National Training Center Opposing Forces Smoke Doctrine

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The opposing forces (OPFOR) at the National Training Center (NTC), Fort Irwin, California, developed several new tactics, techniques, and procedures (TTP) for smoke operations. Over time and multiple NTC rotations, these TTP were refined and adjusted into an OPFOR smoke doctrine. This doctrine has proven to be extremely effective at the NTC and has both offensive and defensive smoke elements that regular Army (BLUFOR) units could use effectively.

While serving as the chemical officer of 1st Squadron, 11th Armored Cavalry Regiment (ACR); leader of the OPFOR smoke platoon; and executive officer of Headquarters and Headquarters Troop Regimental Support Squadron, 11th ACR, I saw first hand the effectiveness of the OPFOR smoke doctrine. This article begins with a detailed account of the OPFOR smoke doctrine focusing on the hard-learned lessons of the NTC. Next, it discusses problems associated with transferring this doctrine to Army standards and ends with a brief summary of each point.

OPFOR Smoke Doctrine

Providing maneuver smoke to the OPFOR at NTC presents several unique problems:

- The OPFOR do not have a set plan for line of departure. Instead, the OPFOR have several courses of action to follow, or they may make up one while on the move, depending on the enemy-force deployments.
- The OPFOR stop for no one. Once the OPFOR have started their movement, units must move out smartly with them or be left behind.
- The OPFOR are outranged by the BLUFOR weapon systems. This makes the OPFOR vulnerable in flat terrain and when crossing linear danger areas. To overcome these problems, the OPFOR developed several unique smoke TTP.

The smoke-platoon leader must know the OPFOR plan better than anyone else. To do so, he/she must attend all war games, rehearsals, and coordination meetings for the regiment and for the motorized rifle battalion he/she will work with. The leader needs not only to plan out-placement of the smoke elements but also to plot preplanned artillery-delivered smoke lines. The requirement for the smoke-platoon leader to coordinate artillery-delivered smoke cannot be understated. There are two important reasons for this: artillery-delivered smoke is the best method to cover your smoke systems until they can conceal themselves, and the effectiveness of your own smoke is doubled with a well-placed artillery smoke line. The placement of artillery-delivered smoke is best coordinated by the smoke-platoon leader who has more experience than the squadron chemical officer and is more concerned with its proper use than the squadron fire-support officer.

Coordinating artillery-delivered smoke becomes more critical when we discuss the task organization of the smoke platoon for offensive operations. However, to understand the smoke platoon's task organization, we first must have a working knowledge of how the OPFOR fight. During an offensive penetration, the regiment will have a forward detachment consisting of the forward security element (FSE) and the advanced-guard main body (AGMB). Task organization for these elements depends on the situation. The mission of the FSE and the AGMB is opening a point of penetration and a maneuver corridor for the regiment. The rest of the regiment consists of the main-body supporting element, the main body, the second echelon, and the fifth maneuver element.

The mission of the main-body supporting element is to exploit the success of the FSE and the AGMB or create

an additional point of penetration and create follow-on points of penetration. The mission of the main body is to secure the objective and prepare for follow-on forces. The second echelon mission is to secure the objective or secure a flank. The fifth maneuver element is the last element and can be assigned a variety of missions.

For any of the regimental elements to accomplish their assigned tasks, they have to close with the enemy without taking heavy causalities from the BLUFOR's direct-fire systems. This is not an easy accomplishment considering the BLUFOR units have an advantage in standoff range of their direct-fire systems. The regiment primarily tries to use terrain to cover its movement. However, without smoke to fill in the gaps in terrain coverage, the regiment would suffer heavy causalities before it could return fire. Therefore, every element in the regiment needs smoke support to accomplishment its mission, which only one platoon provides.

This is the problem we faced when developing a smoke-platoon task organization for offensive operations.

An OPFOR surrogate vehicle (OSV) pulls security as another advances over the hill.

To solve this problem, the first thing we did was to move the entire platoon to the line of departure an hour before start-point time and emplace a smoke haze. This would tie into artillery-delivered smoke lines, if available. The effect of the smoke haze is to conceal the regimental start point. As the regimental elements hit the start point, the smoke platoon splits into teams of two smoke-generator vehicles (TDA-Ms) and moves out with select elements in the regiment. Generally, two TDA-Ms go with the FSE, two with the AGMB, and two with the main-body supporting effort. This gives the supported unit maximum smoke on target at the required time. The linkup with the supported unit is done on the move without a change in the rate of movement.

Once the linkup is complete, the TDA-M team (in coordination with preplanned artillery smoke lines) will smoke supported elements until they are safely in broken ground or across linear danger areas. To screen the supported unit effectively across a linear danger area, smoke should not be placed directly on the maneuver unit. The preferred method is to place a curtain of smoke between the supported unit and the suspected BLUFOR locations. Artillery-delivered smoke is used to cover the TDA-Ms on the flank of the supported element.

After the unit has made contact, the primary mission of the two TDA-Ms with the AGMB and FSE is to obscure the point of penetration. The smoke TTP developed by the OPFOR for opening a point of penetration or breaching operations are extremely effective and a key component of the OPFOR smoke doctrine. Artillery-delivered smoke mission is called in on the far side of the obstacle. Once the smoke builds on the far side of the obstacle, two TDA-Ms move toward the intended breach site and start generating smoke. With the obstacle obscured, the breach tank moves up and creates a breach. The breach tank is followed by one TDA-M to smoke the far side. The second TDA-M follows the next tank across the obstacle and proceeds with the breaching unit toward the objective. The important thing to remember about breaching operations is that a tank never leaves a TDA-M unsupported. The coordination between the supporting tank and TDA-M must be worked out during the planning process and should be rehearsed.

The two TDA-Ms attached to the main-body supporting element have a different mission from those assigned to the AGMB and the FSE. The main-body supporting element is moving through a corridor cleared by the AGMB or the FSE and should be free of enemy contact. So, the need to cover linear danger areas is not as great, and the main-body TDA-Ms should save smoke for their primary mission. The primary mission of the

two TDA-Ms with the main-body supporting-effort element is to open a second point of penetration and to act as the platoon reserve in case the TDA-Ms with the AGMB and the FSE are destroyed.

Once a course-of-action decision is made, the main-body supporting element will do one of three things. It will—

- Attack through the point of penetration made by the FSE.
- Attack through the point of penetration of the AGMB.
- Open a new point of penetration.

Generally, the smoke platoon follows the same basic plan of maneuver despite the course of action the main-body supporting effort picks. For example, if the main-body supporting effort moves through the point of penetration created by the FSE, the two TDA-Ms with the FSE will join the main-body supporting effort. As a result, four TDA-Ms are attached to the main-body supporting effort as they make a second point of penetration. The two TDA-Ms with AGMB split—one stays with the AGMB to try to deceive the BLUFOR while the other joins the main body. (Note: If the main-body supporting effort opens a new point of penetration, one TDA-M from the FSE and the AGMB will stay with those elements while the other two will join the main body.) After the main-body supporting effort has created the second point of penetration and any additional points of penetration that are necessary, they pass the battle off to the main body securing the objective. With battle handoff of these two elements, the four TDA-Ms with the main-body supporting effort join the one TDA-M in the main body. The end state provides five TDA-Ms supporting the OPFOR at the objective.

The basis of offensive OPFOR smoke doctrine is the ability to mass, disperse, and mass again at the decisive point on the battlefield. Every soldier in the smoke platoon has to know the plan, know how to track the battle, and be very proficient at orienting himself to his terrain and stages of the mission.

The OPFOR defensive smoke operations face many of the same problems and require the same skills as the OPFOR offensive smoke operations. However, defensive smoke operations have some additional challenges. Combat battle instructions (CBI) are the rule book for all the NTC engagements and only allow four TDA-Ms in a defensive battle. In addition, the CBI place restrictions on the placement of the four TDA-Ms.

To understand how the CBI limit defensive smoke operations, a working knowledge of how the OPFOR fight in the defense and its task organization is required. The OPFOR fight defensive operations with a reinforced motorized rifle battalion under the command of a captain, while a counterattack reserve usually fights using a motorized rifle company under the command of the division commander. The task organization of these two elements changes from battle to battle.

Security-zone defense is a layered defense. In security-zone defense, each element, with the exception of the final defense line, has the mission of engaging the BLUFOR, causing attrition, breaking forward momentum, and withdrawing before it becomes decisively engaged. To do so, the motorized rifle battalion has ambush positions with two tanks and an armored personnel carrier placed in three different positions toward the forward edge of the battle area. Behind the ambush positions is the security zone that consists of one or two motorized rifle companies spaced out in ambush positions across the width of the battlefield. After the security zone is the main defensive line, which defends the OPFOR's no-penetration line and does not withdraw. The motorized rifle battalion commander will hold a small local reserve to stop any penetration of the main defensive belt or to use as he sees fit. The counterattack reserve is not under the control of the motorized rifle battalion commander and will not be released unless the BLUFOR's no-penetration line is in danger of collapsing or the BLUFOR has been fixed or destroyed and a counterattack is possible.

For the security-zone defense to be effective, the ambush positions and the security zone have to break contact with the BLUFOR units and move into a hide position. This is not an easy task because it requires vehicles to come out of hiding places and expose themselves to enemy fire. The best way to withdraw from contact is to use smoke coverage. This places the smoke platoon in high demand, and the CBI say that only two TDA-Ms are allowed in the security zone. The other two TDA-Ms have to be assigned to the counterattack reserve.

To overcome the restrictions placed on the smoke platoon by the CBI, the same basic principles that were effective during offensive operations are placed in use again. The platoon depends heavily on artillery-delivered smoke and remains flexible. The first thing to do on preparation day during first light or last light is to emplace a smoke haze somewhere on the battlefield. This deceives the BLUFOR scouts or allows them to emplace fighting positions or obstacles without being detected. Smoke is most effective at times of limited visibility. There are only two TDA-Ms to emplace the haze; this is why first

or last light is picked. After completion of the smoke haze, the two TDA-Ms resupply and split up, with each one going to an ambush position occupied by a tank. The TDA-Ms stay with the ambush position until first contact the next day.

Once first contact is made, the mission for each TDA-M becomes very difficult. The first mission for the TDA-M is to assist the ambush position in breaking contact. Generally, ambush positions are in broken terrain, which provides great hiding positions to blow smoke to cover the TDA-M's withdrawal. If the ambush position is unable to break contact, the TDA-M will leave the position to save itself. However, if the ambush position is decisively engaged and is unable to break contact, the TDA-M stays with the unit in ambush until the unit is safe behind friendly lines; then, it withdraws back to a set point and links up with the second TDA-M. It is important that the TDA-M does not take any unnecessary risks when withdrawing from the forward ambush position because it will be needed later. The link-up point for the two TDA-Ms is a center location within the security zone, usually near the security-zone commander's location.

A motorized rifle battalion advances across a dry lake bed under a smoke screen provided by the smoke platoon.

After the security-zone commander makes contact with the BLUFOR and the decision to withdraw from the security zone is made, the next step is to determine where smoke is needed most to aid in the withdrawal. Contact generally occurs on the left or right side of the security zone, and smoke can be massed where the security zone is in contact. If contact is made on both flanks, split up the TDA-Ms and send each one to the largest concentration of vehicles on the battlefield to extract them. Once the decision is made to withdraw the security zone, an artillery-delivered smoke line is fired in front of the BLUFOR unit. If the BLUFOR assault is canalized into the left or right flank, the mission for artillery smoke does not change. However, the TDA-Ms will stay together and place a smoke curtain between the OPFOR and the BLUFOR. As a result, the withdrawal of the security zone from direct-fire contact is a high-risk operation and losses can be expected.

After the security zone has withdrawn from contact, it attempts to move into a hide position on the flank of the BLUFOR. If possible, the two TDA-Ms join the security zone. Once there, the two TDA-Ms support the counterattack of the security zone into the flank of the BLUFOR. If the two security-zone TDA-Ms are unable to link up with the security zone, they will either move back to the motorized rifle battalion reserve or find a location where they can link up with the counterattack reserve TDA-Ms.

The two TDA-Ms with the counterattack reserve have an easier mission. They wait with the counterattack reserve until the division commander releases them. After the division commander releases the counterattack reserve, the TDA-Ms attached to that unit assume the flank-obscuring role discussed during offensive operations.

The OPFOR defensive smoke operations are more difficult than offensive operations. The TDA-Ms on the defense are placed in vul-nerable positions, and their loss has an immediate impact on the battle. To survive defensive smoke operations, the TDA-M operators need all the skills necessary for offensive operations and good situational awareness. They also need to develop a feel for the battle. In other words, they must be able to sense the battle's outcome and future enemy locations from battle tracking.

Problems with the OPFOR Smoke Doctrine

The OPFOR smoke doctrine has several key elements that were not discussed in the above examples. One thing not mentioned is a smoke-control point. Another problem the unit faced was how to resupply the TDA-Ms in this fast-paced environment. Both of these issues warrant further discussion.

First, a smoke-control point is not used in the OPFOR smoke doctrine mainly because it is ineffective. The command vehicle of the smoke platoon is a TDA-M with dual net ability. The TDA-Ms are on the radio frequency of the element they support. Several reasons for not using a smoke-control point are as follows:

- The OPFOR move so fast that there is no time to relay information from a separate net. Instead, platoon command and control use hand and arm signals and, only if necessary, the support-unit net.
- The distance is too great between platoon elements on the battlefield. A smoke-control point could

follow only one section of the platoon, and by the time it was in position to observe smoke, the regiment had moved on. Therefore, the speed of the regiment makes a smoke-control point difficult to manage.

- The supported unit can act as its own smoke-control point because it knows what is needed better than the smoke-platoon leader. Hence, the smoke-platoon leader's job is to find a way to execute what the supported unit wants and to give advice when necessary.

Second, one of the most difficult aspects of the OPFOR smoke doctrine is how to resupply the TDA-Ms and keep up the rate of movement. The OPFOR move quickly and do not wait for the smoke platoon to resupply. In addition, a tank-and-pump unit assigned to the platoon cannot be brought into the fight because it is not fast enough to keep up with the battle. The solution then is to load 5-gallon cans with fog oil and MOGAS and place them in the TDA-Ms. This is sufficient to resupply the platoon during normal battles. However, during heavy smoke-use battles, the smoke platoon uses a HMMWV, visually modified to look like a BRDM (an armored car used for reconnaissance and command control), loaded with 5-gallon cans of fog oil and MOGAS. The BRDM is able to keep up with the platoon and is more durable than the tank-and-pump unit on the battlefield.

Conclusion

The OPFOR smoke doctrine is created to support the unique way the OPFOR fight at the NTC. This does not mean that elements of this doctrine would be ineffective if used by the BLUFOR units. The same concepts the OPFOR use are the basis for Army doctrine. Army units are supposed to move rapidly, seize the initiative, concentrate combat power at points of penetration, deceive the enemy, and attack into an unexpected point.

Some aspects of this doctrine would be easy for a BLUFOR unit to implement. The close coordination of artillery and generated smoke could be done with little trouble. The new smoke-generating systems with graphite can create a smoke curtain more effectively than the M157 jet-pulse system that the OPFOR use.

However, the basis of the OPFOR doctrine—the ability to mass smoke, disperse with the supported unit, and mass again at the decisive point on the battlefield—would take additional training time and money to implement. For the BLUFOR units to implement this concept, a close relationship must be created between the smoke platoon and the supported unit. The supported unit has to know and trust the smoke platoon, and its soldiers, in turn, must know the strengths and weakness of the supported unit. A sense of mutual trust and respect must be built between the supported unit and the smoke-platoon leader. The only way to build this trust is through months of training together under realistic conditions. The platoon must be well trained down to the last soldier. The supported unit also must be well trained and understand the importance of smoke operations.

On the surface, the OPFOR smoke doctrine may appear different than the BLUFOR doctrine in FM 3-50, *Smoke Operations*. However, the doctrine is nothing more than our present Army doctrine modified to fit rapid and decisive maneuver, which is the key to winning on the modern battlefield and is what all Army units train to do. The OPFOR smoke doctrine applied to the BLUFOR units would greatly increase their ability to maneuver and win on the modern battlefield.