacks — it cannot be pulled long distances, it cannot traverse rough terrain, and it is slow. But it is rocket projected, is easy to use, and does not require a lot of time to emplace.

Another problem the Army has not yet solved is locating and marking an opponent's minefields. Its present methods are slow and extremely hazardous for the soldiers involved. The developmental models of mineroller tanks now being used in Europe seem to provide the best answer to the problem, because they can move across open terrain quickly and can find as well as detonate mines. If these specially equipped vehicles can be procured in sufficient numbers for all units then the task of breaching minefields under combat conditions will be greatly simplified.

In addition, the Army still needs more and better assault bridging equipment and combat engineer vehicles (CEVs) to assist its units in crossing such obstacles as antitank ditches and wire entanglements. The only items of assault bridging equipment either now in the Army's inventory or projected for the near future are the present armored vehicle launch bridge (AVLB) and its replacement, the BR80.

Some small items of special equipment that can be used by infantry assault units can usually be acquired more

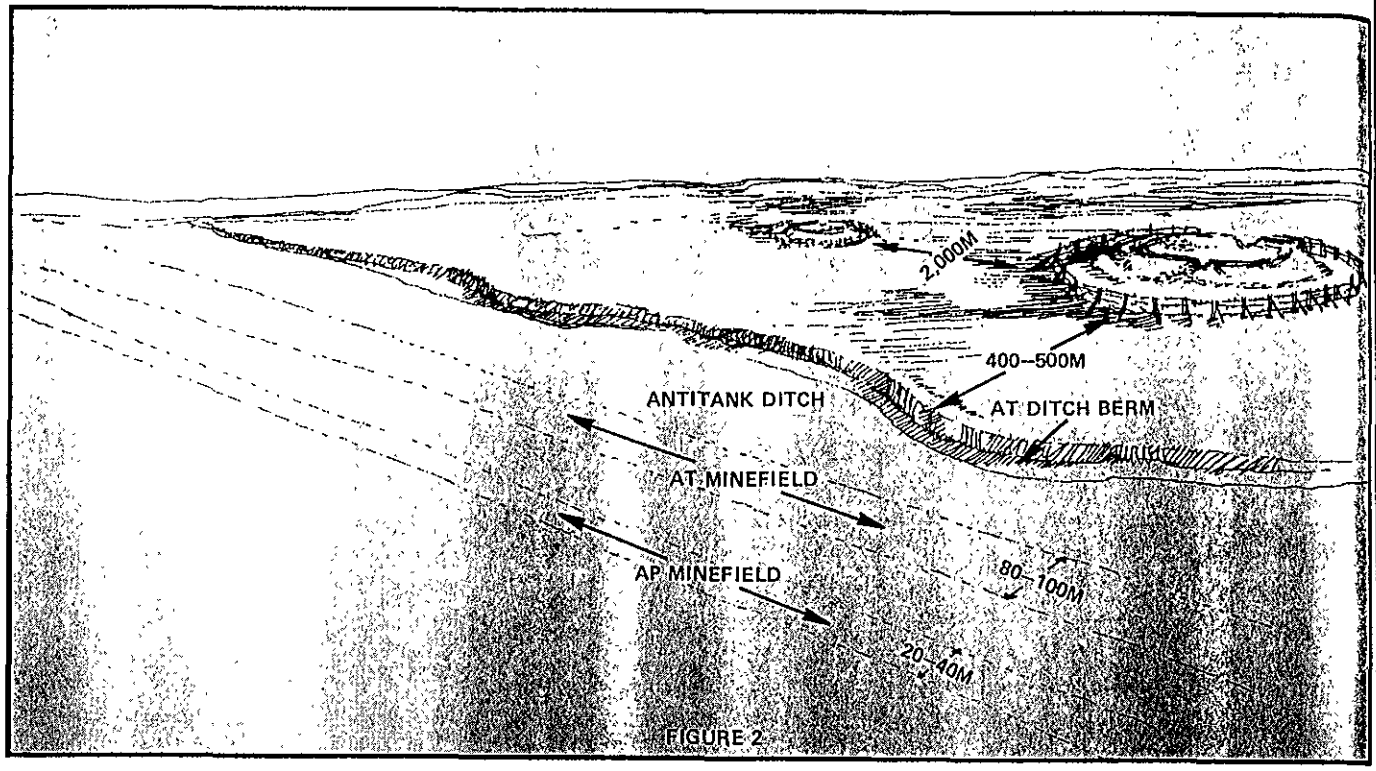


FIGURE 2

easily or can be fabricated at the unit level. These include scaling ladders, wire cutters, bangalore torpedos, and lane-marking poles and tape.

After the equipment needed for an assault has been gathered and prepared, the assault unit, if possible, should hold a rehearsal over ground that is similar to that around its objective. Mock fortifications and ditches should be built to familiarize the leaders and the troops with their specific tasks. The distances and fortifications should resemble as closely as possible those that will be encountered.

Additional quantities of ammunition must also be arranged for. Indirect fire support will play an important role in any attack against a pita system, and suppressive fires as well as obscuration fires can determine the success or failure of an assault. Sustaining an effective smoke screen between the pita and the friendly forces, for example, can require ammunition in amounts not usually carried in a basic load.

The attacking force should be organized according to function. Thus, support, breaching, and assault elements should be organized for, and assigned, specific missions. The breaching element should consist largely of infantrymen to take care of any of the opposing force's soldiers who might be deployed on the berm of the antitank ditch to delay the attacker's advance. The assault element, too, should contain mostly infantrymen so that it can assault and clear the pita itself. The support element, primarily armor units reinforced with ATGMs, should engage any antiarmor weapons and exposed armored vehicles, and exploit the successes of the assault element.

Since pitas are built to be mutually supporting, the approach to any one of them should be as much as possible to the side that masks the fires from a supporting pita. If this is not possible, the pita should be approached from the closest position that provides cover and concealment.

This is how a mechanized infantry company as part of a larger force, with a tank platoon, engineers, and three minerollers attached, might go about attacking and reducing a platoon-sized pita. It must be assumed, of course, that other pitas in the defensive system will be under attack at the same time

The attack should be conducted rapidly to achieve surprise and to prevent the enemy from employing his mobile reserves. Artillery fire should initially suppress and destroy the infantry around the antitank ditch and its berm. Support elements that are providing overwatch should engage antitank weapons and exposed armored vehicles when the assault begins.

The company team's task organization would probably look like this: the three mineroller tanks, one with an M173 demolition charge, in the lead, followed by an engineer M113, the company team commander in another M113, a mechanized infantry platoon in four M113s, an AVLB, a CEV, two more tanks, and, finally, two more infantry platoons, each with four M113s.

Movement into the actual assault phase would be conducted with the mineroller tanks leading. The two tanks without the M173 charge would move forward, keeping about 100 meters between them. The tank with the M173 would follow centered and 100 meters behind the leading tanks. This tank should carry the tank platoon leader as well as an engineer to operate the demolition charge. In the meantime, direct and indirect suppressive and obscuration fires would be falling on and around the team's objectives as well as on the other pitas in the system.

When one of the lead mineroller tanks encounters the

edge of the opposing force's antitank minefield it should halt, a member of its crew should dismount to mark the edge of the field in an appropriate fashion, and the tank with the M173 should be brought forward to that tank's position. The engineer should then disconnect the M173 by activating a quick-release charge, and after the tanks have moved away, should fire the M173 from inside his tank.

The two mineroller tanks should move immediately into the breached area following a staggered path until they reach the antitank ditch. Even as the tanks work their way through the minefield, the team's engineers should move in behind them to mark the edges of the breach. After the engineers have reached the antitank ditch, they should take up positions from which they can give fire support to the infantrymen.

The leading infantrymen should follow closely on the heels of the engineers. Initially, one squad's vehicle as well as the platoon leader's vehicle should remain at the entrance to the breach to provide overwatching suppressive fires. Two squads should then be sent through the breach to cross the antitank ditch by using their scaling ladders. One squad should begin clearing a portion of the antitank ditch berm to the left of the entry point, the other the portion to the right to eliminate any enemy infantrymen who are defending forward of the strongpoint.

Once the berm has been cleared, the AVLB should be brought forward and its bridge emplaced so that the attached tank platoon can cross. The other infantry platoons should follow, while the CEV should begin to fill the ditch with soil from the berm.

At the pita proper, any wire obstacles that have not been destroyed by artillery must be breached by the leading infantry platoon to provide lanes for the personnel and, if possible, for the vehicles. Because the area between the close-in protective wire and the pita's berm is generally mined with antipersonnel mines, the last 20 to 25 meters must be traversed by the infantry mounted on M113s or tanks, or the minefields must be breached with bangalore torpedos.

Each of the two infantry platoons should create its own lane through the final obstacles if possible. They should attempt a mounted assault by driving through the wire and the antipersonnel minefield. Once they reach the pita's berm, the carriers should be parked with their front ends toward the berm, and the infantrymen should leave them by using the cargo hatch, then going over the deck and off the front slope to avoid the remaining mines.

The assaulting platoons should enter the pita at a single point. The point of entry into the pita should have, initially, a three-man element from each platoon armed with LAWs or Vipers and machineguns to provide suppression inside the pita and to destroy any armored targets.

The squads within each platoon — organized into three-man clearing and security teams — should then begin a systematic clearing of the pita's trenches, bypassing and securing bunker complexes until the mop-up phase. Each of the clearing teams should be armed with grenades, rifles, and one M203 grenade launcher, with the soldiers rotating duties as they move along. Back-up clearing teams should follow the lead teams closely and should take over from them if they suffer casualties or run low on ammunition. All of the other elements of the company team should lend support with overwatching suppressive fires.

The clearing teams should be closely controlled so that they will not fire on each other, particularly as they begin to converge at the far side of the pita. It is important, too, that the other elements of the company team know where the clearing teams are so that they will not fire on them. One technique that can be used is to have the forward clearing teams carry distinctive pennants on poles to show their exact locations.

When the pita has been cleared, the overall commander of the operation — probably a battalion or brigade commander — must decide if the situation calls for a rapid exploitation by his armored forces or if more pitas have to be cleared by his infantry units. If possible, he should consider shifting to a lateral attack to roll up the flanks of the entire defensive area. Underlying his decision would be the absolute need for this force to maintain its initiative and momentum to keep the opposing force off balance.

This proposed method of assaulting a pita strongpoint fortification uses equipment now in the Army's inventory, including minerollers being issued to units in Europe. Task organizations and the actual conduct of the assault can easily be adapted to different situations in different environments using the same equipment.

One remaining task is to stimulate thought and discussion among professional soldiers regarding different techniques that might be used to conduct mounted assault breachings, especially in the desert. Such thought and discussion should lead to the development and publication of detailed information on these techniques.

And given adequate doctrine on the subject, the Army's mechanized infantry and armor forces should be able to conduct better and more realistic training. This, in turn, should enable these forces to handle strongpoint fortifications in the desert or anywhere else.

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