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**THE IMPACT
OF THE SAPPER
ON THE
VIET-NAM WAR**

A BACKGROUND PAPER

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SAIGON

BRIEF

This study discusses the development of sapper forces and their expanding role in the Vietnam war. The analysis draws upon information dating back to 1958, when armed hostilities were in their infancy, and proceeds to the present, when sapper forces constitute a major threat to allied forces.

It is concluded that the VC/NVA have only recently achieved an appreciation for the proper employment of sapper forces. Their development over the years has been marked with numerous incidents of malassignment and misuse, which have served to limit their effectiveness. However, the sapper now enjoys equal status with infantry and artillery units, and he has been given additional missions commensurate with his capabilities. Primarily, sappers are used to destroy well-defended targets of either tactical or strategic importance. Additionally, however, sappers have special action missions for clandestine operations within cities and towns, and they have been charged with civilian and military proselyting activities for the purposes of inciting the general uprising that would be necessary to the final stage of the communist take-over of the Republic of Vietnam.

The basic element of sapper organization is the three-man cell. However, the internal organization of sapper units is not standard. Units are activated and deployed based upon the strength and location of their adversaries.

Selection of personnel for sapper units is stringent, although there have been times when this standard was relaxed. Sapper training has been expanded to cross-train other types of units in the employment of sapper tactics. The number of sapper units has steadily increased, especially since 1965. Whereas their attachment to infantry units was normal previously, the reverse is becoming more prevalent.

Since mid-1968 the VC/NVA have adopted a strategy of economy-of-forces. The sapper is well-suited for a major role in pursuit of this strategy, and he has already demonstrated his capabilities in concert with the VC/NVA artillery units during the recent offensives. The renewed emphasis on training different kinds of units on sapper tactics amply demonstrates the enemy's recognition of the value of this concept as a most effective measure for achieving significant results from a minimum expenditure.

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THE IMPACT OF THE SAPPER ON THE VIETNAM WAR

I. INTRODUCTION.

A. Purpose. This study analyzes the significance of the apparent increase in sapper units, their activities in the Republic of Vietnam (RVN) since mid-1968, and their impact on the Vietnam War.

B. Background. In order to provide an adequate basis for a complete evaluation of the apparent increase in sapper organizations and operations, a description of their development since 1958 has been included. The report is divided into three time periods. The first period, from 1958 through June 1968, concerns the Communists' employment of the three-phase strategy of defense, equilibrium, and offense. Despite misemployment, the sapper during this period developed into an effective combat maneuver arm through a long process of trial, evaluation, criticism, and improvement. The second period, from July 1968 to the first quarter of 1969, was characterized by the pragmatic VC/NVA adjustment to political developments, the extension of programs and offensive phases to compensate for setbacks, and the effective employment of time, their most powerful weapon. The third period, from the first quarter of 1969 to the present, covers the current political and military situation and the use of sapper tactics to influence the situation and to support Communist short and long-range goals.

C. Definition of Sappers. The term "sapper" or "pioneer" has traditionally applied to the combat engineer. The term originated in Europe in order to distinguish between conventional military construction engineers and those employed with combat units. The term "sapper" as used by the VC/NVA retains the combat engineer connotation; however, the sapper mission encompasses those tasks normally assigned to units of the commando-raider-ranger type. Thus, the enemy sapper unit ceases to be a combat support element; it is, in fact a combat arm.

D. Role and Employment. When reading this study, it is important to remember the following points:

1. The sapper normally receives training at an organized sapper school, and he is a member of a designed sapper unit of the regular armed forces. Special-action troops are sappers who are employed in cities. Although sappers constitute a full-time enemy threat, the amount of time devoted to sapper tactics by the special-action troop varies, as does their subordination. Sometimes sappers are erroneously categorized as guerrillas because guerrillas also may employ sapper tactics; this tends to blur the issue of identification. Furthermore, no clear distinction may be drawn unless the full organization, including subordination and mission of the individual and his unit, is known. The sapper is normally a member of the regular armed forces, and he spans the gap between the conventional soldier and the guerrilla.

2. The VC/NVA assignment and deployment of sapper-type units (ground, water, and special-action) are guided by two principal factors.

- a. The strength and disposition of Allied forces (considered a single factor and the most important).

- b. The capabilities of the sapper unit, which also determine its employment.

3. The internal organization of the individual unit is dependent upon the unit's location, strength, and specific mission.

E. Scope of Study. This discussion encompasses all units which have received sapper-type training; however, special attention will be given to those units designated "sapper," "water-sapper" and "special-action." Also discussed are their significance within the strategic guidelines set forth by the Central Party Committee and the three-pronged-attack tactics used by VC/NVA Main, Local, and guerrilla forces.

F. Current Role. The current role of the sapper is best understood in the following context: he is not new to the battlefield; he is vulnerable; and he alone cannot influence the outcome of hostilities. Over the past seven years there has been little change in the mission, organization, disposition, tactics, and basic training of the sapper. However, there have been improvements generated through critical analysis and external influences which have placed greater emphasis on the role of the sapper. His compatibility with the objective of disrupting the economic and political stability of the GVN while combating military forces, combined with his economy of employment, currently makes sapper tactics the most lucrative enemy military undertaking. With minimum expenditures they have the potential to inflict costly military and political damage and to influence diplomatic negotiations. Minimum expenditure is currently imperative due to the losses suffered by the VC/NVA in 1968. This has influenced changes in combat efficiency and in the concept of sapper employment, composition, training, and recruitment. Sappers have become essential to the dual program of conserving strength while maintaining military pressure. By effectively using sappers the Communists hope to improve their military posture, thus enabling them to choose the hostilities in which they will engage.

II. DISCUSSION.

A. Development of the sapper. This discussion of sapper development begins with the period from 1956 to 1968, when, after a period of initial small combat operations, the Viet Cong adopted a three-area strategem for the conquest of the Republic of Vietnam. This three-area strategem replaced the old Viet Minh strategy of taking the rural areas to encircle cities. The three areas and their time phasing were: 1960-1963, the mountains (defensive); 1963-1965, the lowlands (equilibrium); and 1966-July 1968, the cities (offensive).

1. Initial Combat Operations 1958-1959.

a. When the elections of 1956 were not held and the Party failed in its political attempts, it shifted its strategy to initiate an armed political struggle. In 1958 the first sapper units were activated in South Vietnam, and in early 1959 sapper and special-action units had scored limited combat successes in what are now III and IV CTZs. Under the Party's concept of the "three-front attack," consisting of political, armed military activities, and military proselyting, the sapper and special-action units were especially effective. Using the "three-pronged attack" tactic of making a breakthrough, attacking from within, and destroying centers of power and communication hubs, sapper actions were successful in bringing the war to the attention of other nations.

b. The sapper and special-action units, activated under guerrilla conditions, employed guerrilla tactics. They used small numbers of troops, appearing at any time and place and attacking with surprise. However, the VC believed that sapper attacks were applicable only during the first phase of guerrilla warfare and not later when the RVN had improved its defensive strength and established strong points. Serious problems were encountered by the sappers in their coordination with infantry units due to differences in tactics, and sappers were often misemployed on tactical missions.

2. Mountain Phase (Defensive), 1960-1963.

a. The mountain phase was characterized by infiltrating cadre into the forest, mountain, and high plateau area; organizing and developing the guerrillas in these areas; and establishing small infantry units and base areas as stepping stones to future plans. The VC considered this phase to have been initiated in 1960, after the activation of sapper units and infiltration of political cadre into villages, towns, and cities.

b. By 1963, special-action troops were being trained in North Vietnam and then infiltrated into South Vietnam. During the latter part of 1963, training organized and directed by the NVA Staff Headquarters covered the following subjects:

- (1) Explosives including the employment of TNT, plastics, directional and antipersonnel mines, grenades, booby traps, and bangalore torpedoes.
- (2) Mine removal techniques.
- (3) Electrical detonation.
- (4) Airfield sabotage.
- (5) Ship sabotage, including underwater swimming and the use of limpet mines.
- (6) Street fighting techniques.

c. During this period the VC occasionally employed water sappers in attempts to sink GVN ships. The majority of ship minings were accomplished using moored buoyant or bottom command-detonated mines.

3. Lowlands Phase (Equilibrium), 1963-1965.

a. During this phase the base areas in the mountains were completed. Extensive infantry and guerrilla force development was accomplished. The VC took advantage of the political confusion in the RVN, which commenced in October of 1963, to move into the rural countryside. Tactics employed by the VC during this period were characterized by small unit actions consisting of raids and ambushes, infantry and sapper attacks on isolated strongholds and lines of communication. Large-scale attacks were avoided until late 1964.

b. Having gained substantial control of the rural area in 1964, the VC began to infiltrate the cities where they organized special-action units, then referred to as guerrillas, and consolidated their political organizations. Typical actions involved sapper and special-action attacks against GVN offices, US billeting facilities, restaurants catering to high ranking GVN and US officials, and the US Embassy. The USS Card and other ships were mined and sunk. By the time US and other FWMAF combat units arrived in RVN in 1965, the VC had consolidated extensive rural areas and had organized guerrilla, Local Force, and Main Force units country-wide. During 1965 successful sapper attacks were conducted on US airfields at Chu Lai, Da Nang, Pleiku, and other lesser military posts, and special forces camps.

c. In 1964 the VC stated, "The most effective tactics in exterminating and stopping the enemy are special actions and deep penetrating attacks." By utilizing the three-pronged-attack tactics on the GVN rear, with the surprise raid as the primary tactic, a high frequency of success was obtained. During these actions sappers had an essential role in the reconnaissance phase and at the start of the battle in the inner perimeter. The original VC concept that sapper attacks were applicable only during the first phase of guerrilla warfare was changed. Specifically, the missions of sapper and special-action units were set forth as follows:

(1) Sapper Units.

(a) Penetrate positions to reconnoiter and determine fortifications, obstacles, and construction.

(b) Use explosives to secretly attack critical points within enemy perimeters.

(c) Attack and occupy "bridgeheads" to open the way for assault forces.

(d) Operate in conjunction with special-action units.

(2) Special-Action units.

(a) Maintain close contact with the military intelligence agency at Party Committee level and with the local armed forces.

(b) Create a base for the establishment of covert organizations.

(c) Act as a covert self-defense force with the mission of investigating the "enemy" situation.

(d) Initiate attacks or coordinate with Local Forces in attacking enemy elements utilizing sapper tactics and techniques.

(e) Conduct armed propaganda.

(f) Annihilate enemy agents to break GVN control.

(g) Capture prisoners for exploitation of information.

(h) Be thoroughly familiar with the terrain.

d. In order to insure the element of surprise, the VC concluded that covert raids were preferable to raids conducted in conjunction with fire support. They specifically required that special-action units develop and consolidate lasting organizations and simultaneously train those organizations to fight, detect security agents, perform sabotage, and remain ready for immediate and effective employment. Sappers and special-action units were required to develop continuous attacks deep in GVN base areas and, to a greater extent, in the cities. In rural areas, towns, and cities, where large VC forces could not operate, small special-action cells, guerrillas, covert self-defense sections, and armed-propaganda units were to use sapper and special-action tactics to maintain continuous action to achieve success.

e. Analysis of captured documents, interrogations, and events revealed that the VC's plans for 1964 and 1965 included:

(1) Consolidation of existing reconnaissance, sapper, and special-action units and schools.

(2) Improvement of the caliber of leadership in these units.

(3) Activation of new units in areas where their operations were required, especially special-action units in towns, cities, and large GVN and RVNAF rear areas.

(4) Mandatory instruction in political and technical subjects; with immediate emphasis on the combat tactics of sapper teams, special-action units, and reconnaissance sections.

f. In conjunction with these plans, selection criteria for sappers and special-action personnel in the Republic of Vietnam were upgraded to conform to the stringent standards already in effect in North Vietnam. In North Vietnam a six-month NVA Sapper School for officers was started in 1965.

4. Cities (Offensive) Phase 1966-July 1968.

a. In 1966, to expand the war and to have sufficient strength to face the Allies, North Vietnam increased the infiltration of troops into South Vietnam. It was noted, however, that some of the sapper units infiltrating into the southern regions were less effective than NVA units in I and II CTZ. NVA sappers had to remain hidden for fear of discovery. Since they were not native to the environment, they were easily recognized. Furthermore, they did not understand the local customs or know the terrain. One NVA sapper unit was inactive for a year. Other units were inactive for varying lengths of time; thus, they were not immediately identified by Allied intelligence.

(1) To maintain the continuity of attacks on GVN secure areas, sappers, special-action groups, and guerrillas using sapper tactics were active in Allied rear areas. The VC/NVA determined, however, that sapper attacks could not be used alone against the strength and firepower of the FWMAF. The VC/NVA then placed greater emphasis on surprise mortar attacks.

(2) Sometime during January or February 1966, a Naval Sapper Group was activated in North Vietnam to train water (naval) sappers. Reportedly, by October 1968 it had trained from 12 to 15 fifty-man companies, nine of which infiltrated into the Republic of Vietnam. The first significant appearance of swimmer-placed mines was in May 1966 in the Nha Be Harbor. On 26 May 1966 swimmers mined three ships, one of which was holed and subsequently beached. On 15 August 1966, mines were placed under two bridges near Dong Tam in Dinh Tuong Province. It was during this period that water sappers assumed the mission for bridge destruction.

(3) In several instances in 1966, sapper, water-action sapper, and special-action units were subordinate to one sapper company or battalion. Other sapper units were subordinate to infantry companies, battalions, and regiments.

(4) During 1966 sappers and special-action units in the cities were targeted against key military and political installations: administrative facilities, such as psychological warfare agencies (information services); Chieu Hoi activities; security networks; police stations; meeting places of Allied troops; airfields; docks; military vehicle parks; power and water plants; bridges; and other installations of tactical or strategic importance. Sappers were misused to establish and defend "bridge-heads" while the infantry penetrated the objective. The special-action mission was expanded to the political struggle through the use of legal and illegal forces to break up the GVN administration. The VC/NVA consider a legal force to be one in which the individuals have bonafide cover but operate covertly. Illegal force members have no cover and operate either covertly or overtly.

(5) Captured documents revealed that cadre in a number of Military Regions and many local areas had not grasped the primary capabilities of sappers or the principles of the urban sapper movement. Instead, they had misused them. As a result, the military regions had not effectively concentrated sapper efforts on the Allied political, military, and economic centers; communication and transportation facilities; and rear areas.

(a) Listed below are examples of the misuse of sappers:

artillery had fired.

1 Sapper units were not allowed to operate until after the

infantry and artillery.

2 The mission of securing positions was reserved for the

3 Sappers were used to reinforce infantry.

4 Either sappers were used as infantry troops to conduct sweeping assaults or the ratio of sappers to infantry troops in the assault was disproportionately large.

5 Sappers were attached to mortar units to assist the latter in conducting mortar attacks.

6 Sappers were utilized to open and occupy breaches in defenses, but they were not allowed to penetrate deeply.

(b) Military regions had further neglected to utilize guerrillas who were trained to employ sapper tactics for attacks on minor and isolated targets.

(c) Sapper units were also deficient in the conduct of raids on Allied outposts and installations. Their main shortcomings were:

1 Incomplete reconnaissance and their failure to collect last-minute information on the target.

2 Inadequate preparation for raids.

3 Use of inexperienced demolition men as penetrators.

4 Poor organization during attack and withdrawal.

5 Failure to coordinate with infantry forces when conducting a raid or an attack.

6 Failure to attack targets of opportunity.

(d) Captured documents emphasized the need to correct deficiencies. The VC/NVA recognized that although their sapper and special action units were small and ill-equipped, they still had proven themselves effective on the battlefield against Allied forces of superior size. Emphasis was placed on the need for an appreciation of successful sapper operations; the need for additional training; the requirement to maximize the use of discrete penetration; the necessity to activate and build units; and the need for endurance, courage, and enterprise.

b. In 1967 the sapper mission was expanded to include a strategic role. Also, water-sapper activity increased, the use of guerrillas employing sapper tactics increased, and planning was completed for Phase One of the General Offensive and General Uprising. (Tet 1968, which began 31 January 1968, marked the beginning of this phase.)

(1) As a result of this upgrading, and with their special capabilities, sapper forces were considered equivalent to infantry and artillery. The "sapper tactic" was heralded as an effective means which could be adopted with excellent

results by a few persons or by any unit. This upgrading was confirmed by Chairman Ho Chi Minh and General Vo Nguyen Giap in early 1968.

(a) The VC/NVA recognized the advantages of the sapper tactic, using a small force for deep penetration to launch attacks from within. The inability to decisively confront the enemy because of the small size of sapper units and the danger of early discovery were disadvantages recognized by the VC/NVA. However, they believed that the advantages outweighed the disadvantages because the former reflected the general Party principle of "destroy the enemy to preserve ourselves."

(b) Prior to April 1967 NVA sapper policy was administered from the NVA High Command. The Naval Headquarters maintained its own sapper section. In late April or early May 1967, due to the increased South Vietnam battlefield requirements, a Sapper Headquarters was established as a joint headquarters for ground and naval sappers. Its initial mission was to train sapper cadre for the North Vietnam Divisions and, particularly, to train cadre and personnel of sapper battalions to support units in South Vietnam. The Sapper Headquarters, Sapper Department, Joint General Staff, North Vietnam, has remained confirmed in North Vietnamese order of battle documents up to 1 March 1969, indicating the continuing existence of this combat arm.

(c) In conjunction with changing the sapper concept of operations (taking away its support role), sappers became involved in large-scale attacks preceding the infantry. The Con Thien battle of May 1967 was the first battle in which a large sapper force was employed to attack a well-defended stronghold manned by large US forces. Relating to this, General Vo Nguyen Giap said, "Regardless of how strongly the US or puppet troops are defended, they can be easily destroyed by our crack and special troops with their special combat tactic."

(d) In June 1967 instruction in civilian proselyting was included in the retraining of an infantry battalion, redesignated Sapper Battalion 3, located in North Vietnam. Specialist sapper cadre conducted the retraining instruction. By June 1968 sappers and special-action troops in and around cities were termed "military-political agents." In July 1967 a VC LF Infantry Battalion in Quang Da Province (Quang Nam Province, Republic of Vietnam) was scheduled to be upgraded to Main Force and retrained as a sapper unit. This was the first evidence that large infantry units were being retrained as sappers.

(e) In 1966 water-sapper incidents were primarily confined to the Long Tau-Rung Sat Special Zone, including the Dong Nai River area where 27 incidents occurred. In 1967 water-sapper incidents occurred country-wide, resulting in an 83% increase over those of 1966. These figures do not include bridge sabotage or river ambushes which were, and still are, carried out by both land and water sappers.

(f) During 1967 in the Military Regions, a large number of Local Force and guerrilla troops were trained in sapper tactics. There were villages which had sapper cells, districts with sapper platoons, and provinces with one or two sapper companies. These units succeeded in attacking Allied rear bases, engaging small field units, controlling portions of lines of communication, conducting terrorism in the cities, and attacking pacification teams.

(g) In July 1967 key high ranking cadre had received the order from the political department of the Central Lao Dong Party in Hanoi to begin Phase One of the General Offensive and General Uprising. From July through December 1967, preparations were made in which the VC/NVA cadre organized forward headquarters elements and strong political controls. They organized and strengthened city forces by assigning experienced officers to the city units and giving these cadre priority in their choice of personnel. Additional sapper companies and battalions were acti-

vated and equipped with sufficient weapons. Special-action units were also strengthened. Operating units conducted a crash training program at bases located in and out of South Vietnam. Sapper tactics were stressed. Supposedly, the battlefield was prepared; yet evidence indicates that thorough planning and command guidance were lacking. Composite units were formed by task organization.

(h) Secrecy was maintained, and the coordinated surprise attacks began in January 1968. Almost without exception, sapper units formed the vanguard of the elements attacking the cities. Other sapper and special-action units operating from within the cities had specific targets to neutralize. They were only partially successful, primarily because they lacked support. Before the middle of February 1968 defeat was apparent.

(i) To regain the confidence of the people and troops, the cadre launched the Political Reorientation Campaign in March 1968. They explained that the January-February offensive was just one phase in the total General Offensive and General Uprising which could be carried out slowly or rapidly, depending on the contribution of the people and the troops. Furthermore, their failure was attributed to the inadequate support of the people and troops. The cadre decided to proceed to the second general attack phase, the 1968 Summer Campaign. According to a captured enemy directive dated 4 April 1968, the "recent" peace gestures had changed neither the military objectives, the goals of the Winter-Spring Campaign, nor the ultimate negotiating positions of the Communists. The Communists were still aiming for a "final victory." Their military objectives were to destroy the ARVN and overthrow the GVN, along with destroying a significant portion of US troops and war facilities.

(2) In preparation for the 1968 Summer Campaign, military regions rebuilt their units, where possible, with guerrillas. MR 2 (IV CTZ) established sapper units by choosing a number of guerrillas displaying high morale to attend sapper training courses. New battalions were formed by splitting existing ones, combining some which had suffered heavy losses and combining units of less than battalion size. Guerrilla ranks, however, had been depleted due to heavy upgrading as replacements for Main Force units, and they were inadequately equipped. To correct these shortcomings each hamlet was ordered to recruit one to two guerrilla squads; villages were to raise units ranging from two guerrillas to one platoon. In addition, villages on the outskirts of Saigon were to activate guerrilla units specialized in sapper and special-action tactics and techniques. The VC/NVA were very successful in keeping these activities secret during the entire period from July 1967 to May 1968. Of twelve sapper battalions activated, only four were confirmed by January 1968.

c. The Summer campaign was to commence on 27 April 1968 (but had to be delayed until 4 May 1968) and end 30 June 1968. Due to the great losses suffered during Phase One of the General Offensive; the inability to obtain replacements; and continuing Allied countermeasures, which precluded units from concentrating in time to attack, the campaign did not reach the intensity of the first offensive.

B. Reappraisal and Rebuilding, July 1968-February 1969.

1. After the offensive had failed, Allied strength had increased, the offensive in the highlands had failed to occur, and the forces around Khe Sanh had been decimated, the North Vietnam High Command strategy called for blockades of the cities and attacks by indirect fire. However, the VC/NVA had difficulty executing this strategy because:

a. Many Allied forces had remained in the rural areas and had set up effective counterblockade measures.

b. More VC/NVA units had been committed during the offensive than originally planned.

2. After the first two offensives of 1968, the VC/NVA decided that the US had changed its strategy from the offensive "search and destroy" strategy to the defensive "clear and hold" strategy. They decided to pierce the deep defense of the Allies in and around cities and towns, to maintain pressure on the GVN, to wear down the Allied forces, and to create unrest among the people. Large-scale attacks, as used in the spring and summer offensives, were ruled out due to effective Allied screening operations.

3. From these conclusions the VC/NVA determined that future campaigns would be aimed at fulfilling several requirements.

a. The primary requirement was to destroy the strength and facilities of the Allies. To contribute to this objective they advocated destroying strategic communications lines, controlling road sections, threatening towns and cities, and destroying remote district headquarters. To do this they intended to use a few well-trained men organized into cells and small sapper "arrows" to secretly infiltrate Allied areas and to attack and annihilate elements there, using the three-pronged attack tactic together with indirect fire support.

b. Winning the people's support, liberating the rural areas, and gaining partial control over areas near the towns and cities in order to establish agent networks were considered equally important. Small groups of infantry were to be used to control favorable terrain and base areas.

4. To accomplish these aims the VC/NVA concluded that the number of infantry troops would neither be reduced nor increased. Their quality however, would have to be improved. They considered it vital to strengthen the Sapper Branch and to equip it with technical weapons suitable to its mission. Lastly, they favored activating and strengthening specialized units capable of destroying tanks, shelling Allied positions, destroying storage areas and seaports, and shooting down aircraft. To accomplish these tasks it was deemed necessary to use tankers, artillerymen, and other combat specialists trained in the use of Allied weapons so that they could be used against Allied troops and installations. Additionally, guerrilla forces were to utilize the effective sapper and special-action tactics.

5. Attacks on cities would employ the "hinge" tactic. This is an attack which requires detailed planning and precise timing. It consists of infiltrating sappers and special-action troops into a city or target area where, upon order, they attack vital points from within, while other forces assault the outer defenses in conjunction with supporting artillery fire. The requirement for surprise is essential. The elements which previously infiltrated are expected to utilize the cities' natural fortifications and obstacles and to establish defensive positions against internal countermeasures where they can maximize the effectiveness of their organic weapons, the AK-47 or carbine, B-40 or B-41 rocket launchers, mines, and explosives. Sapper elements attacking from outside, attempt to penetrate deep into the defensive positions; however, linkup is not envisioned. The purpose of this tactic is to cause confusion and to inflict maximum casualties and damage with a minimum expenditure of personnel. This, of course, also coincides with an economy-of-force program. The "hinge" tactic, however, has inherent weaknesses which are recognized and appreciated by the enemy from past experience. Primarily, much depends upon individual tactics and brief encounters which, if prolonged or not well coordinated, result in the loss of both the infiltration and the penetration elements. Dead or seriously wounded personnel usually have to be abandoned, which lowers morale. If the perimeter assault elements penetrate too deeply, they cannot be supported.

6. The Autumn Campaign, better described as the Third Phase of the General Offensive and General Uprising, began during the latter part of August 1968 although it was initially planned for late July. It was characterized mostly by numerous standoff

fire attacks, some major ground attacks, and a small but noticeable number of sapper operations. If the touted "hinge" tactic was employed, it fell far short of its goals. In I CTZ sappers managed to penetrate into downtown Da Nang and to attack installations in the vicinity of Marble Mountain. In II CTZ the Duc Lap Special Forces Camp and nearby district headquarters were attacked by an enemy regiment employing sappers in the assault. Allied forces successfully countered this strategy. The VC/NVA had not recovered sufficiently from the earlier offensives to carry it off. In IV CTZ it is possible that the major attacks planned for the Third Offensive were compromised; however, harassment and attacks-by-fire were conducted on nearly all of the province capital and district towns, air fields, and military posts. Sapper activity was minimal.

7. Although the high command had recognized that the military situation was not favorable when they initiated their Third Offensive, they nevertheless believed that it was necessary to support their diplomatic efforts at the Paris Peace Talks. In the field afterwards, the VC/NVA "rationalized" their lack of success to difficulties in personnel replacements, shortages of qualified sappers, and the sappers' failure to develop the situation in the towns and cities. Orders were then issued to begin preparations for the 1968-69 Winter-Spring Campaign. The strategy had not changed; only the timing. A military offensive was again considered essential to any successes to be gained at Paris.

a. Once again consolidation, training, and qualitative development of armed units were stressed.

(1) Training in municipal fighting, which was initiated shortly after the spring offensive for infantry, sapper, and special-action units, continued. In August 1968 a special course to prepare sappers and special-action personnel for an attack on Saigon was initiated at a nearby base area. Mock-ups of towns were used at the training site. Training of sappers and special-action personnel in civilian and military proselyting was also conducted. Tenuous indications that sappers and special-action personnel were being trained in what was generally a political mission appear to have been confirmed, thus enlarging their basic mission which had been purely military.

(2) Again, as in the past, the training of sappers as well as guerrillas, Local, and Main Force units in sapper tactics was stressed as part of the strategic guidelines of the Hanoi Central Party Committee. A Quang Da Special Zone Directive pertaining to guerrilla warfare directed Party cadre from cities, districts, and Province Party Committees to increase guerrilla activities in Da Nang and Hoi An, as well as district headquarters and towns, to keep constant military pressure on these areas. Along with this mission, "inside forces" such as sapper and special-action units were to be established to support these guerrilla actions. This appears to be another deviation from the basic policy of independent sapper operations, but it may have been to emphasize the importance of combined operations. COSVN also reaffirmed the importance of training in sapper tactics and directed that each regiment should have one battalion trained in sapper tactics, each battalion should have one company, and each company should have one platoon.

(3) The principles of economy-of-force and quality training were again emphasized: "Use a small force to attack a big one; oppose a weak force to a strong one; use rudimentary weapons against modern ones. We do take the balance of forces into consideration, but we are not to compare our force with the enemy's in terms of numerical strength.

(4) Long-range sapper training programs had been reduced severely since 1967 in order to support the requirements of the RVN battlefield. Whereas officers had received from 12 to 24 months' training and enlisted men received from 6 to 18 months' training, times for both had been curtailed to as little as six months and two months respectively. Preparations for the coming Winter-Spring Campaign

continued to witness abbreviated training.

(5) In MR 2 emphasis was placed on the reduction of personnel from various staff agencies to furnish replacements for Local and Main Force units of the province and military region. The consolidation of staff agencies was emphasized along with a priority to organize sections for Sapper Operations and Training at province and region levels. Districts were encouraged to have a staff assistant for sapper activities.

b. Terrorist activities were also given emphasis. Some success had already been experienced during the lull after the Second Offensive in I CTZ where assassination attempts were directed at both US and RVN personnel. Saigon, which had been the scene of sporadic periods of terrorist activity for many years, was again hit with a series of incidents. Probably due to a shortage of trained cadre and previous losses of experienced terrorists, a number of lower-level "hoods" were recruited to carry out many of the terrorist acts. In September 1968, the VC/NVA organized five sapper/special-action units, designated "CUMs," which were targeted against Saigon, Cholon and Gia Dinh, with a secondary mission of creating fear and confusion in these areas through terrorist acts. Organized and trained from September to December 1968, the CUMs were to infiltrate the city and conduct subversive activities or to attach themselves to Main Force units in preparation for an attack on Saigon. These forces were to infiltrate in January 1969; however, due to the diligence of the screening forces and National Police, entry into the city was limited.

c. The net result of this emphasis on sapper-type activities was an increase in the number of sapper units.

d. Parallel to the emphasis in sapper activities in the cities and towns, water-sapper incidents also increased. An overall evaluation of incidents, documents, and interrogation reports indicated that it was becoming increasingly difficult to differentiate between ground and water-sapper activities. Land sappers and guerrillas were known to sabotage bridges, to plant mines in rivers, and to attack river craft using rocket launchers. On the other hand, water-sapper units were found engaging in limited mining of roads and some attacks on isolated outposts. Countrywide water mine incidents increased from 42 in 1967 to 127 in 1968. These figures do not include bridge demolition incidents or riverine ambushes conducted by both land and water sappers. The increased emphasis on interdiction of water routes became apparent, especially from the increased use of more sophisticated ordnance and swimming equipment. In addition to improved mines made of dud ordnance, water mines were being manufactured in RVN. Relatively modern devices (produced out-country), such as the HAT magnetic-acoustic mine, the pressure-influence mine detonating device, and the HFB self-propelled bomb were also employed. The use of self-contained underwater breathing apparatus was first identified on 5 February 1968, as were close-circuit breathing devices. This significantly increased the VC/NVA water-sapper capability.

e. The Winter-Spring Campaign of 1968-69 began in November 1968. The two main battlefields were to be Da Nang and Saigon. Sappers and special-action personnel were to conduct civilian and military proselyting activities, urging the people to riot and overthrow the GVN in order to make way for a coalition government to include the NFLSVN and the front organization called the Alliance of National Democratic and Peace Forces. The continuation of terrorism and assassination of GVN policemen, security agents, and rural affairs cadre members (the rural affairs cadre were considered to be the greatest threat to VC/NVA infiltration) was in furtherance of this mission. Sapper and special-action units were to violently attack cities in order to frustrate the GVN "Accelerated Pacification" and PHOENIX programs.

(1) Although the 1968-69 Winter-Spring Campaign failed to reach into the cities and incite the General Uprising, the VC/NVA refrained from mass expenditure

of their available strength. Standoff-attacks with mortars and rockets were predominant. Sappers were prominent in the few attacks that were initiated.

(a) In I CTZ sappers participated in a ground attack against Fire Support Bases Neville and Russell in the DMZ. In the vicinity of Da Nang, the command posts of two Marine units received ground probes by sapper-led attacks. In Da Nang, water sappers may have been responsible for destroying two landing craft and about 134 tons of ammunition.

(b) The only other region in which significant sapper activity was identified was II CTZ. Sappers managed to get into a motor park at Dau Tieng (Binh Duong Province). They were successful in destroying nine helicopters at Cu Chi (Tay Ninh Province). They also overran and caused considerable destruction to the provincial headquarters at Song Be, Phuoc Long Province. Saigon experienced some terrorist activity, mostly directed at US personnel.

(2) The Winter-Spring Campaign failed to attain the desired goals of the VC/NVA for several reasons.

(a) The RVN pacification program was achieving greater results than the VC/NVA had anticipated.

(b) Successful operations by the Allies in enemy base areas had deprived the VC/NVA of essential supplies.

(c) Sapper and special-action units were prevented from infiltrating or were discovered in cities due to effective security operations.

(d) Increasing numbers of ralliers reported impending operations, which resulted in a loss of the initiative.

f. Captured notes from 1965 to 1969 discuss lessons learned by the enemy in employing sapper tactics. In 1965 they speculated on the sappers' ability to attack Allied military combat positions, as opposed to base areas. In 1967, training documents which concern sapper techniques of attacking field positions began to appear. Through 1967 and 1968 the use of indirect fire support to disguise sapper attacks was evaluated and tested. Commencing in late 1968, attacks by sappers or units using sapper tactics increased against combat bases in conjunction with indirect fire attacks. The successful attacks of late February 1969 against Allied fire support bases testify to the adaptability of the sapper tactics.

C. Current Outlook.

1. The decision of the Vietnamese Communists to enter into negotiations in Paris does not reflect a change in their basic goal. They have long believed that negotiations are only a means to a unified Vietnam under Communist control. For example, captured enemy documents dated prior to November 1968 discussed the tactics to be employed after a bombing halt. They also stated that the goals of the struggle were still to defeat the US, overthrow the GVN, and establish a coalition government which would ultimately lead to a reunification of Vietnam. The Communists have stressed repeatedly that these goals would never change and that negotiations would not mean a slackening of military and political efforts in RVN. In fact, Communist doctrine insists that for negotiations to be effective, there must be greater efforts in all spheres of activity.

2. The sapper is well suited to play a vital role in furthering this idea within the current economy-of-forces strategy. Sappers comprise the only military combat

branch, aside from guerrillas, which has become involved in all three facets of the conflict: military, political, and military-civilian proselyting. If properly employed, they are ideally suited to engage in military activities which have significant political by-products.

3. The VC/NVA are placing still greater emphasis on their sapper and guerrilla forces. No matter what may happen, in the more conventional military sense of large-scale operations, sappers and guerrillas remain basic to Party power. Guerrilla forces are used to bolster the Party's position in the countryside and to carry out selective small scale actions aimed at gaining specific local objectives. Sappers are employed in the cities and against Allied forces for the purpose of achieving limited victories for political purposes. The use of both sapper and guerrilla forces demonstrates the Communists' presence and serves to give the impression of Allied and GVN impotence. Lastly, their employment is consistent with the Communist doctrine of "fighting while negotiating," for the VC/NVA are convinced that if military action is not sustained, they risk losing essential momentum at the conference table.

4. There are several indications which reinforce the above analysis.

a. The effectiveness of properly employed sapper tactics and units has been demonstrated. Sapper units have sustained the image of an effective VC/NVA fighting force despite heavy personnel losses. However, the need for conventional forces is still recognized. They know that while the employment of sapper forces may influence political and diplomatic activities, the combined coordination of all forces is necessary to insure victory.

b. The number of sapper units (battalion and companies) continues to increase. This total does not include the many small sapper units which have been organized and trained within many Local Force infantry units. This continuing emphasis on increasing the number of sapper units has not caused a reduction in other types of units. The attachment of sappers to infantry units continues, but the attachment of infantry and artillery forces to sapper units who control the attack is becoming more prevalent. Sapper organizations appear to have a higher priority for supplies and munitions than other combat units, except perhaps rocket-artillery units.

c. The increase in the use of advanced weapons by ground and water sappers has been noted. Recent unconfirmed evidence points to the possible employment of rockets by sappers.

III. CONCLUSIONS.

A. Increased Role of Sapper. The impact of the sapper in this conflict has been significant. To achieve greater effect, the VC/NVA have stressed the role of the sapper as a combat arm with the coordinated use of guerrillas, infantry, and artillery.

B. Employment of Sapper. The Vietnamese Communist employment of sappers has evolved through a continual process of evaluation, trial, criticism, and improvement of basic principles.

1. The basic mission of the VC/NVA sapper has not changed substantially over the past few years. Though secondary missions dominated sapper activities at various stages of the Vietnamese conflict, resulting in many cases of misuse, the use of the sapper in deep penetrations to attack and destroy tactical and strategic enemy positions and installations has prevailed as the primary element of assault.

2. The VC/NVA activation, assignment, and deployment of sapper units has been, and still is, guided primarily by the strength and disposition of Allied forces.

The capability of the individual unit, which is also a strong factor in determining employment, is secondary. The internal organization of the individual unit is dependent upon its location, strength, and specific mission. The practice of having sapper units subordinate to other service branches and, conversely, infantry and artillery units subordinate to sapper units continues.

a. Until 1965, sapper units in RVN generally were small, independent units. Since then, with the increased emphasis placed on the use and activation of sapper units by Hanoi Central High Command, the number of battalions and companies has increased significantly. Present indications, however, do not point to any reduction of other forces in favor of the increased activation of sapper units.

b. In conjunction with the increased emphasis on the sapper, the Sapper Department of the North Vietnam Joint General Staff was organized as a joint headquarters on an equal basis with the other service arms. Due to their special nature, sapper forces were established as a strategic force directed through Military Region Sapper Departments. Each military region and province is to have a sapper staff, and each district is to have a staff assistant for sapper activities.

3. The sapper concept of operations has experienced little change. Sapper attacks are still characterized by the use of small numbers of men to inflict extensive damage to installations, population centers and war materials. Within this concept, however, the employment of sappers in military and civilian proselyting has significantly broadened the scope of their activities, as has their employment against fortified military field positions. In recent months the enemy has increasingly employed sappers as a primary assault element. This has not only provided for an economy-of-forces, but it has also achieved significant results.

4. Pronounced changes have occurred in recruiting and training of sappers. Prior to 1968, formal training in North Vietnam for officers consisted of 12 to 24-month courses, and enlisted men were expected to be in training for 6 to 18 months. The length of training depended primarily on areas of specialization such as ground, water, and special-action. In South Vietnam, due to local conditions, training usually lasted for about six months. The current personnel shortages have necessitated the consolidation and intensification of training. While the scope of subjects taught has remained substantially the same, the emphasis has varied from explosives and penetration techniques to combat in built-up areas and attacks against field positions. The most recent and important addition to the sapper training curriculum has been courses in military and civilian proselyting. The stress placed on all guerrilla, Local, and Main Force units for training in sapper tactics and techniques, along with the increase in out-country training centers, indicates the importance of this concept to Party policy.

5. In the logistical area, sappers appear to have enjoyed a relative priority over the other combat elements on obtaining supplies, with the possible exception of rocket-artillery units. The increased availability of sophisticated ordnance and the sappers' ability to employ it successfully increase their capabilities commensurately.

C. The Sapper and Economy-of-Force. Conservation of VC/NVA strength is not a new program in the Vietnam conflict. Since June 1968, however, there have been numerous indications that it is receiving considerably more attention than in the past. Though varying degrees of emphasis have been placed on the utilization of small forces to attack larger forces, a recent intensification is evident. The number of small-unit actions has increased significantly. Concurrently, the Communists are generally avoiding mass assaults. The continued references in captured documents to combat losses; lack of replacements; the qualitative, not quantitative, strength improvements of VC/NVA forces; and known recruitment difficulties serve to substantiate the economy-of-forces policy. The sapper represents a qualitative, as well as a quanti-

tative, solution to the recognized VC/NVA personnel problem. For example, while emphasis has been placed on the qualitative improvement of maneuver forces and while the number of maneuver battalions (less sappers) has remained constant, the number of sapper battalions has increased.

D. Future Role of The Sapper in Relation to Communist Aims. The decision of the Vietnamese Communist to enter into negotiations in Paris and the possibility of their accepting a cease fire prior to the settlement of the political situation does not reflect a change in their basic goal in Vietnam. The uniting of Vietnam under Communist control remains the ultimate goal. Negotiations and concessions do not necessarily mean a reduction of political and military efforts. The current Communist moves will probably result in a shift to those activities which will enhance their political position, tighten their control of the countryside, improve the security of their infrastructure, and improve their military posture. The most obvious is an even greater stress on political efforts and military activities, which will allow the Communists to increase their capabilities and will have significant political impact. They have already stepped up civilian and military proselyting, terrorism, espionage, and sabotage aimed at the administrative apparatus of the GVN. They will likely strive to keep alive an option for a future large-scale offensive using economy-of-force measures, which include sapper-type actions. The extent to which the Communists will exercise this option depends on numerous factors. In any case, a more extensive campaign to increase economically the base of their military capabilities by extensive training of personnel in sapper techniques is likely.