

The Seven Breaching Habits Of Highly Effective Units

by Lieutenant Colonel Thomas H. Magness

Mobility is Job One. Without it, our forces will go nowhere.

Throughout history, combatants have found numerous methods of blocking roads, creating barriers, and limiting the movement of advancing forces, and in turn, great armies have conducted combined arms breaching operations to overcome these various obstacles and barriers in an effort to breach the obstacle, press the fight, and destroy the enemy. The orchestration and execution of this task may be the toughest one a maneuver commander will ever face. The purpose of this article is to provide an assessment of breaching operations at the National Training Center (NTC) while also revealing “The Seven Breaching Habits of Highly Effective Units.”¹

In 1999, TRADOC developed a trends reversal program to review unit execution of numerous mission essential tasks and develop ways to improve in areas where units are traditionally weak. One task, combined arms breaching, was high on the list for review and assessment. TRADOC designated NTC Rotation 00-10 as a combined arms breach-focused rotation and began efforts in coordination with the Engineer School to assess negative trends seen in breaching operations. This onerous task, executed by some tremendous maneuver and engineer leaders, validated one thing — the trend was not reversing. Combined arms breaching operations are hard, and they remain a negative trend. This is no surprise to warfighters anywhere and is echoed by the Sidewinder (Combat Engineer) Observer Controller Team at the NTC. Opposed combined arms breaching, under fire, against a capable opponent like the NTC Opposing Force (OPFOR) is tough...but not impossible.

FM 3-34.2, Combined Arms Breaching Operations (formerly FM 90-13-1)

says, “Breaching is perhaps the single most difficult combat task a force can encounter.” *Engineer* magazine dated May 2001 indicates that it took the Marines 2.5 to 9.5 hours to clear two lanes through an Iraqi obstacle belt during Desert Storm.²

It took another 24 to 48 hours for friendly elements to pass through the obstacle and continue their movement toward the enemy. This was an unopposed breach with the best available equipment, personnel, and planning, and had been rehearsed for weeks.

We can and must reverse this trend. Many rotational units — with great leaders, adequate equipment, and strong motivation — are stymied at the breach and cannot push their combat power across to destroy the enemy. Some units *never even get to the breach* or cannot identify where or how to breach, despite the fact that breaching is a top priority for combat engineers and Brigade Combat Teams (BCTs) in mid- to high-intensity operations.

Combined arms breaching may be the ultimate team sport; success relies on the skill, techniques, and training of all the players — not just the engineers.

Trends – What We See

First, let me offer a quick review of the combined arms breaching trends seen at the NTC, based on observations during the planning, preparation, and execution of combined arms breaching



operations. The list reflects continued failures in these areas:

- Planning.
 - Unfocused R&S planning/unfocused intelligence requirements.
 - Poor terrain analysis that fails to answer the “so what?” question.
 - No reverse breach planning.
 - No detailed plans to set the conditions for breaching.
- Preparation.
 - Observers fail to provide detailed obstacle intelligence.
 - Units fail to interdict enemy engineer defensive preparations.
 - Inadequate rehearsals (engineer and combined arms).
- Execution.
 - Breach execution is unsynchronized.
 - Maneuver forces lack mass and piecemeal forces into the breach.
 - Maneuver forces “stumble” into obstacles.
 - Engineers not in position when conditions are set.
 - No consideration for traffic control or expansion of lanes.

The Seven Breaching Habits of Highly Effective Units

- **Habit No.1 – Mass kicks a**!**
- **Habit No. 2 – Focus on the enemy engineers.**
- **Habit No. 3 – The “Orchestrated Ballet of Farm Implements” doesn’t just happen.**
- **Habit No. 4 – Don’t call them farm implements.**
- **Habit No. 5 – Obstacles are like rivers – learn to breach or...learn to swim.**
- **Habit No. 6 – Use all available smoke assets – someone is always watching!**
- **Habit No. 7 – Breaching operations in restricted terrain are not “business as usual.”**

“I approve of all methods of attacking provided they are directed at the point where the enemy’s army is weakest and where the terrain favors them the least.”

– Frederick the Great

Habit No.1 – Mass Kicks A**!

Quite simply, most units lack sufficient mass to be successful in penetrating prepared enemy positions. Success or failure can often be predicted at the line of departure (LD) based on this fact alone. In fact, most BCT attacks will effectively mass no more than one CO/TM at the point of penetration — clearly not enough to penetrate the prepared fortifications of an enemy who conducts this defensive mission three times for every regimental attack.

The OPFOR is good. We should expect no less from our next enemy, wherever we may meet him. We should expect complex obstacle fortifications with antitank and anti-personnel (AP) mines, ditches, wire, booby traps, anti-handling devices, and whatever else the enemy can muster. Behind this line of obstacles we can expect prepared fighting positions for both vehicles and personnel with interlocking fires, interior repositioning lines, and the massed effects of as many forms of contact as possible.

This is not, nor will it be, a scenario against which we should expect to be successful without the massed effects of fire, maneuver, and every battlefield operating system (BOS) in the unit.

The standard for mass is articulated pretty clearly in *FM 3-34.2, Combined Arms Obstacle Breaching*:

• Breaching is conducted by rapidly applying *concentrated efforts* at a point to reduce the obstacle and penetrate the defense.

• Massed combat power is *directed against the enemy’s weakness*.

• The location selected for breaching depends largely on the weakness in the enemy’s defense, *where its covering fires are minimized*.

• If friendly forces cannot find a natural weakness, they *create one* by fixing the majority of the enemy force and isolating a small portion of it for attack.

TTP: Conduct detailed terrain analysis — answer the “so what?” question. We are beginning to see units leveraging the technological advances of terrain visualization tools. The products from Terrabase, DTSS, and other visualization tools are just that — products. But with *analysis* comes answers to the “so what?” question that maneuver commanders must demand — namely where can we concentrate efforts against an enemy weakness and where are the enemy’s covering fires minimized? If one is not identified, where must we create one? Where does the terrain facilitate the positioning of support forces? Where is the enemy’s “red zone” and how can we stay out of it? The scheme of maneuver, scheme of fires, task organization, and BOS focus await the answer to these questions.

TTP: Plant the BFT (Big Fat Tack)! Mass on the point of penetration. We coach the use of a BFT (an extraordinarily bigheaded pushpin!) to help focus the planning and execution on the point of penetration. It is a great tool to help ensure focus at the point where we must have massed effects. Take a look

at your plan — how many maneuver units are focused at that point? Is every BOS focused at that point to ensure success? Is that an enemy weakness? If not, how are we creating one there?

• When do we place the BFT? Early enough to ensure the massed effects of maneuver, fires, and every other BOS. In other words, before we finalize the friendly course of action (COA).

• Who (BOS) is focused at the BFT? Who isn’t!

• Can we adjust the BFT location? Absolutely. As information changes our understanding of the enemy we will adjust the BFT location. Use these to trigger a re-synchronization of the plan ...are we still focused? TOC battle captains and XOs must ensure we have a battle drill to confirm focus at the BFT through execution.

TTP: Isolate the point of penetration. Wherever we penetrate the enemy, we must ensure that the remainder of the opposing force remains fixed. We do this with fires, CAS, maneuver, and scatterable mines. We must do this, however, without violating the principle of mass. The OPFOR has great success in the offense fixing enemy (BLUFOR) forces using MRCs and FASCAM and does so without significantly reducing his ability to mass at the point of penetration. All too often, BLUFOR units commit BN/TFs to this task — often one-third to two-thirds of their total BCT combat power.

TTP: Mass engineers at the breach. Breaching doctrine basically requires one engineer platoon (with attachments) to execute one lane. Additionally, there is a requirement for redundancy — typically 50 percent. You do the math! In a maneuver TF supported by an engineer company, most of that company is required at the breach. Develop a scheme of maneuver and a task organization that masses engineers at this critical point. Identify triggers to change task organization as required to mass engineers at the breach and incorporate them into the decision support matrix (DSM).

Habit No. 2 – Focus on the Enemy Engineers.

In post mission summaries at the NTC, we often quote from *FM 3-34.2*: “An unverified enemy template can lead to disaster because the force may

aim an attack at the wrong place. Units may deploy to reduce expected obstacles early, wasting mission time to feel their way into nonexistent obstacles; or they may blunder into an unexpected obstacle or an enemy engagement area (EA).” Attacking units routinely have little or no knowledge of how the defending enemy is shaping terrain with obstacles, and engineers are usually committed to breaching operations with very little information on the obstacles they are tasked to breach. It is this shaping of the terrain that will tell the story of how the enemy is defending — and where. Engineers (yes...even enemy engineers) don’t lie. They cannot — it simply goes against their very nature! An obstacle on the ground means something. It probably means that, were you to back up to two-thirds of maximum effective enemy weapons range (typically 1200-2000 meters), there will probably be an enemy position. Terrain visualization tools can help confirm or deny these locations (more “so what?” questions).

All too often, however, we do very little to find these enemy obstacles... and yet they are the one component of the enemy defense that can most easily be detected. They can be detected during the day or night and are most easily detected during the actual construction of the obstacle — men and machines are working, vehicles with supplies are forward, and the terrain is changing shape. Finding precise enemy positions, however, is very difficult. Most OPFOR positions are occupied for only a brief period during defensive prep (position proofing, rehearsals, security operations), and then not again until just prior to contact. Most R&S efforts focused on finding the enemy in those positions are unsuccessful — the enemy is simply not there.

TTP: Kill the enemy engineers! Enemy engineers will die. Kill them. Position observers (early) to detect and disrupt the enemy’s defensive preparations. Target bulldozers, Class IV/V caches, engineer soldiers and equipment, and all obstacle emplacement activity. The enemy’s ability to disrupt our attacking formations and reduce our momentum is directly related to his ability to successfully emplace his obstacles. He knows he cannot defeat the BLUFOR in a direct fire battle without his battlefield shapers — deny him this advantage. Currently, mine emplacement is low risk and high payoff. We must reverse this. We must make it a

high-risk mission for enemy soldiers to employ mines. When an enemy soldier gets the mission to emplace mines, he must tremble with the thought of his impending destruction!

TTP: Find the Obstacles! This cannot be just an engineer reconnaissance task. This is something that must involve COLTS/Strikers, brigade and task force scouts, UAV, JSTARS, and any other available “lookers.” Find the obstacles to confirm/deny the enemy course of action. Confirm the proposed point of breach/penetration. Consider layering reconnaissance assets by sending in initial forces to identify obstacle locations with subsequent forces (perhaps engineer reconnaissance forces — focused on the BFT!) to obtain the precise information required prior to the commitment of breaching forces such as:

- Obstacle location and type
- Gaps and bypasses
- Specific minefield composition (may dictate what breach assets to use and in what sequence)
- Soil conditions (may indicate suitability for plowing)

Even in the very best of circumstances, we do not have the technology to detect buried mines as well as many other low-cost, low-technology explosive devices. Therefore we must compensate for this with TTPs, task organization, and focused reconnaissance. To be successful, we must focus all available “lookers” to enable us to detect mining activity and enemy obstacles — before they are emplaced (see “Kill the enemy engineers” above).

Habit No. 3: The “Orchestrated Ballet of Farm Implements” Doesn’t Just Happen.

FM 3-34.2 indicates that the “Commander ensures synchronization through proper planning and force preparation. Fundamentals to achieve synchronization are:

- Detailed reverse breach planning.
- Clear sub-unit instructions.
- Effective command and control.
- A well-rehearsed force.”

The first two are fairly straightforward and are articulated very well in our breaching doctrine. Reverse breach planning works — do it! Determine the force ratios required on the objective

and work backward through the breach to the LD. Assign clear tasks and purposes to all sub-units with graphic and fire control measures and triggers that take the unit from LD through the objective.

TTP: Command and Control. Ensure, as a minimum, that the following are clearly addressed in the plan and rehearsed during the rehearsal (see below):

- Who determines that conditions are set?
- Who initiates the smoke (artillery and mechanical)?
- Who adjusts and controls the smoke?
- Who chooses the specific breach location?
- Who controls the breach assets?
- Who shifts suppressive fires?
- Who guides assault forces to the breach?
- How and when do we communicate this information...and on what nets? How do we do this digitally?
- Who is the breach force commander and have we resourced him (without exceeding span of control considerations) to be successful?

TTP: Conduct Combined Arms, mounted SOSA rehearsals. You may be surprised to see the R (reduction) missing from the breach fundamentals acronym (SOSR-A). This is the one component that least needs rehearsal — it is the bread and butter battle drill for the engineers but is the one that, when units indicate that they have conducted rehearsals, has received the most attention. Where synchronization most often fails, and where rehearsals need most focus, is in setting the conditions (suppress, obscure, secure) and in rapidly projecting combat power (assault) through the breach and onto the objective. Make this the focus of mounted rehearsals. Work through timing, triggers, positioning, and the C2 issues identified above. Get the engineers to the breach — they’ll do fine!

Habit No. 4 – Don’t Call Them Farm Implements!

We all (engineers, maneuver leaders, Army leadership) recognize that our breaching assets are slow, old, and often inadequate for the assigned breaching tasks. But they’re the best the Army

gives us — make them work! As a generalization, engineer and maneuver leaders both fail to understand the capabilities and limitations of our breaching systems, do not identify appropriate commitment criteria for specific systems, and generally underestimate/undersell the capabilities of the most powerful breaching force on the combined arms battlefield — the sapper!

TTP: Fire the MICLIC! The lethality of the MICLIC (Mine Clearing Line Charge) should not be understated. It consists of 1950 pounds of composition A4 and is capable of defeating most pressure-activated mines, clearing a 14m x 100m lane. Unfortunately, until sappers come to the NTC (or are deployed to a combat theater), they generally have not fired a live MICLIC. CONUS-based units are authorized (STRAC) only inert line charges, and even then not enough for one per MICLIC crew. This would be the equivalent of tank crews achieving “Qualification” having fired only TP (practice) rounds — or, not having fired one themselves, reaching qualification by watching their buddy fire one. Needless to say, there are a host of issues associated with the firing of 1950 lbs. of explosive attached to 550 feet of cabling and electrical wiring. Work through them. Consider the following:

- Bullet No. 5 of 144 in the safety summary section of the MICLIC TM (*TM 9-1375-215-13&P*) indicates that when the MICLIC trailer is towed by a vehicle...restrict operations (in rough broken terrain) to 0-5 MPH. Slow down. Additionally, the launch angle must be $47^\circ \pm 2^\circ$. Elevations outside this window may prevent successful arming of the charge. Put the MICLIC on a good road or pick a point of breach that is suitable for the speeds and launch angle that you require (again — more “so what?” questions for your terrain analysis).

- The MICLIC will destroy most all pressure-activated mines in the 100m x 14m lane. Some mines may remain in the lane unaffected by the blast effect of the charge. That is why we proof, using either rollers, sappers, or mine plows.

- Until the Army fields a more capable system, the MICLIC is still the most capable breaching asset in the inventory that allows breaching without exposing soldiers to the risks associated with dismounted breaching operations. Know and understand its capabilities

and limitations and find opportunities to increase the tactical and technical proficiency of the soldiers who use it.

TTP: Never underestimate the breaching capability of a single sapper! There is absolutely no obstacle known to man (and certainly none seen on the NTC battlefield) that cannot be breached by an engineer soldier. We use mounted systems (MICLIC, tank plow/roller, ACE) to provide speed or mitigate the risk to dismounted soldiers. There may be cases where the sapper is the best available breaching option (rough, restricted terrain for example). And while there are certainly implications on timing, if the sapper is the only available breaching option, we should all be prepared to wait...the alternative (mission failure), of course, being much worse! All of which relates back to the importance of gaining specific intelligence about the obstacle at the point of breach (BFT) — prior to the arrival of the sappers. The ability to configure an appropriate breaching package without losing momentum depends on the timely and precise nature of this information. Your sappers demand it.

Habit No. 5 – Obstacles Are Like Rivers...Learn to Breach or Learn to Swim!

Our breaching tenets, while all appropriate, probably need to borrow a few bullets from our river-crossing doctrine (*FM 90-13*):

- Surprise
- Extensive Preparation
- Flexible Plan
- Traffic Control
- Organization
- Speed

If units viewed the obstacle as a river that requires the passage of not just the lead maneuver formation but perhaps the entire BCT/division/corps on one or two narrow lanes, then perhaps we would be less inclined to “hand wave” the details of the breach or to push the requirement to “execute the breach” down to the lead TF or CO/TM. There is little margin for error. If successful, we might have one to two — 14-meter-wide lanes through which to project combat power. Smoke, dust, direct and indirect fires, scatterable mines, and chemicals all further narrow this margin for error.

TTP: Avoid the frontal attack. While our doctrine indicates that the frontal attack is the least desirable form of maneuver, it is the one most frequently seen at the NTC. Find a flank — and mass on it. Exploit a weakness or create one. Isolate the point of penetration. BLUFOR units rarely, if ever, surprise the enemy but rather “telegraph” their intentions long before LD. Find a way to tell a deception story without losing the ability to mass effects at the BFT — no easy task but one which the OPFOR routinely executes. Use obscurity during preparatory activities and movement to, through, and beyond the LD to make it difficult for the enemy to determine friendly intentions.

TTP: Plan for traffic control. Get the MPs into the fight. Traffic control is a traditional task for military police but one that they rarely execute at the NTC. There must be a trigger to hand over the cleared lane from the breaching unit’s engineers to follow-on MPs and/or engineers. BCTs should plan for a forward passage of lines if more than one unit is passing through the lane. Consider detailed march tables with graphic control measures, much like for a river crossing, that will facilitate the passage without losing momentum.

TTP: Shifts happen. Build flexibility into the plan. Most plans do not survive first contact with the enemy, let alone make it very far beyond the LD. Most units identify branch plans for alternate courses of action but generally fail to include BOS implications as they develop these alternate plans. This is also where the TOC battle drill that refocuses all BOS at the revised BFT location must be in place. Regardless of where we breach, to be successful all team members must be refocused at the new breach location if it is to be successful.

Habit No. 6 – Use All Available Smoke Assets — Someone Is Always Watching!

Of the breach fundamentals (SOSRA) the most challenging may be obscurity. Mechanical smokers (wheeled or tracked smoke generators) rarely create the conditions necessary to allow maneuver formations to get into position to breach. Units rarely identify triggers to transition from artillery-delivered smoke to mechanical smoke and even to hand-emplaced smoke (smoke pots). This is one of the most critical components of the breaching operation that

“Most units identify appropriate targets and triggers for artillery-delivered smoke. Fewer use mechanical smokers during the approach to the obstacle or at the breach....”



needs synchronization...and needs rehearsal.

TTP: Give a clear task and purpose to mechanical smokers. Generally orders to smoke units read like this... Task: smoke; Purpose: to provide smoke. Chemical units need a specific *target* (AT systems, MRP- or MRC-sized formations), *location* (north wall of the valley, NV123456), and desired *effect* (haze, blanket, curtain, etc.) to better leverage their capabilities. Rehearse their positioning within the formation as well as the triggers for employment and transition from one task to the next (and yes, there is often more than one; i.e., one to facilitate the movement of support forces into position, another to facilitate breaching operations, and perhaps a third to facilitate assaulting forces moving through the breach and onto the objective).

TTP: Expend all ammo! Most units identify appropriate targets and triggers for artillery-delivered smoke. Fewer use mechanical smokers during the approach to the obstacle or at the breach. Very rarely do units employ smoke pots and smoke grenades at the breach — perhaps because it adds to what already is a complicated menu of tasks. Units do so often at their own peril. Assume someone is watching and leverage every available asset to create the necessary conditions for committing soldiers to and through the breach.

Habit No. 7 – Breaching Operations in Restricted Terrain Are Not “Business As Usual.”

Too many units fail to account for the implications of restricted terrain in the planning, preparation, and execution of breaching operations. Units cannot approach breaching operations in a defile as if it were an open valley floor. The implications for breach timing, maneuver unit positioning, observer positioning, and breach assets are too critical to overlook. For those who have trained in “Mojavia,” visualize breaching operations in Alpha or Bravo Pass — and

think about the implications for breaching in Korea, Kosovo, or Afghanistan. *FM 3-34.2* (Appendix D) is a pretty good start to examine the implications of restricted terrain and develop unit TTPs and SOPs.

TTP: Restricted terrain operations are slow — plan accordingly. The implications on the time required for maintaining suppression, obscuration, etc., while we work through a defile are tremendous and must be planned and rehearsed in detail. These are often dismounted operations to clear high ground and, quite possibly, to set support forces on the far side of the obstacle. The terrain may restrict the ability to execute mounted breaching operations, further adding to the timing challenges. All of these details point to a slow, deliberate process.

TTP: Traffic control is critical. Not only is the river long, it’s wide...and deep! Because defiles may not allow for two-way traffic and may extend for hundreds of meters, even kilometers, there is even less a margin for error as units move to and through the breach. March tables are critical as are deliberate controls for entering and exiting the breach area.

Conclusion – Making the Seven Habits...Habits.

The challenge for most units is how to translate these habits into executable tasks. The answer, in a word, is repetition. Units that practice these TTPs, incorporating them into battle drills, SOPs, and mission plans, will develop these breaching habits. Multiple repetitions with all members of the combined arms team will make the successful execution of this extraordinarily complex combined arms task more possible.

These habits are designed to facilitate success in the most complicated possible scenario — breaching in contact. The goal must be to set the conditions, in accordance with these “Seven Habits,” to breach out of contact with the enemy! Destroy every enemy in and

around the point of breach and every enemy that can influence the point of breach — and then breach. Is this scenario possible? Yes. Is it possible without multiple repetitions and the total focus of absolutely every team member? Maybe...but not likely!

Ultimately, however, these habits are the responsibility of the breach orchestrator — the unit commander. Translate these TTPs and breach habits into clear guidance and intent that focuses the entire unit on the penetration of the enemy and his obstacles. And while the use of the “Seven Habits” will not *guarantee* success at the NTC or on any other future battlefield, their application, coupled with the warrior spirit that our soldiers consistently display, may help units begin to reverse this negative trend and give our force the mobility it requires.

Notes

¹Apologies to Stephen Covey, author of *The 7 Habits of Highly Effective People*, Simon and Schuster, New York, N.Y., 1989. Combined arms obstacle breaching likely requires effective people as well as effective units!

²Colonel Michael K. Asada, et al, “The Grizzly: A System of One,” *Engineer*, May 2001, p. 41.

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