COT

Battlefield Mobility The Counter-Obstacle Team

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With the introduction of AirLand Battle doctrine, offensive operations have once again come to the forefront of U.S. land warfare doctrine, and at the core of this doctrine is the combined arms team. As an integral part of this team, the combat engineer is found on the battlefield alongside and often in front of the infantryman and the tanker. Unfortunately, though, the specific way in which divisional combat engineers fit into the AirLand Battle scheme has yet to be fully developed.

Throughout history, the combat engineer's mobility mission has been to preserve the momentum of the attack by breaching enemy obstacles and fortifications. This mobility mission will be critical to success on any future battlefield. To close with and destroy the enemy is, after all, any army's primary goal.

While technology has greatly increased the infantryman's and the tanker's ability to destroy the enemy, very little effort has been aimed at increasing the combat engineer's ability to get the infantryman and the tanker forward so that they can complete their missions. Although mobility is the combat engineer's primary mission in the offense, it is a mission he is ill-equipped to perform, given the assets available to him. Promises of things to come, "notional" assets, and REFORGER 3x5 index cards will not breach lanes through opposing force minefields and antitank ditches.

Combat engineers have proved, however, that they can overcome this equipment handicap through an imaginative use of the assets currently in the inventory. This action has resulted in the development of an engineer counter-obstacle team (COT). The COT, properly trained and employed, is the only element available today that can reasonably guarantee the maneuver of the combined arms team in the spirit of AirLand Battle doctrine.

Before discussing the use of the COT, however, another aspect of mobility needs attention. One of the basic impediments to successful maneuver today is the combined arms team's misunderstanding of Soviet countermobility capabilities. Despite common belief, defensive operations are not anathema to the Soviets. Although they do consider the offensive as the only means of achieving decisive victory, they constantly emphasize the defense as a temporary form of combat that makes the transition to the offense easier.

In World War II, in fact, the Soviets showed themselves to be masters of the defense, waging some of the greatest defensive battles in history—such as those at Stalingrad, Moscow, and Kursk. They attained excellent results in constructing positions and dummy installations and in using camouflage. In open terrain, they dug wide and deep antitank ditches, often many miles long, and they set up numerous minefields, wire obstacles, entanglements, and other obstacles.

In the southern Ukraine, following a successful tank thrust, the Soviets immediately protected the terrain they had gained with a belt of antitank mines blocking all roads and approaches. On one day alone, they laid 20,000 such mines. German counterattacks ground to a halt and collapsed in the minefields. All told, the Soviets employed more than 200 million mines during World War II.

Soviet defensive operations today are no less formidable. They have developed a doctrine that provides for a defensive stance under the following circumstances: consolidating gains, halting by enemy defenses, or repulsing enemy counterattacks. Once a Soviet unit goes on the defensive, it does so quickly and efficiently. A typical battalion defensive area is three to five kilometers wide and two kilometers deep. Depending on the frontage, the battalion may defend with all three companies forward or with two up and one back, with at least one platoon always held back as a reserve.

The main Soviet defensive area is a defense in depth. Minefields are placed forward of the defensive position to slow the enemy and to make him concentrate his forces. Fires are planned to attack these concentrations and to prevent or delay breaching. The minefields themselves are designed to break up the enemy's assault and to strip away his infantry's supporting armor. They are also designed to force the enemy into areas where the concentrated fires of all weapons can be brought to bear. Minefields within the main defensive areas are placed so as to confine the enemy within fire sacks and make the employment of the reserves easier. (For a complete discussion of Soviet mines and minefields, see the two-part INFANTRY article "Soviet Landmine Operations," Part 1, May-June 1988, pp.27-31; Part 2, July-August 1988, pp.22-25.)

STRONGPOINTS

Company or platoon strongpoints form the basic elements of the main defensive area. These strongpoints are established on key terrain and the Soviets feel they must be retained at all cost. Mutually supporting fires that provide for fire sacks are also planned. Each company will occupy a 360-degree strongpoint 500 to 1,000 meters wide and up to 500 meters deep. Normally, all three platoons will be forward.

All Soviet troops, no matter what their branch may be, are trained to perform some engineer tasks whether it is building weapon emplacements and trenches or emplacing minefields by hand. The Soviets contend that a tank protected by a revetment is significantly more effective in the defense than an attacking enemy tank. As a result, the Soviets take very seriously the task of digging in their vehicles, equipment, and personnel. If engineer support is not available to provide those positions, the vehicle crews attempt to dig positions themselves.

Obstacle emplacement and survivability positions serve as the foundation of the Soviet defense. When the Soviet soldier halts, his primary mission can be considered that of "going to ground" for survivability and emplacing obstacles to shape the battlefield.

The Soviets' obstacle emplacement and digging capabilities are no less extensive today than they were 40 years ago. A dangerous assumption on the part of many U.S. commanders is that the Soviets' combat engineer organization and capabilities are similar to those found in our own combat engineer units. The fact of the matter is that their combat engineering capabilities are superior to ours.

Soviet combat engineers, referred to as sappers, are found organically down to the regimental level. This regimental engineer company is made up of three platoons, two of which—the mine warfare platoon and the technical (construction) pla-

toon—directly affect an enemy's mobility mission. At the division level, Soviet engineers, as in a U.S. division, are found in battalion strength. This battalion adds a sapper company and a technical (construction) company to the division's countermobility capabilities. All of these countermobility or survivability assets enable the Soviet forces to entrench themselves behind a considerable obstacle system in a very short time.

A Soviet motorized rifle regiment (MRR) with divisional support and a priority of effort on countermobility could probably dig more than 1,100 meters of antitank ditch in the first hour and surface lay with engineer assets at least 1,500 meters of minefield with a density of one mine per meter. These minefield frontages can be augmented by 16,200 meters if each squad in the regiment spends just 20 minutes laying mines with a mine chute. This would easily give an MRR at least 17,700 meters of minefield within the first hour with no consideration given to air- or artillery-delivered scatterable mines. Even though these estimates are interpolations based upon the best of conditions, they do show that the Soviets, even in a hasty defense, can emplace a considerable countermobility barrier and dig themselves in in a short period of time.

In the face of this considerable Soviet defensive capability, then, how would the commander of a U.S. mechanized or armored force acquire mobility?

Every maneuver task force has a task force engineer. He has under his command at least one platoon of combat engineers with its four armored personnel carriers (APCs). Given a particular mission, the task force engineer can have any number of additional engineer assets attached to him. These assets normally are in the form of combat engineer vehicles (CEVs), armored vehicle launched bridges (AVLBs), or heavy earth-moving equipment—dozers and armored combat earthmovers (ACEs).

SPECIAL MEMBER

A task force engineer serves as a special member of the maneuver task force commander's staff. His primary mission is to advise the commander on how engineer assets can best support the commander's scheme of maneuver based upon the commander's prioritization of engineer work. Mobility itself—the reduction or elimination of the effects of obstacles or mines to improve the movement of maneuver forces—is the responsibility of the task force or team commander, of course, not the engineer.

The task force engineer can best carry out his mobility mission with a counter-obstacle team (COT). This team should be composed of, at the least, his platoon of four APCs, one CEV, and two AVLBs. If ACEs are available, one of them should be used to augment this force. The APCs should carry as part of their basic load the following: bangalore torpedoes, cratering charges, satchel charges, shovels, picks, wire cutters, grappling hooks, smoke pots, bolt cutters, chemical lights, colored smoke, and lane marking materials.

The placement and control of the COT is critical to the overall success of the maneuver unit. The team needs to be in support of the task force's main effort and under the direct control of the task force engineer, who serves as the COT leader. The team members must remain together and the team itself must not be broken down into sub-elements, because decentralizing its control would dilute the overall combat multiplier effect of the engineer force. The final result would probably be heavy losses and possibly mission failure for the maneuver force.

The maneuver commander's responsibility is to direct where and when the COT should be engaged to breach a given obstacle. The task force engineer's responsibility at that point is to commit the assets he considers necessary to effect that breach.

The COT should be well forward in the column of march with the advance guard. Often overlooked, though, is the need for an engineer to be with the covering or reconnaissance force that is leading the movement, which usually means the scouts. This engineer should be the task force engineer's platoon sergeant. He will maintain contact with the task force engineer using the engineer platoon's headquarters section AN/PRC-77 radio.

Upon encountering an obstacle, this engineer can help the scouts by determining whether the obstacle can be bypassed and, if it cannot, advise the task force engineer on what has been encountered, how best to reduce the obstacle, and at what point it should be breached.

BREACHING SEQUENCE

Taking these recommendations into consideration, the task force engineer then sets up a breaching sequence and rearranges his formation while on the march to meet his needs. Concurrently, the scout platoon leader informs the maneuver commander of the obstacle. If a bypass can be identified, the maneuver commander must consider whether this is a legitimate gap in the enemy's defenses, or an attempt to channel his forces into a kill zone. If the maneuver commander decides to breach the obstacle, the sequence of events begins with the organization of support, breaching, and assault forces.

The support force's mission is to secure the near side immediately and provide covering fires in the vicinity of the breach to neutralize enemy direct fire. (If at all possible, support elements should be moved around or through the obstacle to secure the far side.) This neutralization is critical, because an enemy who places high priority on engineer equipment can most likely halt all but the most determined attacks.

During a battle in the Arab-Israeli war on the Golan Heights, for example, an Israeli commander in one sector identified Syrian engineer equipment as the primary target of engagement and was able to stop all Syrian advances across an antitank ditch. Only later that evening, under the cover of darkness, were the Syrians finally able to breach this antitank ditch successfully. (The Israeli Defense Force lacked any type of night observation devices for their armor at that time.) Israeli forces in the south, who had no major countermobility obstacles, were not nearly as successful in stopping the Syrian onslaught.

In addition to direct fires, supporting indirect fires need to

be called in to help suppress enemy fires and provide obscuring smoke on the obstacle. Of particular importance are counterbattery fires to counter any enemy indirect fires that might be directed at the breaching element.

Once enemy fires have been neutralized as much as possible and smoke has been placed between the obstacle and the enemy's covering forces, the task force engineer commits his breaching elements where the maneuver commander has directed. This location should be marked by the scouts using whatever methods are available, such as smoke, M203, or tracer rounds.

The location of the breach is critical and should be chosen carefully. To reduce losses, the proper use of terrain must be seriously considered. Breaching a minefield in the middle of an open field, for example, instead of at the point where it ties into a tree line, is not considered by most to be a tactically sound move.

Once the breach site has been designated, the COT combat engineer goes about his work. All breaching vehicles should have tow bars or cables in place to make quick recovery easier if they should become immobilized near or in the breach. COT weapon systems—such as the APCs' .50 caliber guns, the Dragons, and the CEV—that are not employed in the breach itself can be used to support the breaching element with covering fires.

The task force engineer, under most circumstances, should follow a previously developed obstacle breaching matrix, flow chart, or PERT diagram for minefields, antitank ditches, road craters, abatis, gaps, or wire. A matrix provides a sequence and priority of engineer equipment or troops to be committed to breach a given obstacle. This matrix, if designed properly, will allow the task force engineer to use his assets quickly and with a minimum of effort. It is particularly valuable when various types of obstacles are encountered in depth.

Because of the engineers' lack of modern equipment or munitions today, one of the most difficult obstacles to breach is a minefield. Mine rollers and plows are either scarce or nonexistent. Even when they are available, they do not clear a lane that M113s or Bradley fighting vehicles can follow without risk.

Minefield breaching line charges such as the M173 projected line charge are unreliable and just as scarce. (There is a bright star on the horizon, though, with the fielding of the mine clearing line charge.) Some untested options are pushing destroyed tank hulks or rolling M113s with blade tanks, and clearing a lane through a surface minefield with a CEV or a blade tank.

If all other methods fail, dismounted combat engineer minefield breaching teams can be used. Each breaching team consists of two or more soldiers, depending upon the depth of the minefield and the number of lanes to be breached. Staying as close to the ground as possible, the first man through the minefield identifies each mine within the lane to be cleared and marks it. This man is also responsible for marking the lane. (Lane marking under fire is not a very well developed concept in our Army. It usually runs the spectrum from engineer tape to flares or luminescent powder.)

Following closely behind the mine marker is the demolitions specialist. Loaded down with satchel charges full of primed sticks of TNT, dynamite, or C-4, the demolitions specialist places an ignited charge on each marked mine. The depth of the minefield determines how long a fuse will need to burn. Once through the minefield, the breaching element needs to move to a previously identified covered and concealed position to link up with the other teams.

Fortunately, Soviet minefields generally lend themselves to this type of breaching because, for the sake of speed and recovery, most Soviet minefields are made up of surface-laid antitank mines. Obsviously, if antipersonnel mines and trip wires are part of a minefield, breaching it will be considerably more difficult.

Infantrymen can be used in this role, if it becomes necessary to do so. One warning, however—they may lack an engineer's concept of the limitations of explosives.

Once an obstacle is breached, the assault force moves through, secures the far side—if it has not been secured earlier— and continues to advance. The maneuver commander must keep in mind the potential employment of enemy scatterable mines as well as rotary or fixed wing close air support to reseal the breach and trap his forces in a "kill zone" between defensive belts. Accordingly, he must plan to use counterbattery fires and air defense artillery assets to cover the breach.

Both the maneuver commander and the task force engineer should report the obstacle breach to their respective higher headquarters. The task force engineer should make sure the breach is adequately negotiable and marked for the rest of the maneuver elements. (An attempt should be made to turn the breach over to a follow-on unit, but in most cases this probably will not be possible.) The task force engineer should at least ensure that the entrance and exit points are adequately marked and then move on to continue the mission with his maneuver unit. It will be the follow-on engineer's mission to expand the breach and reduce the obstacle if necessary.

Leadership, protection, firepower, and maneuver are the critical ingredients of combat power. While U.S. forces have improved considerably on the first three of these elements, the fourth still needs improvement. Speed and cross country capability alone do not make for maneuver. Against a determined enemy, the ability to move swiftly and cross country will normally be gained only after the enemy's obstacle system has been reduced.

As with almost everything else, training is the key. Command and control of a counter-obstacle team as part of a maneuver unit's formation and battle drills is a monumental undertaking that will succeed only if all the maneuver unit's elements mesh together efficiently. This meshing can come about only when the armor, infantry, artillery, ADA, aviation, and combat engineers train together as a true combined arms team whose only mission is to close with and destroy the enemy.

While a counter-obstacle team cannot guarantee successful maneuver every time, it can at least guarantee the maneuver unit a fighting chance—something it does not, in many instances, have now.

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