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DEPARTMENT OF THE ARMY  
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S 3 *[initials]*

AVII-GCT

14 March 1969

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT. Lessons Learned - Defense Against Sapper Attacks (U)

1. (U) PURPOSE: To provide XXIV Corps units with information on enemy sapper operations and with recommended countermeasures to be taken against sapper attacks.

2. (U) CENERAL:

a. Analysis of enemy attacks conducted during the past 12 months against friendly fire bases and fixed installations in the XXIV Corps TAOR has shown that the NVA resorts almost entirely to the use of sapper tactics. There is no record since TET 1968 of an enemy attempt to seize and hold a US or ARVN installation. His primary objective has been to penetrate the defenses of the friendly force, inflict the maximum number of casualties, destroy equipment and bunker complexes within the perimeter, and withdraw. This form of attack differs slightly from the more conventional operation undertaken by an enemy battalion or larger. It is therefore requisite that all personnel within XXIV Corps be familiarized with the tactics and techniques employed by the NVA sapper.

b. The enemy sapper is a tough, well trained, and highly motivated soldier. He is combat experienced, has received extensive specialized training, and is a volunteer. His primary mission is to destroy equipment, weapons, installations, and personnel. His primary weapon is the explosive charge.

c. Sapper training consists of two phases. During the first phase, the trainee is subjected to instruction in those aspects of tactics which will enable him to approach an objective without being discovered, penetrate the perimeter of the defending force, and fight the defending soldier at close range. The second phase is more sophisticated, in that the trainee receives detailed instruction in the technical aspects of explosives.

d. During the combat training phase, the sapper first receives practical

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work in hand-to-hand combat. He then spends almost two weeks practicing the silent approach to an objective. This is followed by a week of training devoted to the techniques of cutting wire and detecting anti-intrusion devices within the wire. Still another week is allocated to training in the detection of mines, grenades, booby traps and trip flares, and it has been reported that live munitions are used in this phase of training. After this training, he devotes approximately four days to practice in scaling walls and wire obstacles. Finally, two and one half weeks are spent studying sapper tactics. This latter training includes instruction in the techniques of an attack against an outpost (to include approach without detection and rapid exit from the objective area) plus training in attacks against houses, buildings, trenches, tunnels, and bunkers.

e. Following his preliminary training, the sapper is then exposed to instruction in the use of both field expedient and sophisticated explosives. Upon completion of the training cycle, he is a soldier imbued with confidence and convinced of his ability to accomplish whatever mission is assigned.

3. (C) SAPPER TACTICS: Sapper operations consist of two phases: the reconnaissance and the attack. Both are time consuming, and both are executed with meticulous care.

a. The reconnaissance.

(1) The sapper operation begins with the announcement by the company commander of the objective to be attacked. Captured documents indicate that this normally occurs from four to nine days prior to the assault. The company commander discusses his plan with his executive officer, the PO (political officer), the assistant PO and the platoon leaders. Tactical responsibilities are assigned to the platoon leaders. The mission of motivating the men is assigned to the PO and his assistant.

(2) The company commander, XO and platoon leaders then begin their reconnaissance. From three to seven days may be spent in reconnoitering the objective. It is significant to note that an effort is made at the outset to proceed as close to the objective as possible. All terrain features are analyzed, routes of withdrawal and advance are determined, patterns are studied, and the location of listening posts and outposts are carefully plotted. Additionally, an effort is made to identify the location of existing anti-intrusion devices, to determine exactly how the protective wire is strung and what type of weapon is needed to breach it, and to decide on the time required to penetrate the perimeter and accomplish the mission. Finally, the reconnaissance party seeks to determine the exact enemy strength stationed around the perimeter and within the objective area and to plot trenches, bunkers, weapons' positions, CP's, and ammunition storage points.

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## b. The attack.

(1) The time between the final reconnaissance and the initiation of the attack is devoted to rehearsals and briefings. Sketches and sand tables are prepared, and each man is apprised of exactly what he must do throughout the course of the attack. A fire support plan is developed, and appropriate signals for attack and withdrawal are announced.

(2) That portion of the attack normally observed by defending troops is characterized by violence and speed. Like an iceberg, however, that which is seen of the attack represents only 10 percent of that which actually exists. The advance to the objective area begins many hours before the final assault. Frequently, an entire day is spent approaching to within a few hundred meters of the perimeter wire. Following this, most of the hours of darkness are consumed in proceeding the last few hundred meters to the wire. (Sappers recognize that surprise is the key to success, since they are invariably outnumbered by the defending force.) The assault is violent, beginning with a preparation (normally mortar fire), during which the noise is augmented through the use of RPG's and explosives. It is assumed that the defenders, upon hearing the mortar fire, will follow the normal pattern of seeking shelter within a bunker. (This has all too frequently been the case.) Once the defending force has retreated to the bunkers, RPG fire is placed on apertures at the points of penetration. Small arms fire is avoided by the sapper, because he does not wish to announce the presence of attacking forces. As a matter of fact, only a limited number of troops in any sapper unit are armed with small arms, and these weapons are used primarily to cover the withdrawal.

(3) The sapper frequently uses the least likely and most difficult avenues of approach. He takes the time to do so, because use of these avenues offers the best opportunity to work his way between listening posts. Success of his effort is dependent upon his ability to breach the wire without being detected. Using bamboo poles, mats, and explosives, he normally has little difficulty penetrating the perimeter wire, provided he has been successful in forcing the defending troops into bunkers. Once this is accomplished the actual assault begins. Mortars cease firing, but the impression of incoming fire is maintained through the use of RPG's, grenades, and explosive charges. Once inside the perimeter, sapper teams proceed directly to the specific installations or weapons that have been assigned to them. Their move through the objective area is made "on the double" and conducted without consideration for personal safety. Selected members of the unit are designated to continue to fire RPG's and detonate explosives throughout the attack in order to keep the defending troops in their bunkers. The few sappers equipped with small arms are charged with the mission of shooting defending personnel who attempt to leave the safety

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of their bunkers. Upon completion of their destruction mission, each team then moves rapidly to the planned point of withdrawal and exits the objective area. While in route, explosive charges are thrown into all bunkers not previously destroyed by RPG fire.

(4) The plan of attack invariably provides for an assault from more than one direction. Usually, there are two main exits, one on each side of the objective. Sappers are trained to carry dead and wounded with them as they withdraw.

#### 4. (C) HISTORICAL EXAMPLE:

a. Although sapper attacks undertaken within XXIV Corps area have followed the same general pattern, an attack which occurred in February 1969 is considered classic. In this attack the enemy unit was divided into four groups, each consisting of four teams of four men each. By dusk of the day prior to the attack, the 16 teams were deployed around the objective area, all of them concealed in underbrush within 100 meters of the perimeter wire.

b. The sapper element then devoted more than eight hours to a stealthy movement across the last 100 meters to the perimeter and into the wire. They were not detected during this eight-hour period. Then followed the standard pattern of mortar and RPG preparatory fires while the wire was being breached. In this particular instance, the defenders called in defensive fires, which added to the noise. Visibility was restricted by a thick blanket of fog. Defending forces, suspecting only an attack by fire had, for the most part, occupied defensive positions within the bunkers. When the enemy mortar fire ceased, the combination of friendly protective fire and enemy RPG fire continued, leaving the impression that the attack by fire was still taking place when, in fact, the sappers had penetrated the perimeter and begun to destroy occupied bunkers and artillery pieces. Defending forces, then recognizing that a penetration had been made, left their bunker positions and engaged the sappers in hand-to-hand combat -- but not before two artillery pieces and a number of occupied bunkers had been destroyed. Although the friendly position was not entirely overrun, casualties were high, and the enemy achieved a psychological victory at a time when he was seeking publicity.

#### 5. (C) LESSONS LEARNED:

a. Observations. Analysis of previous sapper attacks, to include the aforementioned, results in the conclusions that: the greatest threat to fire support bases and fixed installations in the XXIV Corps area is the sapper attack; sapper attacks follow a standard pattern, and such attacks can be prevented through the use of imaginative techniques designed to detect the enemy before he begins his assault.

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b. Evaluation.

(1) Despite past successes achieved by sappers, there is one major weakness in the tactics employed. The sapper must have time. He will sacrifice speed to achieve surprise. The defending force can, if it is so inclined, prevent the enemy from having the time he needs. The unit that remains in its position, following a standard pattern and making no effort to interdict either the initial reconnaissance by the sapper force or the time consuming approach to the objective invites disaster.

(2) It is to be recognized that the basic principles of defense apply in the development of any fire base or fixed installation. Commanders must always be aware of the requirement for adequate fields of fire, properly located internal defensive positions, and coordinated final protective fires. Recommendations listed below describe techniques specifically applicable to defense against sapper attacks. Their adoption should in no way preclude the preparation of defenses in accordance with existing doctrine.

c. Recommendations. The following recommendations are considered applicable, either individually or in toto, in the defense against sapper attacks.

(1) Day and night recon patrols. Defending units should prepare and implement as extensive a patrol plan as possible. Recognizing that infantry resources at a fire base or fixed installation seldom meet the basic needs of the commander, it remains imperative that a continuous effort be made to detect the sapper during either the reconnaissance or the movement to contact. The size of the friendly recon patrol will naturally have to be based upon the enemy threat in the area. The distance the patrol travels from the fire base or installation will also be contingent upon knowledge of enemy activity. It should be emphasized, however, that friendly patrols need not necessarily operate at great distances from the base, because sapper recon elements invariably attempt to get close to the objective area, and sapper forces must be positioned within but a few hundred meters of the perimeter wire many hours before the assault begins. The mission of early detection can therefore normally be accomplished by small screening parties operating in the immediate area around the fire base or installation. In this regard, an analysis of the historical example will show that two or three small patrols conducted by friendly forces just prior to dusk along a line some 200 meters outside the wire would have uncovered the enemy force at a time when he was most vulnerable.

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(2) Deception and counterintelligence. It will be noted that the sapper bases his plan of attack on detailed knowledge of defensive installations and patterns normally followed throughout the day and night. Commanders should therefore develop plans to deceive the enemy and hinder his reconnaissance. Such plans should include provisions for false bunkers and gun positions, movement of key installations from time to time, variation in patrol schedules, and the emplacement of dummy anti-intrusion devices to augment the actual devices around the perimeter. Effective deception and counterintelligence measures are products of the imagination, usually the result of thorough knowledge of sapper techniques combined with the promulgation of ever-changing ideas designed to confuse the enemy. One of the major deficiencies noted in the study of past sapper attacks was the constant use of the same locations for listening posts. An imaginative commander prepares plans for dummy listening posts as well as for posts that are never in the same location two nights in a row.

(3) Anti-intrusion devices. A unit programmed to occupy a fire support base or a fixed installation can never emplace enough anti-intrusion devices. Defense plans must provide for continuous improvement of those devices which exist and progressive augmentation thereof. Mines and booby traps affixed to trip wires must be carefully plotted in the interest of safety. However, the trip flare is a device which can and should be used in great numbers and in those locations where the enemy is not likely to expect them. A trip flare emplaced on high ground overlooking the defensive perimeter or on avenues of approach well away from the perimeter will cause the sapper immeasurable difficulty. He expects a pattern of wire, booby traps and trip flares in the general vicinity of the perimeter. If he discovers or trips a flare hundreds of meters from the objective area, he will be forced to proceed with even greater caution than he normally does. The principal factor in this technique involves constant and continuous improvement of the defensive position. This is a platitude all too frequently ignored because of limited personnel resources and the press of other business. Nevertheless, the commander who adheres to this principle and expands his detection devices as far as available resources will permit will seldom be subjected to the assault phase of a sapper attack.

(4) Troop alertness. It is a known fact that the VC/NVA will wait until boredom on the part of friendly forces causes the guard to be lowered. There is little that can be said relative to the requirement to insure that listening posts and personnel on the perimeter are alert at all times. This is a command function, and it is up to the commander to develop supervisory techniques designed to motivate the men. Practice alerts and a system of continuous inspections (particularly during the early morning hours) seem to produce favorable results.

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(5) Illumination of defended area. One of the keys to an effective defense against sapper attacks is illumination. The sapper is trained to operate in the dark, and once he penetrates the perimeter wire, he relies on confusion among the defenders and their inability to differentiate between the defender and the attacker. Thus, periodic illumination (at varied intervals) will assist in the detection of approaching sappers, and continuous illumination once the assault has begun will work to the benefit of the defending force. In many fire bases throughout the XXIV Corps area there is one 81mm mortar tube prepared at all times for immediate illumination of the objective area.

(6) Destruction of the enemy after the assault has begun. If the sapper is successful in reaching the perimeter wire without being detected, he is still extremely vulnerable during that period when he is attempting to penetrate the wire. It is here that effective fire from the perimeter guards will pay the greatest dividends. As soon as any member of the perimeter detects an attempt to penetrate the wire, the area should be illuminated, and every effort should be made to destroy the enemy during the process of penetration. In this regard, extensive use of tangle foot between external and internal perimeter wires will keep the sapper in the kill zone for a longer period of time.

(7) Use of bunkers. The bunker is the worst place to be during a sapper attack. Although a well constructed bunker can sustain a direct hit by an 82mm mortar round, the sapper is trained to fire his RPG at the apertures of the bunker, thus preventing the defender from participating in FPL fires. It should be axiomatic that only critical bunkers (such as FDC's and communications bunkers) remain occupied when mortar fire begins to hit the objective, and even these bunkers should be protected by a guard stationed in a foxhole outside the installation, and another in the entrance. A well prepared foxhole in the vicinity of the bunker becomes a far more effective fighting position than the bunker itself and is less likely to be a target for crew served weapons and small arms employed by the attacking force. A soldier occupying a foxhole will not normally sustain injury from incoming mortar fire unless his position receives a direct hit.

(8) Reaction force and internal firing. Every defensive position, regardless how small, should have a reaction force, whose mission it is to assault enemy elements that have penetrated the wire. This force need not be particularly large. It should, however, be capable of assembling rapidly and moving to predesignated positions within the perimeter. The reaction force should be rehearsed to insure that every man knows his job.

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Additionally, specified individuals in the defending force should be designated to fire at targets within the wire. Sappers pay little attention to activity of individuals within the perimeter unless those individuals are blocking their movement to their assigned objective. They can be eliminated by effective internal fire.

(9) Use of signals. Some provisions should be made to alert everyone within the perimeter, as well as listening posts outside the perimeter, of the fact that a penetration has been made. Almost all historical examples indicate that a significant percentage of the defending force was unaware of a penetration until it was too late. Signals should be simple and easy to employ by all members of the command. Visual signals, such as a red flare, are perhaps the most effective means available because of the noise and confusion that exist during the initial phases of the assault.

(10) Miscellaneous. The following additional recommended techniques should be considered by the defending commander:

(a) "Telldales" should be used extensively around the outside of the perimeter. These include the raking of sand strips so that footprints will show up and the arrangement of trees and bushes in such a manner that their disturbance by sapper recon parties will be detected by friendly screening patrols.

(b) Units should be directed to save C ration cans and affix them to wire and bushes to serve as warning devices.

(c) Sapper attacks should be expected along the least likely avenues of approach -- through swamps, blown timber, and trash dumps. Defensive positions should therefore provide for adequate observation of these avenues and the construction of additional obstacles to augment the natural ones.

(d) Within the defensive perimeter internal wire systems should be constructed (progressively, as time permits) around artillery pieces and critical installations. The ultimate objective should be a checkerboard network of internal perimeters which will force the enemy into a pocket if he succeeds in penetrating the external perimeter.

(e) Personnel stationed along the perimeter who suspect the presence of the enemy should be advised to use hand grenades and M-79 fire until such time as the enemy is definitely identified. Sapper recon parties occasionally probe a perimeter to test alertness of the defending force

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and locate individual firing positions.

6. (C) SUMMARY. In any sapper attack, the sapper unit is outnumbered by the defending force. He must have time, he must achieve surprise, and he is effective only if he can operate in the darkness. The commander who can effectively steal his time, catch him early, and force him to function under simulated daylight conditions will never sustain a defeat by a sapper force.

FOR THE COMMANDER:

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