

Cavalry Operations in MOUT

by Captain Scott Schenking

The Armor community has clearly realized that training in MOUT environments is taking on a more important role for our armored teams. Although our armor systems are not specifically designed to operate inside built-up areas, there are tactics, techniques and procedures (TTPs) that can be used to assist in the survivability and lethality of an armored force operating in support of a MOUT operation.

A Troop, 1-10 Cavalry recently completed training on MOUT operations in order to rehearse and refine those TTPs. In the scenario we developed, our squadron conducted a moving flank guard with a small built-up area in its path. Based on the terrain, the squadron was not able to bypass the town. It had to move rapidly past a built-up area without bypassing an enemy force that could influence the division's flank.

In order to accomplish this mission, one troop was to conduct an area recon of the town and establish a bypass through or around the area so that the squadron could continue its mission. We broke this troop's mission down into three phases: reconnaissance; establishing a foothold; and forward passage of lines (FPOL)/urban reconnaissance.

Reconnaissance

The zone recon to the objective can be rapidly accomplished mounted on Bradleys, but this method will likely give up the element of surprise. If time permits, dismounted scouts should be moved into the area to reduce the likelihood of premature contact with enemy forces inside the city. Integration between OH-58D Kiowa armed reconnaissance helicopters and dismounted scouts will ensure a rapid zone recon. Prior to conducting dismounted reconnaissance on the objective, the OH-58D is also capable of conducting area recon of the built-up area (BUA) in order to provide an initial read to dismounted scouts and assist them in moving to effective observation posts.

When conducting an area recon of a BUA, the OH-58D is vulnerable to most small arms weapons firing from well-concealed positions. The OH-58D must stay beyond small arms range and

should remain masked behind the last piece of covered and concealed terrain. The OH-58D scouts can provide many kinds of information before the dismounted scouts enter their observation posts:

- Identify positions on rooftops.
- Confirm the street map and identify any changes to the terrain.
- Observe through windows using thermals and identify positions that can observe the approach to the BUA.
- Verify the best OP positions for dismounted scouts and assist in clearing those positions.
- Observe the far side of the BUA and report movement into the BUA.

The OH-58D is limited in its ability to observe deep into the BUA. Unless the helicopter unmask to gain elevation, it may not be able to observe beyond the initial row of buildings, but it can reposition to multiple OPs rapidly, and may be able to observe down streets between the buildings. However, the aerial scouts will not be able to provide a detailed read on enemy positions within the BUA.

As dismounted scouts enter the area to occupy observation posts around the perimeter of the BUA, they can provide the following initial information:

- Any observed forces that can cover the approach to the BUA.
- The types of structures — frame, stone, etc. — to determine weapons effects.
- Any obstacles along avenues of approach to the BUA.
- Bypass routes around the BUA.
- The best possible positions to gain a foothold for further recon.

Dismounted scout section leaders must be trained on how to communicate with OH-58D pilots during a reconnaissance mission. This relatively simple task of talking in a common language is trained regularly at Bradley commander level and higher, but junior NCOs are not as well trained on this task, and are usually not as familiar

with the call signs or the squadron SOPs for communicating directly with pilots. Although the information may not flow as smoothly, units should train junior NCOs to communicate with pilots. This will increase the combat information available and will be critical to successful dismounted operations in MOUT environments. One technique that 1-10 Cav emphasizes has scout pilots landing every so often to discuss the situation with Bradley and tank crews, face to face.

Develop a detailed map for the squadron in order to ensure a common method of describing the BUA. The OH-58D can take digital photos of the BUA and print them through the AMPS computer, but this can be time-consuming. Other approaches are to use local street maps, imagery, or UAV photos. We produced a numerical grid map of the BUA, numbering every building, naming each route, and providing a grid reference system that was specific and more focused for the BUA. This map supplemented the standard military map and provided a common picture of the area before we entered. The map was continuously refined as we conducted our zone recon.

Given this initial reconnaissance, the troop commander should be able to determine the best possible location for penetration as well as ensure that the approach to the BUA is clear of enemy forces.

Establishing a Foothold

If the commander determines that further recon of the BUA is needed, or if an infantry force will be passed forward to clear the objective, then the unit must establish a foothold. This requires synchronization of the combined arms team that is organic to a division cavalry troop. It is the synchronization of armor, dismounts, and air assets that will make for successful MOUT operations.

We approached this mission in the same manner as we would a breaching operation using SOSR (Suppress, Obscure, Secure, Reduce). Field artillery can shape the battlefield by limiting mounted routes that could be used to



reinforce the enemy at the penetration point, as well as by destroying overwatching positions. The OH-58Ds provide accurate grids to targets within the BUA, shaping the initial penetration point. Mortars then provide continuous smoke to cover the penetration area and the initial foothold. A tank platoon was the first element to lay suppressive fires on the BUA. The tanks isolated the foothold by suppressing buildings to the flanks of the foothold and preventing reinforcements from moving to that penetration point. Tanks were capable of standing off at 900m, the maximum effective range of coax, thereby limiting their exposure to RPGs. Tank wingmen scanned for AT missiles while two tanks suppressed the enemy in the BUA.

The mounted scout platoon entered between the tanks and established the point of penetration. The scouts moved forward and dismounted close to the penetration point while the CFVs maintained sufficient standoff to be capable of scanning for targets. The dismounted scouts conducted their attack into the foothold and secured the entire building. Once that building was secure, the Bradleys could move to the far side and destroy any enemy element attempting to eliminate the foothold. At this point, the troop has secured one side of the BUA and is capable of passing a stronger combined arms force forward

or allowing the squadron to bypass the town.

While moving from the last covered and concealed position to the penetration point, the dismounts were most effective when following closely behind the Bradleys. Dismounts cannot follow closely behind the M1A1/M1A2 because of the heat of the exhaust. However, they can use the rear of the Bradley to reduce exposure of the M3 while they attempt to dismount scouts near the target area.

The troop must develop a clear direct fire plan for entry into a BUA. The dismounted scouts must know the control measures that the tanks are using so that they can rapidly call for the lifting or shifting of fires as dismounts move through the objective. Armor crews must ensure that they add the height dimension to their direct fire planning in order to cover windows and rooftops. There is a high risk of fratricide in this operation. Armor crews must rehearse jointly with dismounts to ensure that everyone understands the direct fire plan. This is essential to the successful synchronization of dismounts and armor.

The OH-58D was especially useful in preventing fratricide by providing feedback on positions of our own troops. The pilots reported directly to platoon and squad leaders to warn them

of dismounts moving into their line of fire. Throughout this phase of the operation, the Kiowa Warriors continued to provide information on movement of reinforcements into the penetration point and assisted in redirecting suppressive fires.

Because of their high trajectory, mortars are highly effective at firing into BUAs. In order to strike a target, the mortars must know the height of the target itself and the height of any building that may block the gun-target line. Scouts must know the location of the mortars in order to rapidly determine the gun-target line before making calls for fire. We recommend using the polar plot mission, assisted with MELIOS and a PLGR. Since target areas in MOUT are small, a difference of 100m could place a round in another block protected by a building — or on your own position!

Urban Recon/FPOL

If the troop is required to make a forced entry into the BUA, then further reconnaissance may not be possible without a larger force. The cavalry troop can assist a forward passage of lines by a combined arms force in several ways. The cavalry troop can establish the initial foothold for the infantry battalion so that they can conserve their combat power for the remainder of the

fight. As the infantry battalion passes forward, the cavalry troop can attach their own tanks and Bradleys to the infantry battalion. The troop can also conduct flank reconnaissance to protect the force as it enters the BUA. The cavalry troop can move to the flank and conduct aggressive zone recon around the BUA in order to assist in isolating the objective.

A cavalry troop is limited in its ability to operate inside a built-up area. Dismounted scouts should not enter a building unless absolutely necessary.¹ Once inside the BUA, the dismounted scouts should move rapidly forward in front of their CFVs in order to clear corners and blind spots. The tank platoon will have to enter the BUA if they cannot provide overwatch from their positions outside of the town.

Techniques for target acquisition in a BUA must be trained before any operation can be successful. Tank crews must remain aware of the limitations caused by their gun tubes when inside cities. Tube depression and elevation is limited, and the length of the gun tube may cause problems when traversing the turret on narrow streets.

The tank loader can assist a crew by keeping his hatch open and scanning for targets above the tank. With his M4 in hand, the loader can suppress targets and assist in directing their wingman into position while still remaining in a relatively protected position. The Bradley is most effective in BUAs because of its short gun tube length and ability to traverse rapidly. A tank and Bradley mix provides a highly effective team in MOUT.

Movement through the streets should be conducted with dismounts forward to clear corners and blind spots. The Bradley should provide immediate protection for dismounts. Its 25mm can penetrate concrete and suppress any target within a BUA. Tanks following the Bradley provide the immediate ability to react to another armored force as well as clear obstacles and destroy bunkers. The tank is especially vulnerable in a BUA. Each tank must be covered by a wingman to prevent dismounts from moving to its rear. Tanks are best left in supporting positions in more open areas so that they can provide their own security and still provide rapid protection against armored forces.²

The weapons effects for each weapon system differ and provide distinct advantages when used appropriately. *FM 90-10* describes the effects of each weapon sys-

tem and should be reviewed before conducting MOUT operations.

Training for MOUT

Training in a MOUT environment for armor companies and armored cavalry troops will increase the flexibility of armor units to understand the impact of MOUT on their units. The training that we conducted was a series of lanes designed to ramp the unit up to a scenario-based, combined arms event. The lanes included driver training, target acquisition, direct fire planning, area reconnaissance, and zone reconnaissance.

Driver training allowed each driver to maneuver through the MOUT site to become familiar with the limitations of the tank. The drivers were required to maneuver at night with some of the street lights still on in order to understand the effect on the VVS-2s. They also rehearsed rapid movement and "berm" drills that included backing up behind buildings.

Target acquisition training consisted of a series of E-type silhouettes placed throughout the city in windows, rooftops, and basements. The crew was timed on acquiring the target and choosing the appropriate weapon system to engage that target.

Training can consist of driver's training through a city, target acquisition lanes, as well as scenario-based lanes which rehearse the cooperation between armor and infantry. The key task to successful MOUT operations is well rehearsed communication at the lowest level between dismounts, armor, air assets, and indirect fire. MOUT operations cannot be successful without synchronization of all elements at platoon level and lower. One of the best resources for preparing for MOUT training is *FKSM 17-90-10, Armor in MOUT*. This short supplementary manual lays out the doctrine and specific techniques to be used in a MOUT environment.

Conclusion

We learned several critical lessons from our MOUT training. First, that armor is highly vulnerable in a MOUT environment. Despite the tactics that we employed to mitigate the risk to our armor forces, they remained at great risk to close-range antitank fire. The best way to mitigate risk is to keep armored forces outside the city, allowing them to suppress from a more secure attack-by-fire position. Another key lesson is that combined arms coordina-

tion is absolutely essential to the success of the mission. Units must work together as a combined arms team to ensure that fires and mutual support are provided at the right place and the right time.

Finally, MOUT is a squad leader fight. Squad leaders need to be involved in the planning and rehearsals at troop level. Once an urban fight begins, command and control at troop and platoon level relies upon the noncommissioned officer that is at the tip of the unit's spear.

Overall, training in a MOUT environment has not only enhanced our unit's ability to operate in this difficult type of terrain, but has trained many critical combat skills. MOUT teaches combined arms coordination, the flow of combat information, and tactical leadership at the lowest levels. Without these critical skills, MOUT operations will not be successful.

Notes

¹*FKSM 17-90-10, Armor in Military Operations on Urbanized Terrain (MOUT)*, April 1990, Chapter 7.

²*FM 90-10, Military Operations in Urbanized Terrain*, August 1979.

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