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Search And Attack: Just A Technique For
Movement To Contact Or A Distinct
Doctrinal Mission?

A Monograph
by

Major Michael F. DeMayo III
Infantry

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ABSTRACT

SEARCH AND ATTACK: JUST ANOTHER TECHNIQUE FOR MOVEMENT TO CONTACT OR A DISTINCT DOCTRINAL MISSION? By MAJ Michael F. DeMayo III, USA, 69 pages.

This monograph attempts to recapture the tactics, techniques, and procedures for "search and attack" operations which Americans learned in past conflicts. Since the re-introduction of light infantry into the U.S. Army's force structure in the mid-80's, light battalions have struggled in executing the mission essential task to conduct search and attack. By classifying search and attack simply as another technique for movement to contact, the emerging FM 7-20 (Aug 1991, Approved Final Draft) lumps planning considerations together and causes confusion in the field.

The monograph first reviews the doctrinal life-cycle of search and attack since 1965. Then utilizing the seven battlefield operating systems, the monograph compares the doctrine for both movement to contact and search and attack. Then, historical analysis is drawn from the Philippine Insurgency (1899-1902), World War II (1941-1945), and the Vietnam Conflict (1965-1973). As with the doctrine, this historical analysis is considered in light of the battlefield operating systems.

The monograph concludes that search and attack is a distinct doctrinal mission. Moreover, the monograph illustrates that there are two general techniques for planning and executing this mission. Lastly, Appendix B recommends a modification to the emerging FM 7-20 for search and attack operations.

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SECTION I. INTRODUCTION

Search and destroy operations, by any name, were the tactics by which U.S. units engaged the enemy. They were the right operations at the time, and they contributed to the essential function of shielding the pacification effort from the enemy's main forces.--LTG John H. Hay, Jr.¹

The re-introduction of the Light Infantry Division into U.S. Army force structure in the mid-80's caused the Army to review many issues, not the least of which was doctrine. Possessing a rapid deployability which was responsive across the wide continuum of conflict contingencies, light infantry units required a "how to fight" manual which would be useful across that continuum. The establishment of the Joint Readiness Training Center (JRTC) at Ft. Chaffee, Arkansas offered a vehicle for testing doctrine and lending impetus to its review. As light battalions readied themselves for the training crucible of the JRTC rotation, the mission essential task of "search and attack" became a common challenge.

Search and attack was introduced to the Army's lexicon with the 1987 edition of FM 7-72, Light Infantry Battalion.² In three and a half pages, search and attack is described as "a movement to contact technique peculiar to light infantry."³ The manual goes on to suggest the search options available to the battalion commander, as well as sketch out a generic scenario example.⁴

A review of the relevant doctrine between 1965 and 1984 reveals the full "life-cycle" of this mission. In section 6, "Counter guerrilla Operations", of chapter 10, "Special Environment and Other Operations", FM 7-20 (May 1965) identified the "search and

clear" mission as a type of counter guerrilla operation. The planning of search and clear missions involved the establishment of a battalion base and company sectors within the battalion area of operation. The destruction of guerrillas within the the battalion sector was accomplished by companies and platoons. Lastly, the battalion retained a reaction force flexible enough to exploit large enemy contacts.⁵

The December 1969 version of FM 7-20 incorporated the essence of search and clear missions under the more conventional mission of reconnaissance in force (attack with a limited objective) and the rubric of stability operations.⁶ The domestic American political upheaval against the Vietnam conflict in 1968 was a significant factor in this manual's disguised discussion of "search and clear." During the Vietnam conflict, units had translated this into "search and destroy" operations, a term which carried a noxious odor. The changed political climate necessitated a purge of this term, or any connotation of it, from the doctrine.⁷

In the aftermath of the U.S. Army's experience in Vietnam and the reorientation of FM 100-5 in 1976, infantry battalion doctrine became almost exclusively focused on the conventional European battlefield. The next two editions of FM 7-20, one in 1978 and the other in 1984, completely ignored any reference to "search and clear". In fact, there was no reference to any coequal type task anywhere in the manual. The only reference to the Vietnam era manuals, as regards searches, was by implication. In "The Airborne Infantry Battalion" appendix, in each version, there appeared a

three word mission capability to "Conduct stability operations".⁸ In a previous version of FM 7-20 (1969), "stability operations" were described as "...tactical operations...providing advice, assistance, or support to host country regular armed...or paramilitary forces."⁹ These operations were linked to a U.S. program for internal defense or development within the host nation. Nowhere in the 1978 or 1984 versions does this explanation appear; the institutional doctrine for light infantry battalions had been cleansed of the hard lessons of counter-insurgency warfare.

In August 1991, the emerging doctrine articulated in FM 7-20 devotes twelve pages to search and attack. This increased discussion on search and attack is improved over the 1987 version; however, the picture portrayed is still incomplete. The manual again describes search and attack as a technique for the conduct of movement to contact.¹⁰

The concept of "search and attack" connotes a powerful similarity to the concept of "search and clear," which was articulated in the 1965 manual. Both seek the defeat of a widely dispersed and elusive enemy and rely heavily upon decentralized platoon and company sized units for execution. However, neither FM 7-20 (1965, 1987, or 1991-AFD) does a thorough job of describing the tactics, techniques or procedures that leaders require to plan and execute these missions. In fact, while the 1965 manual describes "search and clear" as separate from any other mission, the 1987 and 1991 (AFD) manuals classify "search and attack" merely as a technique for conventional movement to contact. In doing so, the manual

lumps many movement to contact planning considerations together, indiscriminately, with search and attack planning considerations. This causes confusion in the field, where a generation or more of officers without Vietnam experience are trying to plan and execute search and attack as a conventional movement to contact.

It is towards the clarification of the search and attack mission that this monograph is directed. I intend to compare and contrast the movement to contact with search and attack, using the battlefield operating system framework, to determine if there is sufficient difference to warrant a distinct mission identity for the latter. In so doing, I shall explore examples from the American historical experience during the Philippine Insurrection (1899-1902), World War II (1941-1945), and Vietnam (1965-1973). After my conclusions, I shall include a succinct and, hopefully, useful doctrinal modification for search and attack in FM 7-20.

SECTION II. COMPARISON OF MOVEMENT TO CONTACT AND SEARCH AND ATTACK

Out of the crucibles of the Army's Combat Training Centers (CTCs) came the recognition of the critical requirement for battlefield synchronization. This synchronization requires commanders to arrange the available assets in time and space to focus overwhelming combat power against the enemy at a decisive point.¹¹

The available assets are functionally categorized into seven battlefield operating systems (BOS)--intelligence, maneuver, fire support, mobility and survivability, air defense, combat service support, and command and control.¹² These BOS provide a framework

for the systematic analysis of any given military mission.¹³ I aim to use them to dissect movement to contact as well as search and attack. This will facilitate analysis of their essential elements and allow me to integrate historical examples in order to confirm or deny their doctrinal similarity.

Maneuver, the first of the tactical BOS, requires a commander to "...move, engage the enemy, and control terrain".¹⁴ It consists of "...the employment of forces on the battlefield through movement and direct fires...to achieve a position of advantage in respect to enemy ground forces..."¹⁵ Each type mission balances maneuver characteristics differently.

Every edition of FM 7-20, since 1965, identifies the primary purpose of the movement to contact as gaining or re-establishing contact with the enemy.¹⁶ Speed of action is imperative to mission accomplishment; however, also stated is the requirement for maintaining security so that the commander retains his freedom of action. In order to retain this flexibility, the unit must lead with the smallest element possible, while balancing the necessity for speed with that of security.¹⁷ As if to reinforce the notion of rapid execution, mission duration may be measured in hours, while the movement to contact terminates when enemy contact is made or when the unit occupies its attack position.¹⁸ The primary means of executing this mission is the time honored approach march technique.

The approach march movement to contact is used "...when direct contact with the enemy is imminent."¹⁹ Organization for the

approach march may take any number of forms. Typical among those used are the battalion column, multiple columns, wedge, vee, and box formations. Regardless of the form chosen, each articulates a common framework--scouts forward, advance guard, main body, rear guard, and flank guards.²⁰ "Aggressive offensive action...to develop the situation and ...defeat the enemy."²¹ characterizes the movement to contact.

Search and attack is described as a "decentralized movement to contact technique...most often used in low-intensity conflict ...against a dispersed and elusive enemy."²² The main purpose of this task falls into one of four categories: enemy destruction (including infrastructure), area denial to enemy forces, force protection, and information collection.²³ It places high emphasis upon dispersion to find the enemy, after which the unit masses to attack.²⁴ Friendly force security, and not speed, appears to be weighed as more essential for this operation.

In addition to search and attack's emphasis towards force security over speed, there is a difference in the duration of a search and attack operation and a movement to contact. The description offered in doctrine, that "units can expect to spend more time operating in an area of operations rather than just 'sweeping' through it"²⁵ implies a time factor that may extend to days, weeks, and, perhaps even months. Since the doctrine lacks specificity in this area, later in this paper I shall evaluate an historical antecedent to demonstrate the fact that search and attack duration is greatly extended.

However, from a strictly doctrinal comparison of the battle-field operating system of maneuver, several distinctions between movement to contact and search and attack are apparent. First, speed and aggressiveness are weighted as more essential during movement to contact (approach march technique), than during search and attack. Second, force security, while essential in both, is weighted most heavily during search and attack. Third, the purpose of the conventional approach march technique is accomplished upon enemy contact, while the purpose of search and attack is not fulfilled until the enemy force has been destroyed, or cleared, or denied access in an area of operations. Last, by describing enemy contact during the approach march as "imminent", while expecting "more time" to be required for search and attack, the doctrine implies a significant duration difference between the two.

Several questions arise from this analysis. First, are these observed distinctions valid? Second, if so, do they represent sufficient difference to warrant mission distinction between movement to contact and search and attack? Lastly, a third question, does the doctrine adequately address search and attack execution? To get a sensing for the answers to these questions, one must analyze the remainder of the BOS.

Intelligence, the next tactical BOS requires a commander to collect, process, and report information.²⁴ It consists of gaining knowledge about one's enemy, as well as the terrain and weather to be encountered during the mission. Sun Tzu's sage guidance to "know the enemy and know yourself" lies at the heart of this

battle operating system's importance.²⁷ What is known or unknown about the enemy situation determines the employment of offensive or defensive means.

FM 7-20 (1991, AFD) is indirect in its discussion of the enemy condition. Re-establishing enemy contact by approach march implies a vaguely known, though nearby, enemy.²⁸ There is no discussion regarding the time required to develop an enemy picture; however, again, by implication, one understands that there is not sufficient time to conduct a thorough reconnaissance. In effect, the movement to contact is a form of reconnaissance, and, conversely, one sees that FM 7-10 is quite direct when it states that "the enemy situation is vague and there is not time to reconnoiter extensively to locate the enemy."²⁹ This manual goes on and tries to clarify the distinction between the time available to prepare for the approach march movement to contact and the search and attack:

The approach march...generally requires much less time for preparation. The company may require only a brief FRAGO assigning the...formation...and some ...graphic control measures...The search and attack...may require more preparation time...the platoons and squads have more planning responsibilities...³⁰

FM 7-20 (1991, AFD) describes the essential nature of intelligence preparation for search and attack by saying, "Much time may be required to establish the pattern of enemy operations...the [unit] will be effective only once these patterns have been identified."³¹ Likewise, this manual highlights that in the search and attack the "Intelligence preparation...must be done as soon as

the battalion enters an area, before it conducts any [other] activities".³² Later, in its appendix on Low Intensity Conflict, FM 7-20 describes successful counter-insurgent operations as those which

rely on monitoring the movements of and ambushing the enemy rather than on stomping the bush. After a victory over the enemy ...many [enemy]...given the chance, will change over to the government side. These people are good sources of intelligence.³³

From this discussion about the intelligence aspects of movement to contact and search and attack, a clear doctrinal difference begins to emerge. Movement to contact is predicated upon inadequate time to reconnoiter and develop the enemy situation. Search and attack cannot be effective without a detailed intelligence preparation of the battlefield and time to develop patterns of enemy activity. As one moves to consideration of the next BOS, fire support, the difference between the two missions grows even more distinct.

"Fire support" requires a commander to plan for indirect fire support employing field artillery, organic mortars, naval gunfire, close air support and electronic warfare measures.³⁴ Synchronization of this battlefield system is of paramount importance to any ground operation. The basic principles of providing continuous and responsive support to maneuver forces remains fixed.

FM 7-20 (1991, AFD) does not discern a significant difference between fire support for the movement to contact and search and attack.³⁵ However, one must consider the potential battle-

field geometry for executing each of these missions. During the approach march, there is expected to be a roughly linear arrangement between supporting artillery or mortars and the moving force. That is to say that fires will come from the general direction of rear to front. This may, or may not be the case for search and attack.

In the case where one battalion (or more) is conducting search and attack operations in an AO, indirect fire support may require the establishment of one or more dispersed fire support bases. These fire support bases would provide responsive fires to units conducting search and attack within a complete 360 degree circle. However, this situation would require significantly different control measures because of the wide variety in observer-target/gun-target angles which would be encountered. It may be this this situation which may prompt the emerging doctrine to say that when "finishing the enemy...the battalion may establish an area ambush and use [indirect fire or CAS] to drive the enemy into the ambushes."²⁶ Such fire support coordination would require establishment of RFAs, CFLs, or NFAs around or between the precisely located positions of adjacent "ambush" units within the AO.²⁷ This is much more sophisticated than the shifting of fires from phase lines within a linear sector or zone, as in movement to contact.

The above discussion reveals an incomplete doctrinal treatment of the fire support BOS for search and attack. The fire support coordination and planning to support a search and attack will be much more complex than for the conventional movement to con-

tact. The same appears true for the next BOS, air defense.

The air defense BOS requires a commander to neutralize the effect of enemy aircraft or missiles against the friendly unit in order to deny the airspace to enemy activity.³⁸ Air defense employment is a function of the enemy threat being faced. In support of the conventional approach march movement to contact, ADA assets are dispersed in accordance with the commander's protection priorities. They are capable of moving with the main body, or providing coverage from adjacent key terrain.³⁹ The discussion of ADA employment for search and attack offers ADA assets for CP security or to provide overwatching coverage from adjacent key terrain. However, the manual notes that if this latter technique is employed, then additional security must be provided to the ADA element.⁴⁰ Likewise, such disposition of forces magnifies the complexity of integrating other BOS. Fire support, mobility-survivability, combat service support, and command and control become at once, more complex. This description may indicate an insufficient doctrinal treatment of the air defense BOS for the search and attack. Moving to the mobility-survivability BOS, one finds a doctrinal situation similar to air defense.

This BOS requires a commander to retain his "freedom of movement relative to the enemy," not to gain positional advantage, as with the maneuver BOS, but "to enhance friendly movement or degrade enemy movement."⁴¹ Engineers support the approach march movement to contact by organizing to provide responsive mobility support. Engineers organize to support the screening force forward

and the advance guard.⁴² This enhances the main body's ability to execute the approach march with speed.

As it is currently written, FM 7-20 (1991, AFD) accounts for engineers enhancing air mobility support for search and attack by using chain saws to cut LZs, or for the dispersion of engineer "advisors" to assist the infantry.⁴³ As in the case of the fire support BOS, engineers may provide mobility support to a search and attack conducted as an approach march. However, if fire support bases are established for reaction or artillery forces, then engineer support will be extensive in the survivability function. Additionally, the noise of chain saws cutting trees would compromise the security of the search and attack mission.⁴⁴ These issues must be addressed by the doctrine.

The above discussion reveals an incomplete doctrinal treatment of the mobility-survivability BOS for search and attack. Once again, the engineer coordination and planning to support a search and attack is more complex than the same for the conventional movement to contact.

The combat service support BOS requires that commanders sustain the force so that it can accomplish the mission. This sustainment consists of manning, arming, fueling, fixing, protecting, and transporting all classes of supply.⁴⁵

CSS for movement to contact and search and attack are considered only in Chapter 8 of FM 7-20 (1991-AFD) in the section on "support of the offense".⁴⁶ While this may be satisfactory for the conventional approach march, the nature of CSS planning for

search and attack may be much more extensive. Search and attack scenarios are very likely to be non-linear. Non-linear operations will require extensive planning and may rely exclusively on helicopters or fixed wing aircraft for all classes of supply, including casualty evacuation, for the duration of the operation. While airdrop resupply is discussed in chapter 8, it is generic and does not shed much light on CSS planning for search and attack.

The above discussion reveals an incomplete doctrinal treatment of the combat service support BOS for search and attack. The CSS coordination and planning to support it will be more complex than the same for the conventional movement to contact. One must consider whether similar differences apply to the last BOS, command and control.

The battlefield operating system of command and control requires a commander to make "sound and timely decisions" and issue orders to "apply combat power decisively".⁴⁷ To do this, a commander must be able to communicate effectively with his subordinate units to gather and disseminate information.

During the approach march, the commander must position himself where he can best "receive information, see the ground, and plan ahead..."⁴⁸ This will often place him near the front of the main body. From this location he can communicate by radio or visual means with his scouts, advance, flank, and rear guards. This centralized method allows for rapid transfer of information to all units across the battalion, and readily lends itself to standing operating procedures which means speed in execution.

During the search and attack, the commander must be located where he can best obtain information and react to subunit contact with appropriate force. If the search and attack is conducted in the manner of an approach march, then the commander may be located as discussed above. However, if the search and attack is conducted out of a centrally located operating or support base, then the commander's control becomes much more complex. The commander may remain centrally located with his reserves and mortars so that he can insure immediate, responsive fire support for any of his subunits which make enemy contact. Additionally, rather than designating and moving with his main effort, the central position may offer him more rapid response to get to the decisive point of contact. Otherwise, the commander could find himself out of contact and out of communication with a supporting effort in contact. This supporting effort could very quickly become the main effort if its "search" finds the enemy. This also alludes to an additional planning problem for this type of search and attack--communications. The limited range of light infantry communications systems requires detailed planning and rehearsal to insure that possible terrain masking effects are resolved. Relays or retransmission stations may be required, and--as with the ADA, M-S, and CSS systems--additional planning becomes essential.⁴² All of these considerations add up to a more detailed preparation for combat.

This discussion about command and control demonstrates an incomplete treatment for this BOS in the search and attack doctrine. While the search and attack might take the form of an

approach march, any other scenario would require a much more detailed plan for command and control.

From this doctrinal review of battlefield operating systems there appears to be several important distinctions between movement to contact and search and attack. These distinctions are outlined in table 1.

BOS	Movement to Contact	Search and Attack
Maneuver	Imperatives: Speed & Aggressiveness Mission: Regain enemy contact Enemy contact "imminent;" operation duration-hours	Stealth and Security Destroy, clear or deny enemy access in AO "More time in AO" to find enemy; operation duration-days, weeks, even months
Intelligence	Predicated on lack of time for reconnaissance	Detailed IPB is essential
Fire Support	Simple fire support coordination	Complex fire support coordination
Air Defense	simple control measures	complex control measures
Mobility-Survivability	Emphasis on Mobility	Emphasis on survivability
Combat Service Support	Continuous lines of support	Nonlinear support, detailed planning and coordination req'd
Command and Control	more centralized planning and control	more decentralized; detailed planning and execution

table 1

SECTION III. HISTORICAL ANALYSIS OF SEARCH AND ATTACK AND MOVEMENT TO CONTACT

Search and attack operations, by other names, have a long history in our Army. Indeed, many of our 19th Century Indian campaigns were planned and executed with the objective being the pacification, suppression, or destruction of native American tribes.⁵⁰ However, I shall focus my historical analysis upon American involvement in the Philippines (1899-1902), during WW II (Leyte, 1944), and in the Republic of Vietnam (1965-1973). These examples facilitate a comparison of these two operations.

The American annexation of the Philippines during the course of the Spanish-American War was a clear policy decision which was well suited to the international diplomatic climate at the turn of the century.⁵¹ This decision was at odds with the desires of native Filipinos, most notably Emilio Aguinaldo. Aguinaldo, while vying for leadership authority among a number of groups, had assumed dictatorial control of the archipelago in June 1898; however, his control over the newly liberated Philippines was never consolidated. As rivals from various tribal groups challenged his leadership, Aguinaldo found American soldiers arriving in the Philippines through the summer of 1898 to secure the policy objectives of the McKinley administration.⁵²

Over the course of the next three years, the U.S. Army conducted operations "...to 'win the confidence, respect, and affection of the inhabitants'..." in order to facilitate the "benevolent assimilation" of the archipelago.⁵³ Quickly learning their

relative disadvantage vis-a-vis the American Army, Aguinaldo and other leaders began guerrilla operations against the U.S. Army in the hope of swaying American public opinion and defeating McKinley at the polls in 1900.⁵⁴ The Army recognized that "...the ultimate survival of the guerrilla movement rested on the revolutionaries' ability to control the civilian population."⁵⁵ Pacification met with mixed results through 1900. After the Republican presidential victory in November, the Army acknowledged that it "...must resort to the 'methods which had proved successful in [its] Indian campaigns in the West'. "⁵⁶ It is within this setting that the American Army conducted what now would be called "search and attack" operations.

Aguinaldo...emphasized the use of small forces which could strike and then disperse, regrouping later at some prearranged rendezvous. Guerrillas were to fight only when they had overwhelming superiority and rely on skirmishes, raids, and ambushes.⁵⁷

The U.S. Army demonstrated its uncanny ability to adapt to the physical reality of this conflict. Its mission was, essentially, to pacify the archipelago. This included isolating the guerrillas from the people, establishing a legitimate government, then going out to search for and attack the guerrilla bands operating in assigned areas. The purpose of such expeditions was to capture guerrilla arms and logistic caches, defeat and harass guerrilla bands to deny them freedom of action, and coerce them to rejoin the protected population as productive Filipinos.⁵⁸

The method employed to maneuver, in the vast majority of cir-

cumstances was the approach march movement to contact. In the parlance of the period, these movements were simply "marches." The use of "point," "advance guards," "flank and rear guards" or multiple columns insured the security, protection, and unimpeded movement of the "main body."⁵⁷

In BG Funston's Fourth District, Department of Northern Luzon (see map 1), the Army maintained constant pressure on Filipino insurgents. At the end of February 1900, Funston led a week long search which "pretty thoroughly combed" a large tract of mountainous country to the southeast of San Isidro. Besides its intelligence value, Funston admitted to "...surprising two small bands of insurgents, with disastrous results to them."⁵⁸ Within a week of this, Funston returned with his reinforced rifle company to this same area. They located and attacked small guerrilla groups which had sought refuge in the uninhabited mountains, also destroying a camp and capturing arms.⁵⁹ In the middle of March, 1900, a patrol from a reinforced company of the 34th Infantry (USV) discovered a large force of guerrillas at Mauiluilui. These 500 or more guerrillas were led by key insurgent leaders, Garcia and Padilla. The infantry company, accompanied by native scouts, attacked and dispersed the guerrillas after inflicting heavy casualties upon them.⁶⁰ In early May, 1900, a company sized detachment surrounded and captured the key guerrilla leaders mentioned above at the village of Jaen.⁶¹

Operations in the Fourth District were not distinctly different than in other districts. Reflecting on the night movements

which, when first attempted, had created such anxiety among the company, Clarence Lininger described the organization for the march:

At the head marched the advance guard, a small compact group...of intently alert, instantly ready men. Nothing must be within range of eye or ear of which this unit was unaware. Its duty was to find the route and protect the head of the main body, feeling out enemy positions and regulating the rate and direction of movement. During all of this it must never lose contact with the main body which might be ...ten yards behind on a very dark night or fifty yards in moonlight.⁴⁴

Lininger concluded this description by stating that his company's "progress was not fast; it was not intended to be. But it was silent and sure."⁴⁵

The dispersed nature of the guerrilla bands coupled with the insufficient troop strength to secure the main population centers and concurrently operate against the guerrillas in force, caused the U.S. Army to fall back upon its Indian fighting heritage of organizational improvisation. Each expedition was organized after a thorough accounting of its mission, the enemy, the friendly forces available, the expected duration, and the terrain and weather effects expected. Movement into, or through a particular area was, generally, accomplished by approach march methods. Once in an area of operations, however, it was common for company and battalion commanders to hold a reaction force in a centrally located barrio. These commanders would rely on dispersed, small unit "search" operations, which could move with stealth and speed, to find the guerrilla bands. Once found, if the patrol possessed

sufficient strength it could defeat the insurgents. Otherwise, they could maintain observation until the parent company returned to mass and finish the guerrillas.⁶⁶

This discussion demonstrates the plausibility of multiple techniques for the execution of search and attack. Army "search and attack" operations during this period included conventional movements to contact, as well as other methods to find, fix and finish guerrilla bands. The duration of these operations can and often did extend beyond days, to weeks. Stealth and security were more essential than speed to mission accomplishment. Mission accomplishment also required precise information. In the words of BG Funston,

The efficiency of a company depends largely on [its] knowledge of the people in the vicinity, and the country itself, which can be acquired only after some time.⁶⁷

BG Frederick Funston assumed command in the 4th District, DNL in December 1899. During the more than two months before initiating searches in his district, he immersed himself into every aspect of its social, cultural, and political climate. He became intimately aware of the petty rivalries between Tagalog, Illocono, or Macabebe and understood well, how to best exploit those jealousies. He nurtured informal friendships among the leaders of many villages, while he also exploited the groundwork for a powerfully responsive and efficient intelligence system.⁶⁸

The initial searches through portions of the district, while appearing fruitless, allowed BG Funston to truly "know his

ground." It was not uncommon for reinforced company sized detachments to span the breadth of the district over a period of eight to ten days. An occasional contact might be had, but, especially in Funston's first two months, these expeditions were critical to his intelligence preparation of the district.⁶⁹

He developed a flare for "turning" former guerrilla leaders and employing them. His native secret service, simple as it was, could serve as a model for human intelligence collection, even today. Besides his personal "Headquarters Scouts", who escorted and provided a rapid and mobile reaction force, Funston organized and trained a capable Philippine Cavalry and Illocono Scouts. These two units were invaluable sources of information to him.⁷⁰ It is not surprising that given the effort devoted to "painting" a continuous intelligence picture, BG Funston was supremely successful in pacifying his district. Funston's success was not an isolated occurrence.

In La Union province, First District, Department of Northern Luzon (see map 1), 1LT William T. Johnston fell upon an intelligence source which was instrumental in educating American officers about guerrilla organizations. Personal jealousy had caused one guerrilla leader to turn in another in the coastal town of Bauang. Upon questioning Crispulo Patajo, 1LT Johnston was treated to a dissertation of the entire guerrilla organizational framework in the 1st District. The U.S. Army's district leadership effectively exploited this information as it lifted the veil from American eyes as to the depth and breadth of guerrilla organization in the

district.⁷¹

As the Philippine example demonstrates, the conduct of search and attack operations must include an intensive, systematic and very deliberate intelligence preparation. Without the detailed intelligence preparation which U.S. commanders made, combat operations could very well have consisted of ineffective "stomping the bush."⁷²

For the most part, the Philippine Insurrection was an infantry, or mounted infantry fight. The ruggedness of the terrain, coupled with the poor transportation network and monsoon weather effects during extended time periods militated against the employment of cannon. Additionally, the equipment available did not have sufficient range nor were indirect fire techniques well enough developed for Philippine conditions. There were occasional examples of using light mountain guns to support conventional marches.⁷³ Similarly, it became somewhat common for U.S. Navy gunboats to support Army coastal operations, primarily along the coastal ports of Bicolandia in the 3rd District, Department of Southern Luzon (see map 2).⁷⁴ However, because of the paucity of assets and technological infeasibility, one is not able to use the Philippine example to illustrate distinctions between fire support for search and attack and movement to contact.

Turning to a consideration of the air defense and mobility-survivability operating systems, the Philippine Insurrection again is not particularly helpful. The requirement for air defense did not exist, while mobility-survivability issues remained well

within the capability of the foot soldier.

Supporting combat operations during the Philippine Insurrection proved to be a daunting challenge. As mentioned earlier, the road system was little more than narrow trails which often washed out during the monsoon season. American detachments had to improvise to sustain themselves. It was common for them to subsist on native rice and water buffalo.⁷⁵ Water purification and disease were always of prime concern, but as BG Funston noted, "it was 'absolutely out of the question for all the small detachments... constantly leaving...to be accompanied by medical officers.'"⁷⁶

Under conditions such as these, the non-linear nature of operations placed demands upon the support system which were not normally associated with conventional operations. Logistic support for these operations were heavily dependent upon the Army's relations with the indigenous population as well as the improvisational talents of soldiers. Search and attack could not be exclusively dependent upon contiguous lines of support which remained linked to the forward most units.

The improvisational character of combat service support was also reflected in the decentralized command and control system in place. Within each district, company, battalion, and regimental commanders retained wide-ranging authority. In fact, the U.S. Secretary of War reflected that "the pacification of the islands seems to depend largely on the character of the military officer in charge of the particular district."⁷⁷ This wide-ranging authority spanned the spectrum of conflict.

Communications between echelons of command were slow. Letters between senior and subordinates within districts could take days, sometimes weeks to reach their destination. In this war, there was no alternative to decentralization. Company officers relied upon their own judgment and understanding of the district commander's unifying policy and intent, to plan and conduct their operations.^{7a}

This brief discussion of command and control draws a large distinction between the heavily centralized control envisioned during conventional approach march movements and search and attack operations. Communications technology has provided some improvements in command and control, but there still can be little disagreement about the decentralized character of search and attack.

In summary then, table 2 recapitulates the observations regarding search and attack in the Philippine Insurrection.

BOS	PHILIPPINE INSURRECTION
Maneuver	multiple techniques plausible, including approach march or a form of search, then attack force security of prime importance extended duration beyond days, to weeks & months
Intelligence	detailed, systematic intelligence prep essential
Combat Service Support	significant, non-linear operations cannot be exclusively supported by unbroken lines of support
Command & Control	highly decentralized

table 2

As table 2 summarizes, search and attack operations during the Philippine Insurgency illustrates many of the doctrinal differences from conventional movement to contact which were highlighted in table 1. From this historical example, those differences are significant in the battlefield operating systems of maneuver, intelligence, combat service support, and command and control. Turning to look at movement to contact operations during the Leyte Campaign in December 1944, we should continue to clarify our picture of these light infantry operations.

By the 14th of December 1944, the 77th Infantry Division had secured Ormoc, and was preparing to conduct offensive operations northward through the Ormoc valley (see map 3). The division's objective was the seizure of Valencia, a decisive point for control of the Ormoc Valley, and linkup with elements of the X Corps in order to split the remaining Japanese forces on Leyte. Regimental reconnaissance units had identified light enemy opposition west of highway 2. The division appeared to be up against a delaying enemy.⁷⁹ The distance between Ormoc and Valencia was just over six miles. The XXIV Corps commander ordered the 77th Division to cross its line of departure on the morning of the 16th with guidance to be "flexible in order to take advantage of every break to speed the advance north."⁸⁰ An analysis of this mission will offer a near textbook example of movement to contact.

The division commander chose to maneuver two of his regiments west to envelop and cut off what appeared to be a main enemy delaying effort along highway 2, which he pressed with his third

regiment.⁴¹ The 307th regiment moved out in approach march battalion column and routed the weakly held Liloan, Bao, and San Jose approaches to Valencia. The most serious resistance came from two Japanese platoons defending at San Jose, but by the end of 16 December, the regiment had reached San Jose, eight miles from their LD.⁴² As the 305th regiment pressed northward from Ormoc, The 306th regiment, which had initially followed the 307th, split north and east in a shorter enveloping movement.⁴³

This maneuver was bold. The divisional history stated that "...the [CG] was playing for big stakes, for if this...move caused the immediate collapse of the enemy...it would save many lives and much time."⁴⁴ However, what did the American force know about the enemy? From an intelligence standpoint, the Corps and Division knew that the enemy was desperately trying to build a coherent defense and that it would likely be hinged at Valencia. Regimental reconnaissance elements depicted the enemy's main effort and its weakness in the west, although it did not have a clear picture north of Tambuco on highway 2.⁴⁵ In the short time available for preparation between December 14th and 16th, this appears to be the picture. However, commanders at every echelon from corps to company were apparently obsessed with the idea that they had to "push forward rapidly...before the enemy could regroup."⁴⁶

How was fire support orchestrated for this mission? Initially the main effort, the 307th regiment had its DS artillery battalion supporting. The three remaining artillery battalions supported the division's flank reconnaissance efforts, and all from positions in

the vicinity of Cogon.⁴⁷ On 17 December, the 77th Division CG concentrated his own artillery fires, plus reinforcing fires from Corps artillery east of the Ormoc Valley across the mountains, on enemy forces in and around Valencia.⁴⁸ Additionally, fifteen sorties of P-40 attack aircraft were integrated with the artillery to punish the Japanese at Valencia.⁴⁹

In summation, fire support planning appeared to be routine procedure. Fire support coordination was greatly simplified by the generally linear alignment between the guns and supported units. With such an alignment it remains simple to shift fires by phase lines within the zone of advance. While these fires were centrally controlled, they still remained responsive to the regiments in contact and supported the division commander's scheme. Since U.S. forces had complete air superiority over the land battles, American ground forces were never at risk during this mission. However, mobility-survivability became a major concern.

Mobility support along highway 2 was critical to maintaining the tempo of the 77th Division's advance. It was over this route, and its numerous bridges, that all of the division's artillery and CSS would move to maintain the tempo.⁵⁰ The division engineer battalion was responsible for maintaining this highway.⁵¹ This task is in harmony with the doctrinal mandate to use engineers in their mobility role to facilitate the speed of advance.

The 77th Division's combat service support operations corroborate the soundness of our CSS doctrine for offensive operations. Because of the untraffability of the ground over which it would

move, the 307th regiment carried all the essential supplies it would need for three days on its backs and the backs of Filipino porters.²² Casualty evacuation was accomplished by LVT's on the rivers, or by artillery liaison planes landing on unimproved jungle roads.²³ The division resupplied its forward regiments on 18 December by organizing an

armored column...of five light tanks from the 7th Division, the Cannon and Tank destroyer Companies of the 306th and 307th Infantry... part of Company C, 302nd Engineer Battalion, a platoon from the 305th Infantry, and sufficient LVT's to carry men and supplies. An artillery observer accompanied the column.²⁴

A better doctrinal example of logistic resupply operations would be hard to find. Nevertheless, the orchestration of CSS support was simplified by the linearity of this mission. That is not to say it was easy, rather, that having congruent lines of operation and lines of support facilitates rapid and simplified CSS planning and execution. Examination of the command and control BOS appears to illustrate a similar result.

The unifying concept regarding this mission was the speed of advance which was essential to keep the Japanese off balance.²⁵ The division commander maintained effective communications with his regimental commanders with radios and in person by using a cub airplane which landed and took off from unimproved jungle roads in the vicinity of his units.²⁶ He integrated all essential battle-field operating systems with powerful effect against enemy forces. On 17 December he flew with his division artillery operations officer to coordinate the artillery and air strikes against the

enemy at Valencia.⁹⁷ Likewise, regimental commanders handled their respective battalions with aplomb. Regimental commanders were habitually well forward, usually just behind or with their advance guard.⁹⁸ It was only from locations well forward that these commanders could rapidly assess the situation and issue appropriate orders. This centralized system assured efficient command and control of this operation.

On 18 December 1944 the 77th Division secured Valencia. "In three days of...fast fighting and maneuvering, the 77th Division had shaken...and disrupted the plans of General Suzuki."⁹⁹ Three additional days saw the division continue north to linkup with the X Corps' 1st Cav Division.¹⁰⁰

This example of a light infantry movement to contact may have served as a model for the doctrine writers. A recapitulation of observations regarding this example of movement to contact is outlined in table 3.

BOS	LEYTE CAMPAIGN
Maneuver	Priority: speed and aggressiveness Mission: envelop enemy in zone and secure the decisive city of Valencia with its airfield
Intelligence	not thorough, but aggressive patrolling proved to be sufficient
Fire Support	linear operations simplified fire support coordination
Mobility- Survivability	linear, emphasis entirely on mobility

BOS

LEYTE CAMPAIGN

Combat Service Support	linear, line of support same as line of operation
Command & Control	functionally centralized

table 3

As table 3 illustrates, the 77th Division's offensive action in the Ormoc Valley is congruent with the doctrine for a movement to contact type mission (see table 1).

The last examples for examination comes from the Vietnam Conflict. During the first three years after the introduction of U.S. regulars into the fight (1965-1967), American units struggled to effectively come to grips with its dispersed and elusive enemy.¹⁰¹ As we have seen, the conventional means of regaining contact with the enemy is the approach march movement to contact. However, many American units incurred excessive casualties in attempting to operate "by the book" relying on the speed and aggressiveness called for by movement to contact doctrine. In the physical reality of Vietnam, such characteristics translated into "excessive haste in the advance... and outright carelessness about security."¹⁰² Use of search and attack evolved from experience in this kind of context. Units found that successful organization for search and attack operations required detailed planning and preparation. This becomes apparent through the examples of the 4/503rd Infantry at Dak To (Central Highlands) in November 1967, and the 4/39th Infantry in the Mekong Delta during March 1969.

In early November, 1967, the 4/503rd Infantry received the mission "to meet the enemy threat west of Dak To."¹⁰³ This meant that 4/503rd was to go find the enemy, then either fix and finish him, or drive him off. This is what, today, is known as "search and attack".¹⁰⁴

Commencing on 3 November, the 4/503rd's battalion commander held one company (Bravo) as a reaction force while employing the other three companies (one was provisional) toward the expected enemy contact. On the first day, the companies moved along diverging paths. They moved west, south, and east, respectively, and made no contact. Night defensive positions were about 1 1/2 kilometers apart.¹⁰⁵ On the second day out, in reaction to intelligence from division, Alpha company was directed off its axis to search an area believed to hold the HQ of the NVA 40th Artillery Regiment. The third day, the battalion commander adjusted his movement to have two companies (Charlie and Delta) roughly abreast, with the third (Alpha) in trail. Also, with his companies now five kilometers away from him, the commander planned to conduct an air assault on the 6th to secure ground for a new base camp. He decided to employ his reaction force (Bravo) to secure Hill 823 (see map 5). This location could provide mutually supporting fires with Ben Het.¹⁰⁶ The rifle companies on the search were to link up at the new base on the 6th; however, both the air assault and the provisional company made substantive enemy contact in the early afternoon on 6 November.¹⁰⁷ The battalion's actions warrant a review.

The first contact, made by D Company, occurred while it was "cloverleafing" to search the finger approach to Ngok Kom Leat. The company commander quickly regained control of his lead platoon, but required maximum supporting fires from artillery, close air support and attack helicopters in order to disengage it. The battalion commander directed his trail company (Alpha), to close up and support Delta. Likewise, C Company, several kilometers further west was directed to close against the enemy from that direction and relieve the pressure on D Company.¹⁰⁰

In consolidating on the site of the new fire support base on hill 823 after its air assault, B Company's LP/OP buddy team was ambushed. That contact began Bravo's fight on 823 which lasted through the night. Though pressed hard, Bravo was fresh and withstood all NVA attempts. In addition to company mortars, Bravo had brought a section of battalion mortars to establish fire support in the new base.¹⁰⁰ In mid-afternoon, the battalion commander landed to insert his executive officer, artillery liaison officer, and sergeant major as well as evacuate casualties.¹¹⁰

Throughout the engagement, the battalion commander remained aloft in his aircraft to monitor both fights, and assist with orchestrating the fires. Those fires, particularly artillery and close air, were critical in relieving pressure on the infantry companies. On the morning of the 7th, the NVA forces were gone and 4/503rd Infantry continued to reorganize; however, it was relieved on 8 November by 2/503 Infantry. These offensive operations continued for two and a half more weeks in Kontum.¹¹¹

The 4/503's fight was against an NVA opponent attempting to gain control of the border area around Dak To. The second example from this Vietnam era occurs in the Mekong Delta against the Viet Cong insurgents which tended to dominate that region.

By the middle of March 1969, 4/39 Infantry had been operating in western Dinh Tuong province for several weeks. The battalion's ongoing mission "was to deny Viet Cong infiltration from nearby Cambodia through the Delta by picking off the VC at (and between) their many way stations..."¹¹²

The battalion commander organized his unit into two ambush and two ranger companies. The area of operations was sub-divided into company sized AOs. The long range ambush company operated on the outer fringe of the battalion AO, out of a company base camp. One of its two 60 man platoons was deployed within its AO for up to six days at a time. The short range ambush company worked inside of a ten kilometer radius of the fire support base. Three of this company's four platoons conducted ambush operations every night.¹¹³ The two ranger companies alternated out on operations into a specified AO. While one was deployed the other secured the battalion fire support base and provided the reaction force. The deployed company hid, planned and slept, by day, and conducted multiple ambushes at night.¹¹⁴

A sniper detachment rounded out the battalion's maneuver assets. Organized into seven 2 man teams, they focused exclusively on sniper missions. For daylight operations, four teams were inserted at BMNT and by daylight would be in position. Each team in-

cluded three personnel from headquarters company to serve as RTO and security. As the snipers operated only within the short range ambush company's AO, each day's sniper operations were integrated with that company commander in the base camp. Night sniper operations consisted of two teams which normally co-located with a regional force checkpoint.¹¹⁵

Preparations for operations were "by the book - air recons - rehearsals - sand table briefings - detailed before mission personnel inspections."¹¹⁶ The units were normally inserted by either helicopters or foot. Maximum use was made of dummy pick-ups and false insertions to deceive enemy in the area. Stealth and security were "main weapons" of this battalion.¹¹⁷

Intelligence preparation of the AO ran the gamut of collection means. It included native informants and defectors, area reconnaissance by air and ground, documents, equipment, and prisoners captured.¹¹⁸

Fire support appeared almost limitless. The artillery battery at the battalion base provided fires to the short range ambush company and the snipers, who operated within the artillery's range fan.¹¹⁹ If the snipers observed targets out of direct fire range, these snipers frequently employed artillery fires to drive the enemy back to within engagement range.¹²⁰ Artillery support for the long range ambush or ranger company came from other specified fire support bases in the brigade or division AO.¹²¹

Service support for these operations was planned in detail. Each unit deployed with enough class I and V to last for the dura-

tion of the mission. Generally, helicopter resupply was not utilized as a helicopter would give away unit locations. Aero-medevac was used for seriously wounded.¹²²

Command and control was highly decentralized. The battalion commander's preparation of the battlefield often painted a picture which "blinked like a neon light that pointed a bright red arrow at the enemy."¹²³ In light of the battalion commander's guidance, each company then planned and conducted operations. When a contact was too large for the friendly unit, that unit would back off and call in artillery and close air support to do its work. If an opportunity to destroy a large enemy force was offered, then the units in contact would attempt to fix the enemy by fire. The battalion reaction force would be inserted in blocking positions along enemy egress routes, as close air and artillery mauled the enemy. With the battalion commander providing observation from the air, the enemy was beaten at every turn.¹²⁴

In assessing the maneuver BOS for both the 4/503rd and 4/39th, one notes the essential similarities. In both cases, although the techniques were different, unit movements were steady and deliberate. 4/503rd methodically "cloverleafed" on the march to search their assigned areas. In the process, they only moved 1 1/2 to 2 kilometers from the fire support base each day.¹²⁵ In the 4/39th's case, the whole outfit was focused on profiling the enemy's activity so that nightly ambushes were most effective. These examples also lend credence to the absolute doctrinal necessity for stealth and security. Similarly, these battalions

illustrated the additional time it takes to find the enemy and subsequent lengthening of mission duration. We might now ask, "how had the intelligence preparation supported these missions?"

The IPB was extensive, and continuous for both examples. Near Dak To, the information received at the end of October portrayed enemy preparations in northern Kontum province. It appeared that the NVA 66th Regiment, 1st NVA Division was after both of the CIDG (Civilian Irregular Defense Group) camps near Dak To. Long range patrols, informants, POWs, and the enemy's own patrolling activity confirmed this picture during the last four days of October and the first two days of November.¹²⁷ Similarly, the 4/39th's domination of Dinh Tuong province was predicated on an effective intelligence gathering system. It was the battalion commander's intelligence system, and it integrated the information available from higher echelons with the human intelligence collected by his soldiers and from interrogations of agents, defectors, and prisoners.¹²⁸

Fire support had to be meticulous for each operation. During these non-linear operations, when units occupied night defensive positions those units had to assure coordination of restrictive fire around their positions. This became even more critical with the decentralized operations of 4/39th Infantry. With the wide dispersion of ambush patrols throughout the AO, coordination had to be thorough.¹²⁹ Likewise, close air support and helicopter gunships were generally controlled by informal coordinated fire lines established on station by ground commanders employing

colored smoke.^{1.20}

Turning briefly to a consideration of the air defense BOS, one is again confronted by the condition of U.S. air superiority. Air defense was not a vital concern to American ground forces in these examples. However, a look at the mobility-survivability BOS may be more fruitful.

Mobility-survivability tasks within these battalions was focused primarily on survivability. The displacement of fire support bases during operations required the prioritization of engineer work around fire support base survivability.^{1.21} However, infantry units insure that mobility and survivability were sustained. As a standard procedure in some units, a landing zone big enough to support at least one helicopter was prepared every night. This assured resupply, medical evacuation, or reinforcement for the unit.^{1.22} Thus, mobility-survivability support for infantry was integral to its sustainment.

The combat service support BOS was greatly facilitated by the use of helicopters. Both of the units examined here used them to evacuate casualties, although 4/39 Infantry reserved this means for seriously wounded. However, both units tried to minimize helicopter use for resupply. As noted by 4/39, "...once a chopper came near the element, the operation was compromised..."^{1.23} Nevertheless, planning to insure that sufficient supplies and equipment were carried for the mission duration took planning, coordination, and supervision.^{1.24}

Supervision leads one into the command and control BOS. These

operations were functionally integrated by the battalion commander's concept for each operation. Execution was decentralized to company; however each battalion commander retained reaction forces which allowed him to "pile on" against enemy contacts.¹³⁵

Thus, in summary, a recapitulation of observations regarding these examples of search and attack is outlined in table 4.

BOS	4/503rd Infantry	4/39th Infantry
Maneuver	Imperatives Stealth and Security Mission: destroy, clear, or deny enemy access in AO. Enemy contact: 3 1/2 days to make contact	Stealth and Security destroy, clear, or deny enemy access in AO multiple contacts over 4 months in AO
Intelligence	Search was the reconnaissance	Detailed cdr's preparation was continuous
Fire Support	Complex control measures	Complex control measures
Mobility- Survivability	Emphasis on survivability	Emphasis on survivability
Combat Service Support	Non-linear detailed planning	Non-linear detailed planning
Command and Control	Decentralized detailed planning	Decentralized detailed planning

table 4

As reflected in the table, each of these search and attack operations required planning and execution which was significantly different from the movement to contact.

SECTION IV. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

During the initial phases of monograph preparation, I acquired a copy of the approved final draft for FM 7-20 (Aug 1991). This emerging doctrine clearly distinguishes between the conventional approach march movement to contact and the search and attack. As I articulated in the doctrinal review section, this had not been done effectively since the 1965 version of FM 7-20. However, there remained doubt as to whether or not search and attack is just another technique for movement to contact as the doctrine states. Thus, I asked three questions. First, if there are distinctions between them, are these distinctions significant? Second, are any differences between them significant enough to warrant a distinct mission identity for search and attack? Lastly, regardless of the previous answers, does the doctrine adequately address search and attack?

As I discovered during my introductory review of relevant doctrine since 1965, search and attack (or its antecedent, search and clear) had not been categorized as a movement to contact prior to the 1987 version of FM 7-20. My doctrinal analysis, coupled with the results of historical case study analysis, demonstrates that the key characteristic differences in each BOS functional area (less air defense) are valid. I have recapitulated these distinctions in table 5.

BOB	Movement to Contact*	Search and Attack*	Philippines	Leyte Campaign	4/503rd Infantry	4/39th Infantry
<u>Maneuver Imperatives:</u>	speed & aggressive-ness	stealth & security	stealth & security	speed & aggressive-ness	stealth & security	stealth & security
<u>Techniques:</u>	approach march multiple formations	approach march variant search, then at-tack (& variants)	approach march search, then at-tack variants	approach march columns	approach march variant	search, then at-tack variant
<u>Enemy:</u>	imminent contact expected	more time req'd to find enemy in AO	often many days before contact	imminent contact w/ delaying enemy	3 1/2 days to make contact	multiple contacts over 4 months in AO
<u>Mission:</u>	regain enemy contact	destroy, clear, or deny enemy access	clear and deny enemy access	envelop enemy, seize key pt.	destroy, clear, or deny EN mvmt in AO	destroy, clear, or deny EN mvmt in AO
<u>Length</u>	hours, at most, days	days, weeks, even months	days and weeks, even months in AO	3 days to key pt. 6 days to link-up	8 days	over 4 months
<u>Intelli- ence</u>	lack of time for reconnaissance	detailed IPB essential	detailed, systematic IPB essential	not thorough, but patrolling adequate	search was the reconnaissance	detailed cdr's prep was continuous
<u>Fire Spt</u>	linear fire spt coordination	non-linear fire spt coordination	not significant	linear control measures	non-linear control measures	non-linear control measures
<u>BOB</u>	simple control	complex control	not applicable	not significant	not significant	not significant
<u>Mobility- survive- bility</u>	emphasis on mobility	emphasis on survivability	not significant	emphasis on mobility	emphasis on survivability	emphasis on survivability
<u>Combat service support</u>	linear, continuous lines of support	non-linear, detailed planning	non-linear opns difficult to spt	linear, line of spt same as line of operation	non-linear, detailed planning req'd	non-linear, detailed planning req'd
<u>Command & Control</u>	centralized	decentralized	decentralized	centralized	decentralized	decentralized

* Columns 1 and 2 identify the doctrinal differences.

table 5

As one can see, table 5 illustrates significant differences in six of the seven BOS. Nevertheless, one of the purposes of this comparative analysis, then, is to answer whether or not search and attack ought be identified as a distinct doctrinal mission. To do this I shall highlight the distinctions by operating system.

Within the maneuver BOS one may observe the dual imperatives of stealth and security during search and attack. These imperatives flash like a warning beacon to those who would review the historical cases offered. Similarly bright, is the impact of non-linearity. As illustrated by the examples offered, maneuver may assume multiple movement techniques. Regardless of the maneuver technique(s) employed, this non-linearity extends the duration of operations within specified areas of operation.

A stark difference appears in the intelligence BOS. It is precisely the lack of intelligence upon which movement to contact is founded. However, as illustrated, search and attack may be successful only after a systematic intelligence preparation develops the enemy's pattern of activity.

Fire support coordination for search and attack operations requires meticulous planning, not simple graphic control measures as with movement to contact. Defensive or ambush positions require precise restrictive fire area coordination. Likewise, the frequent convergence of units, or necessity to control close air support, makes precise coordinated fire line planning essential.

While the role of air defense has not been significant in this monograph, it cannot be ignored. Although U.S. forces have

never conducted search and attack operations except under conditions of U.S. air superiority, one should not assume away the air threat of potential foes.

The mobility-survivability BOS places first priority upon the survivability function during search and attack operations. Engineer efforts remain focused on the survivability of fire support and operations bases. Survivability for deployed infantry forces devolves upon their field skills and unit standards.

Combat service support requires detailed planning. Units examined tried to carry what they would need for three days or more. Since they could not count on a daily logistics package to pull up the main supply route, these operations took meticulous planning.

Command and control is often decentralized to platoon and squad level. This requires a high state of training and preparation. Small units and their leaders must be hardened for the rigors of these decentralized operations. Leaders must plan, conduct reconnaissance, rehearse and inspect each objective action anticipated. Battalion commanders retain reaction forces which can exploit enemy contact and offer that enemy two options--surrender or destruction.

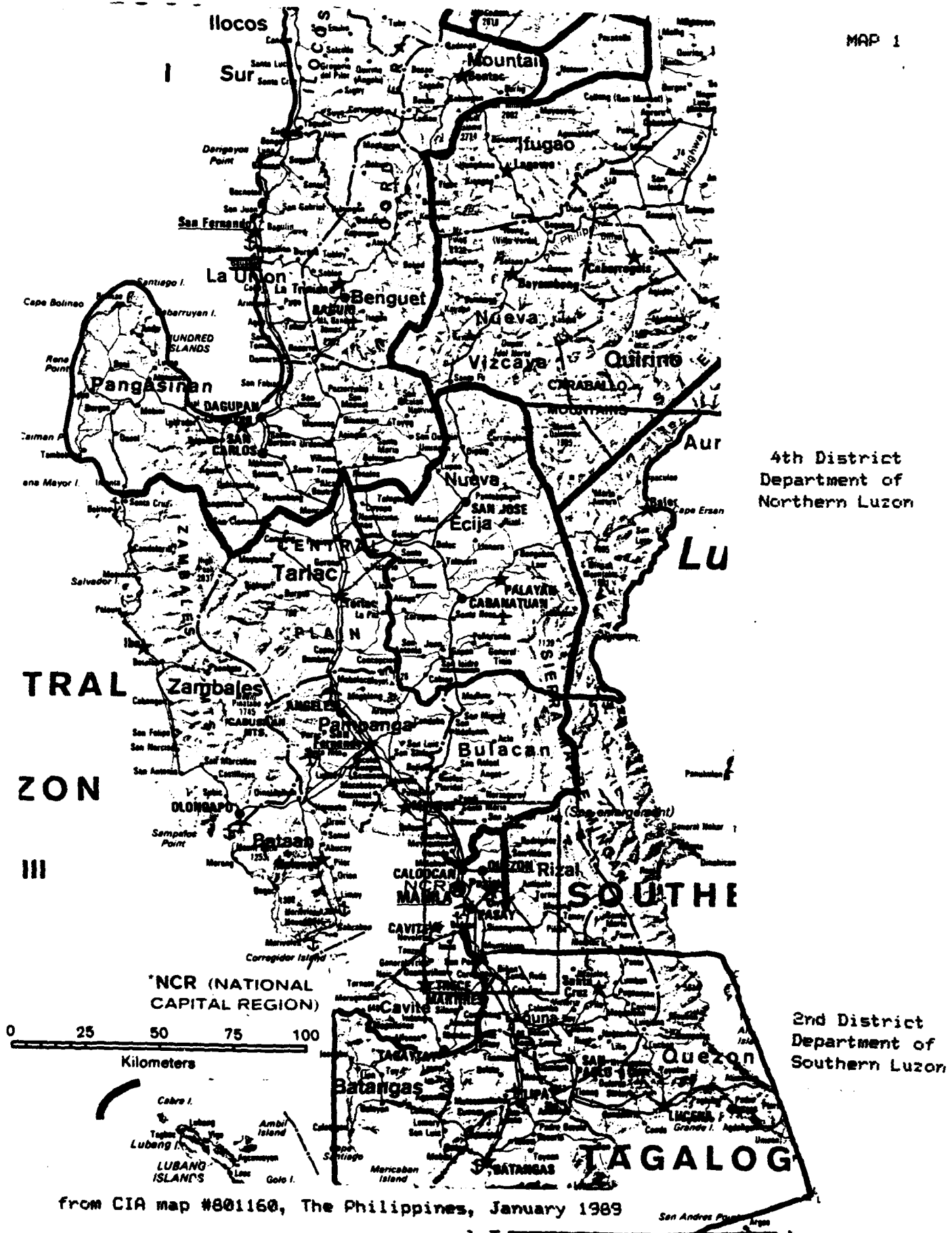
In light of the evidence just summarized, I conclude that search and attack is, indeed, a distinct mission from movement to contact. Further, as this monograph has shown, the planning, preparation, and conduct of search and attack warrants distinct mission treatment within the offensive doctrine. Thus, we are confronted by the last question, does the emerging doctrine adequate-

ly address search and attack?

Based upon my analysis, the manual is still inadequate. There are gaps in describing the integration of the battlefield operating systems. Appendix B offers a modification to this emerging doctrine which may render a more thorough, yet succinct, treatment of this mission.

This monograph has attempted to help me come full cycle to recapture the tactics, techniques, and procedures which were hard earned in past conflicts. Whether or not search and attack remains exclusively within the realm of counter-insurgent warfare will depend upon evolving world events, and the responses directed by our leadership. Through this unpredictable environment, ring true the words of GEN (Ret) William R. Richardson when he said, "As members of the profession of Arms we must be sensitive to the demands of change, visionary in our examination of their implications, and creative in our adaptation of combat organizations, tactics, and techniques."¹³⁶

APPENDIX A: Maps 1st District, Department of Northern Luzon

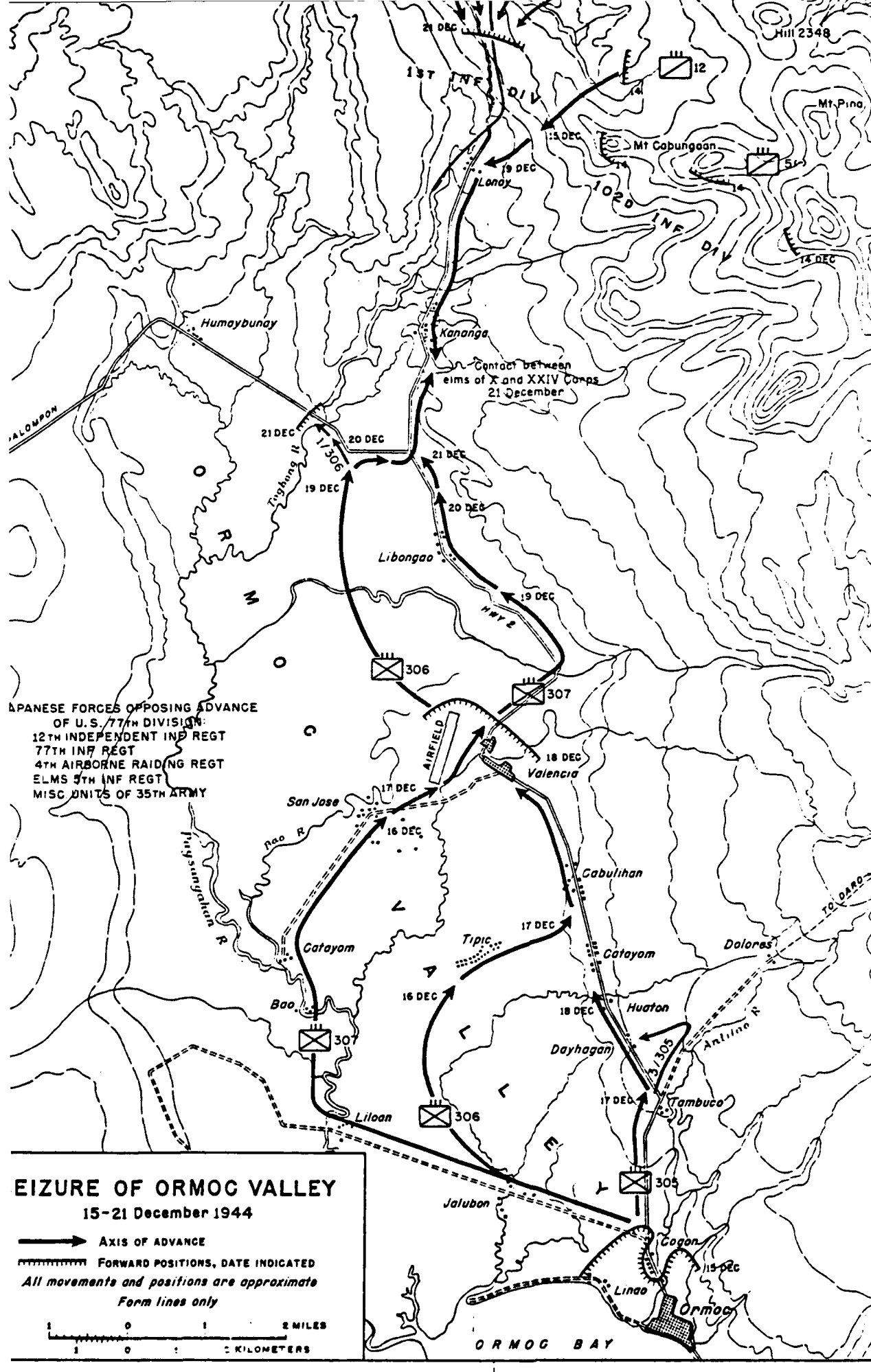


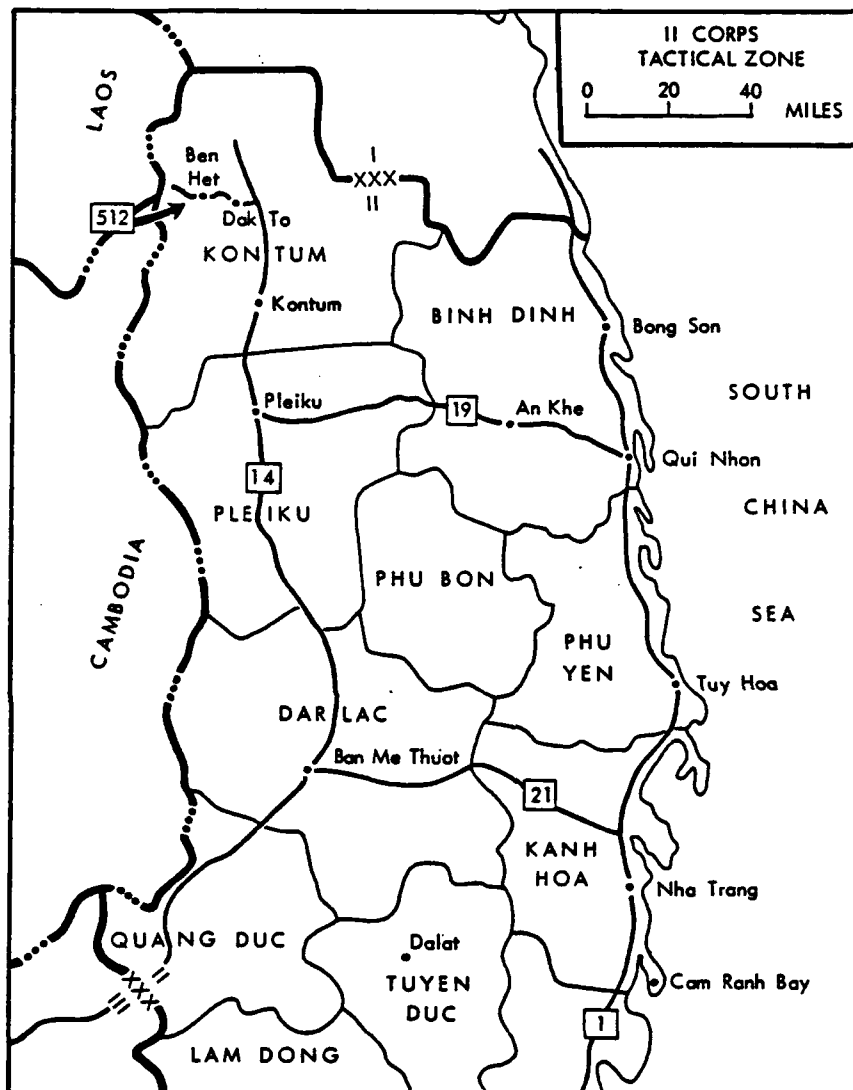
BICOLANDIA: 3rd District, Department of Southern Luzon, 1900-1902

MAP 2

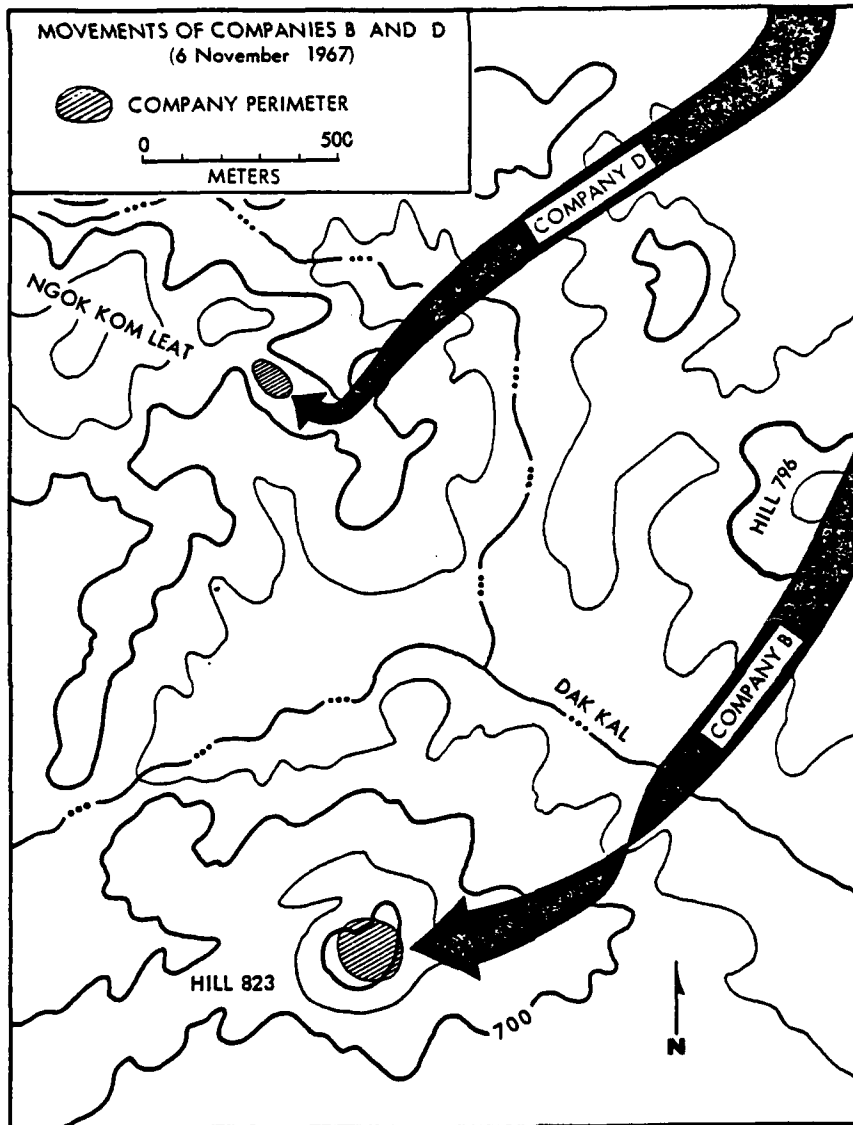


from CIA map #801160, The Philippines, January 1989





from Sandstrum, "Dak To," in Seven Firefights, 86.



from Sandstrum, "Dak To," in Seven Firefights, 93.

APPENDIX B: Proposed modifications to emerging doctrine for Search and Attack

Search and attack is conducted by the light infantry battalion to find, then destroy, clear, or deny enemy forces free access within a specified area of operations. This non-linear, decentralized mission is most often employed in an unconventional conflict. Search and attack involves the commitment of the battalion within a specified area of operations for periods of time often extending to weeks, and even months. There are two general techniques for executing this mission, and each technique has many variants. The two techniques are the conventional technique and the search, then attack technique.

PLANNING CONSIDERATIONS. The battalion (or subunits) tries to establish contact on ground of its own choosing to focus overwhelming combat power against that enemy.

a. **Imperatives.** There are two overriding imperatives for the conduct of search and attack operations--stealth and security. Together, they afford friendly units the fruits of their work, surprise and mass at the chosen time and place. Stealth and security are enhanced by the creativity and cunning of the unit's leadership. These two imperatives are complementary, and require the focused exertion of every unit member.

b. **Intent.** The commander's intent clearly portrays to subordinate commanders what the battalion commander wants to do to the enemy. The purpose for the operation, followed by the tasks to be

accomplished, flows from this intent.

(1) Search and attack is conducted with one or more of these four purposes in mind:

(a) Information collection. The commander's preparation of the battlefield must be detailed and continuous. This intelligence preparation is essential, and must exploit indigenous informants, prisoners, defectors, captured documents, sensors, aerial reconnaissance, and the whole gamut of sources. The goal of this process is to know the enemy's pattern of activity. It is upon this preparation that all operations are founded.

(b) Destruction of the enemy. Enemy units operating in the AO must be killed or captured.

(c) Area denial. The enemy must be denied freedom of action in the AO, for example, base camps and logistic caches must be found, and either destroyed, or the equipment and supplies turned over to the government for appropriate disposition.

(d) Force protection. The enemy must be prevented from disrupting or destroying friendly military or civilian operations, equipment, and property such as key installations, polling places, dams, and so on.

(2) Subunit tasks may include:

(a) Finding enemy base camps, logistic caches, defensive positions, routes normally travelled.

(b) Destroying, observing or fixing enemy forces until a reaction force can encircle and block the enemy so that fire sup-

port (including close air or attack helicopters) can complete the destruction of the enemy.

(c) Establishing ambushes.

(d) Isolating towns or villages so that they may be searched, in cooperation with host nation units, to capture enemy forces, agents, documents, or equipment.

(e) Serving as a reaction force.

c. Concept development. The commander's estimate of the situation, with its detailed consideration of the mission, enemy, troops, terrain and weather, and time available provide the basis for the concept of the operation.

The battalion will normally sub-divide its area of operations into company sized AOs. The size of these company AOs can vary widely. For instance, a provincial sized battalion AO (20 x 30 km) could organize company sized AOs up to half that size. On the other hand, one can envision more conventionally sized AOs for the company (2 x 8 km). It is all METT-T dependent.

The commander will normally employ one of the two general techniques for search and attack in developing his concept.

(1) The Conventional method. This technique is a variation of the approach march movement to contact. It can be employed using roughly parallel company axes of advance, or distinct AOs (see figure 1). The battalion commander will normally retain a company sized reaction force in a centrally located fire support base. The reaction force will also secure the base.

Companies, whether they maneuver in single or multiple columns of platoons, must maintain strict movement, noise, and communications discipline. Companies will also routinely halt in order to allow subordinate units to "cloverleaf." "Cloverleafing" units must remain mutually supporting (see figure 2) in order to find or disrupt potential enemy ambushes. When found, enemy base camps, logistics caches, or personnel encountered are thoroughly searched or interrogated. Communications with the battalion CP must be scheduled regularly for each company and locations plotted and disseminated so that all task force members are alert to friendly positions. It may be days before enemy contact is made.

When enemy forces are found, the unit in contact must take action. If taken under fire, then the friendly force must return fire immediately, deploy and determine the enemy's size, and report. If undetected, then the friendly unit can exploit the stealth and security it has worked so hard to retain. The friendly unit must observe and report, assess the enemy's situation, and isolate him by blocking observed routes in or out of the immediate area. At the designated time, the friendly unit concentrates direct and indirect fires into the objective area to destroy the enemy, always minimizing the exposure of friendly forces to enemy fires. U.S. units maximize the effect of friendly supporting fires onto the enemy, and exploit any information that might be captured in the objective area. When moving out from the contact, the unit leaves a stay behind ambush force to continue to observe for

unwary or reinforcing enemy. In either instance, the battalion commander must be prepared to move with reaction forces and call for reinforcing fires to complete destruction of the enemy. When halts are made for continued planning, reorganization, or rest, insure all-around security and maintain communications with higher and adjacent units.

(2) Search, then attack. This technique also operates out of a centrally located fire support base, but the battalion organizes its AO for short and long range operations (figure 3). The short range AO is that concentric area around the fire support base that extends out to organic mortar range (or DS artillery range, if a battery is committed to support the battalion from the same support base). This area is designated for one of the companies, which is then responsible for a specified number of ambushes each night. The remainder of the AO is the long range operations area. The remaining two companies rotate out from reaction force and base camp security. The designated company establishes a company base, conducts reconnaissance, and executes ambushes or raids against identified enemy targets. These companies stay out for three to four days at a time, moving every day before dawn, or after sunset, to new ambush sites or into patrol bases. These units continue troop leading procedures for the next night's attacks and exchange information with the battalion base.

If, during reconnaissance or after an ambush, a large enemy force (multiple companies) is encountered or escapes from the

ambush, then the battalion commander may be able to exploit this. The friendly force either fixes the enemy or stalks him in movement. The battalion commander moves by helicopter to observe the fixed or fleeing enemy. Assault helicopter insertions of reaction forces can block and trap this enemy force. Destruction or capitulation of the enemy force results from the concentration of indirect, close air, and direct fires against the enemy.

The battalion may organize and train its scout platoon as five man sniper teams (2 snipers, 2 security, 1 RTO). These snipers can be integrated to complement the operations of the line companies. Inserted before dawn into carefully selected positions (generally within the short range AO), the snipers kill enemy targets as these targets approach the sniper position. If the targets are moving away from the sniper position and are out of range, then the sniper team may call indirect fires in front of the enemy to chase them back into the sniper's range. Extraction of sniper teams should be accomplished after dark.

d. Combat support. The integration of all battlefield operating systems is essential to success.

(1) Fire support planning must be meticulous. Search patterns, movements, patrol bases, and ambush positions must be planned, rehearsed and thoroughly understood by every member of the fire support system. Meticulous coordination of control measures, such as restrictive fire areas and coordinated fire lines, is essential. Battery sized fire support bases are necessary to

provide continuous, over-lapping fires throughout an AO. Organic mortars collocate at these FSBs. Likewise, close air support roles must be planned, rehearsed, and thoroughly understood. TACPs move with the battalion commander to the point of contact to control CAS. Informal CFLs, RFLs, or NFAs are established on the ground and friendly units are identified by panel markers, colored smoke, flares, or special arm or helmet bands.

(2) The air defense threat will determine the requirement for ADA. If U.S. forces conduct search and attack in a hostile air environment, then air defense planning must be meticulous. If air defenders are outposted on key terrain, away from fire support bases, to provide coverage for the AO, then additional security must be allocated. CSS and indirect fires planning must be meticulous.

(3) Engineer priorities of work will be to fire support base survivability. During non-linear operations with widely dispersed forces, numerous fire support bases are necessary so that artillery units may provide continuous and over-lapping fires for infantry units. Engineer advisors provide mobility support in reconnaissance to bypass obstacles, or determine bridge classifications and construction requirements for infrastructure. Chain saws should not be used to clear one-ship LZs--their noise and smell can compromise the mission.

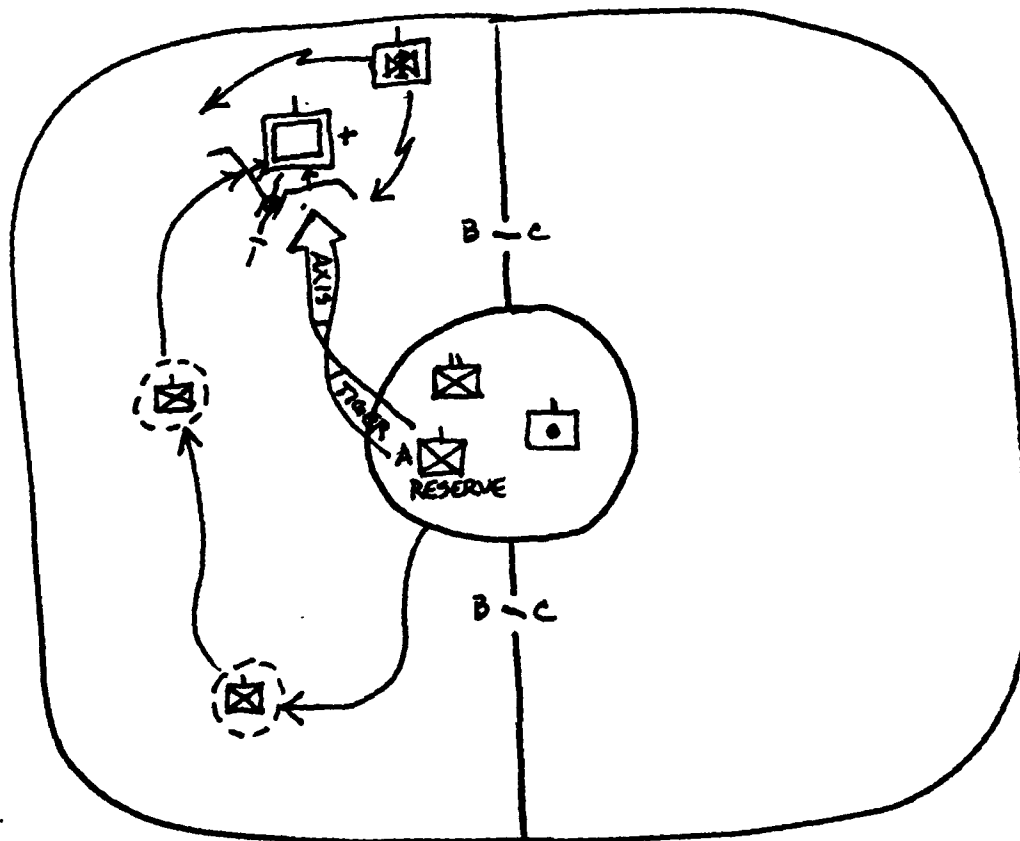
(4) Assault and attack helicopter support can reconnoiter, guide ground forces to the enemy, provide lift and fire support

assets for air assaults, direct artillery fires, aid command and control, and protect flanks. Air assaults must be complemented by false insertions and extractions, regularly, in order to confuse the enemy. Attack helicopters can be particularly responsive to pursuing or blocking enemy forces.

(5) Combat service support for non-linear operations, which rely on stealth and security, must be meticulously planned. Units operating for several days carry all essential supplies. They plan for helicopter resupply, by exception, as this can compromise the operation. Almost without exception, however, units plan for aeromedevac for seriously wounded.

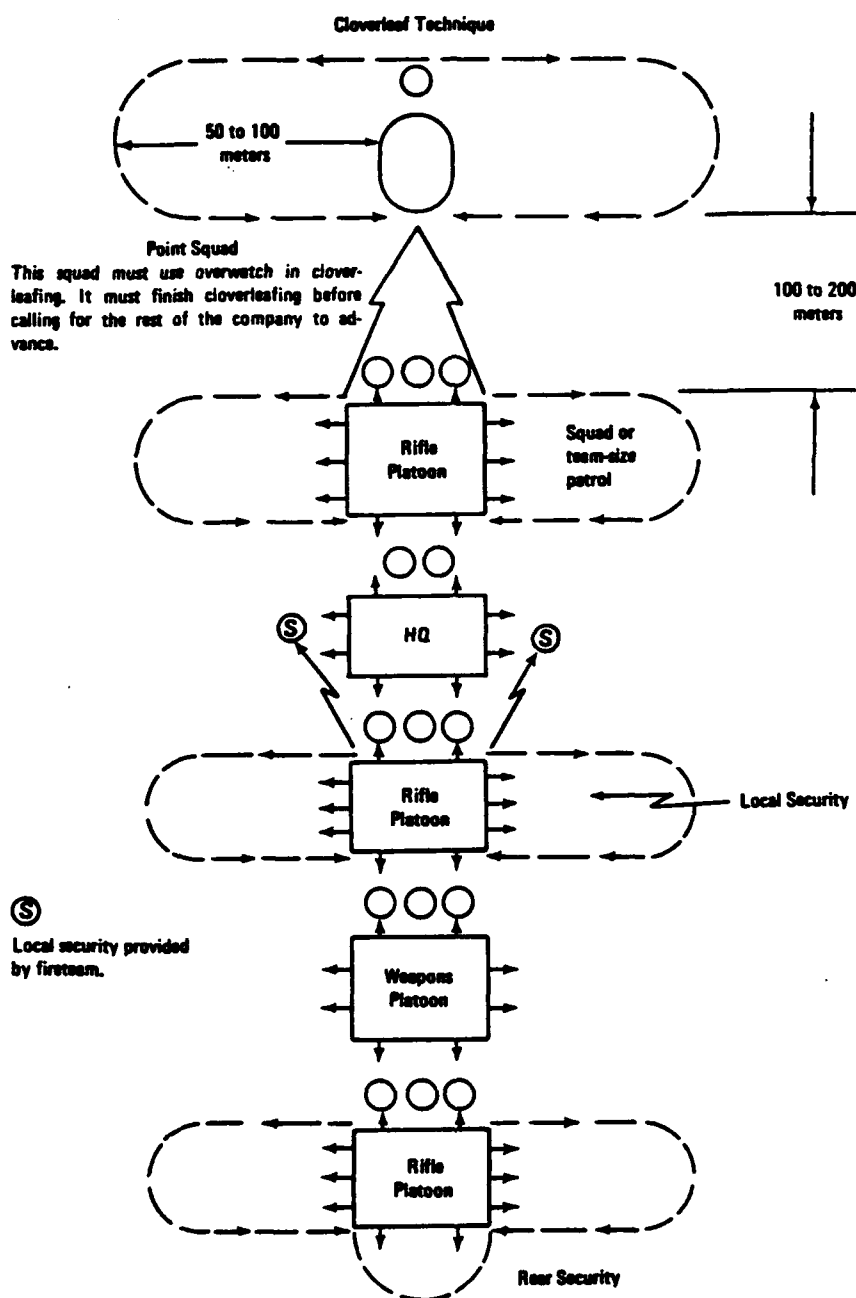
(6) The commander positions himself to receive and disseminate information during the search and attack. He plans ahead for shifting assets within the AO, or committing his reaction force to exploit contact. The commander must insure communications throughout the AO, and must be able to reach the critical point of contact rapidly. The commander, and his staff, supervise the detailed preparations for combat by issuing coherent orders (including sand tables), systematically inspecting, conducting rehearsals, and receiving briefbacks from subordinates.

Figure 1. The Conventional method.



Once the searching unit locates the enemy force, it fixes that enemy. Reaction forces move to block and focus direct fires onto enemy. Attack aviation prevents the enemy from egress, while artillery, CAS, and direct fires destroy the enemy.

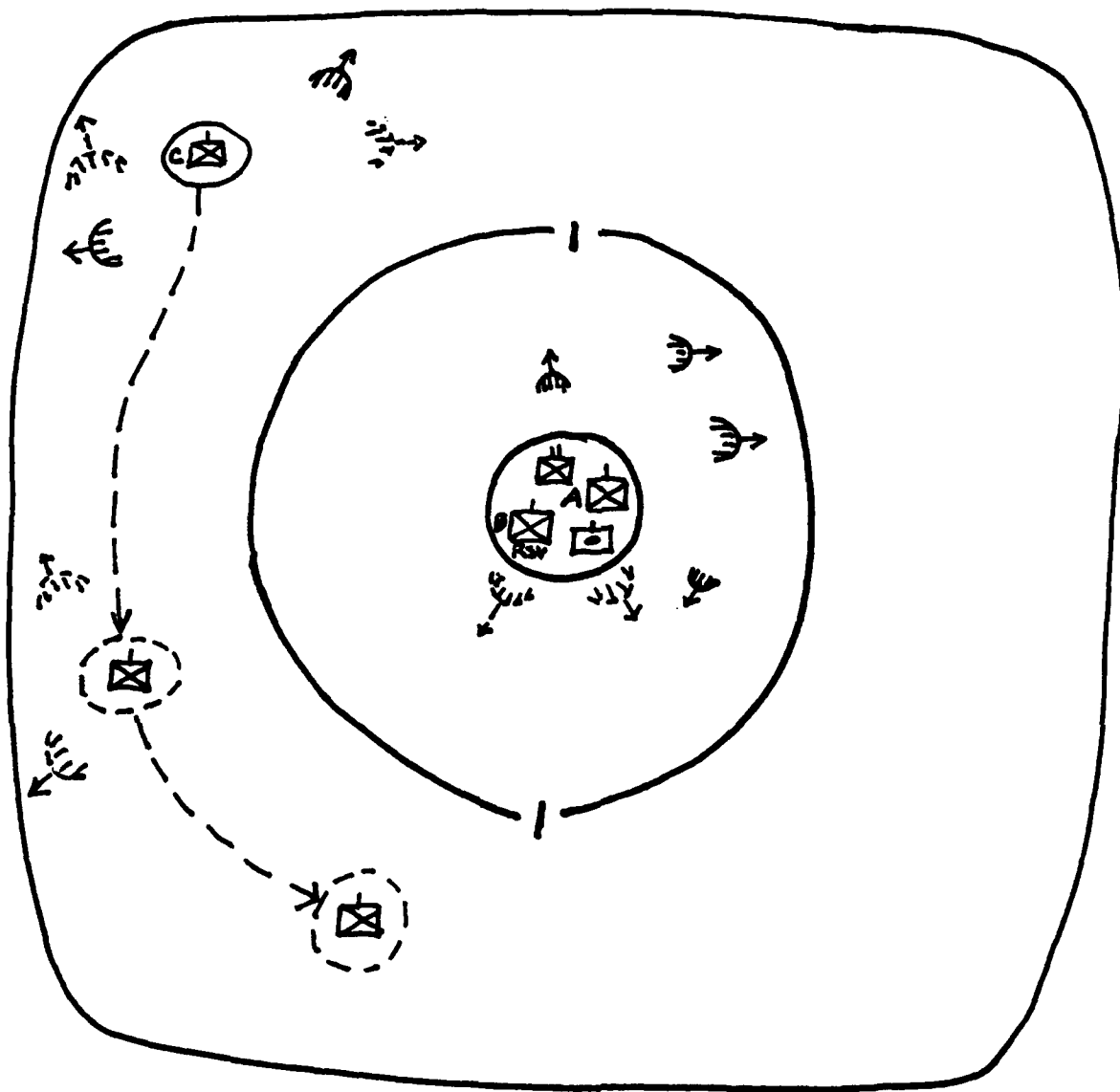
Figure 2



Rifle company cloverleafs

From Hay, Tactical and Materiel Innovations, 44.

Figure 3. The Search, then Attack method.



One company conducts short range ambushes within the inner AO. Another company conducts search, then attack by operating out of patrol bases in the outer AO. These are moved every couple days. The reaction force rotates into the outer AO, then back on a cyclic basis. Scouts can be trained as snipers and may be integrated into ambush operations.

ENDNOTES

¹LTG John H. Hay, Jr., Tactical and Materiel Innovations (U.S. Army Vietnam Studies) (Washington: Department of the Army, 1974), 178.

²U.S. Army, FM 7-72, Light Infantry Battalion (Washington: Department of the Army, 1987), 3-39.

³FM 7-72 (1987), 3-39 to 3-42.

⁴FM 7-72 (1987), 3-40 and 3-41.

⁵U.S. Army, FM 7-20, Infantry, Airborne Infantry, and Mechanized Infantry Battalions (Washington: Department of the Army, 1965), 291-2.

⁶U.S. Army, FM 7-20, The Infantry Battalions (Washington: Department of the Army, 1969), 4-30 and 7-44.

⁷Hay, Innovations, 177.

⁸U.S. Army, FM 7-20, The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger) (Washington: Department of the Army, 1978), H-5; U.S. Army, FM 7-20, The Infantry Battalion (Infantry, Airborne, and Air Assault) (Washington: Department of the Army, 1984), A-4. As you can see, each one line entry occurs in an appendix.

⁹FM 7-20 (1969), 7-43.

¹⁰U.S. Army, FM 7-20, The Infantry Battalion (Approved Final Draft) (Washington: Department of the Army, 1991), 3-35.

¹¹U.S. Army, FM 100-5, Operations (Washington: Department of the Army, 1986), 17.

¹²U.S. Army, TRADOC Pam 11-9, Blueprint of the Battlefield (Fort Monroe, Virginia: Department of the Army, Training and Doctrine Command, 1990), 38.

¹³TRADOC Pam 11-9 (1990), 3.

¹⁴TRADOC Pam 11-9 (1990), 23.

¹⁵TRADOC Pam 11-9 (1990), 23.

¹⁶FM 7-20 (1969), 4-24; FM 7-20 (1978), 4-7; FM 7-20 (1984), 4-15; FM 7-72 (1987), 3-12; FM 7-20 (1991-AFD), 3-27; of all the manuals reviewed for this monograph, only the 1965 version used terminology other than "gain, maintain, or re-establish contact." That manual defined movement to contact as "an operation conducted

to place a battalion in a position to close with the enemy," FM 7-20 (1965), 112.

¹⁷FM 7-20 (1991-AFD), 3-27.

¹⁸FM 7-20 (1991-AFD), 3-27 and 3-28.

¹⁹FM 7-20 (1991-AFD), 3-27.

²⁰FM 7-20 (1991-AFD), 3-28 and 3-29.

²¹FM 7-20 (1991-AFD), 3-44.

²²FM 7-20 (1991-AFD), 3-35.

²³FM 7-20 (1991-AFD), 3-35 and 3-36.

²⁴FM 7-20 (1991-AFD), 3-37.

²⁵FM 7-20 (1991-AFD), 3-35.

²⁶TRADOC Pam 11-9 (1990), 25.

²⁷Sun Tzu, The Art of War, trans. S.B. Griffith (London: Oxford University, 1982), 84.

²⁸FM 7-20 (1991-AFD), 3-27.

²⁹U.S. Army, FM 7-10, The Infantry Rifle Company (Washington: Department of the Army, 1990), 4-13.

³⁰FM 7-10 (1990), 4-14.

³¹FM 7-20 (1991-AFD), 3-38.

³²FM 7-20 (1991-AFD), 3-36.

³³FM 7-20 (1991-AFD), c-11.

³⁴TRADOC Pam 11-9 (1990), 23.

³⁵FM 7-20 (1991-AFD), 3-30 and 3-40 to 3-41.

³⁶FM 7-20 (1991-AFD), 3-40.

³⁷Discussion between LTC(P) Dubik and MAJ DeMayo regarding integration of this BOS into search and attack, 1 NOV 91.

³⁸TRADOC Pam 11-9 (1990), 24.

³⁹FM 7-20 (1991-AFD), 3-29.

^0FM 7-20 (1991-AFD), 3-41.

^1TRADOC Pam 11-9 (1990), 25.

^2FM 7-20 (1991-AFD), 3-29.

^3FM 7-20 (1991-AFD), 3-42.

^4Discussion between LTC(P) Dubik and MAJ DeMayo regarding the integration of this BOS into search and attack, 15 NOV 91.

^5TRADOC Pam 11-9 (1990), 25.

^6FM 7-20 (1991-AFD), Chapter 8.

^7TRADOC Pam 11-9 (1990), 24.

^8FM 7-20 (1991-AFD), 3-30.

^9Discussions between LTC(P) Dubik and MAJ DeMayo regarding the integration of this BOS into search and attack, 15 NOV 91.

0I would offer the 1876 campaign against the Sioux Indian Nation, which resulted in the destruction of Custer's command, as but one of many, prime examples. Nearly every war fought against Native Americans possesses examples where the Army was tasked to search for and attack the selected hostile group.

1Brian M. Linn, The U.S. Army and Counterinsurgency in the Philippine War, 1899-1902 (Chapel Hill: University of North Carolina Press, 1989), 9.

2Linn, Philippine War, 9.

3Linn, Philippine War, 9.

4Linn, Philippine War, 23.

5Linn, Philippine War, 18.

6Linn, Philippine War, 23.

7Linn, Philippine War, 16-17.

8Linn, Philippine War, 9 and 20.

9U.S. Army, Infantry Drill Regulations (Washington: War Department, 1911), 143-147.

0BG Frederick Funston, Memories of Two Wars (New York: Charles Scribner's Sons, 1911), 324.

- 61Funston, Memories, 324.
- 62Linn, Philippine War, 71.
- 63Linn, Philippine War, 71.
- 64COL Clarence Lininger, The Best War at the Time (Ann Arbor: Edward Brothers, 1964), 156.
- 65Lininger, Best War, 158.
- 66Linn, Philippine War, 112-113.
- 67Linn, Philippine War, 22.
- 68Linn, Philippine War, 70 and 76-77.
- 69Funston, Memories, 324.
- 70Linn, Philippine War, 76-77.
- 71Linn, Philippine War, 42-43.
- 72FM 7-20 (1991-AFD), c-11.
- 73Lininger, Best War, 113.
- 74Linn, Philippine War, 113.
- 75Linn, Philippine War, 70.
- 76Funston, Memories, 328-9.
- 77Linn, Philippine War, 22.
- 78Linn, Philippine War, 22, 49, 78, 83, 110-111, and 142.
- 79M. Hamlin Cannon, Leyte: The Return to the Philippines (The U.S. Army in World War II: Pacific Theater) (Washington: Government Printing Office, 1954), 329.
- 80Cannon, 331.
- 81Cannon, 329.
- 8277th Division, Ours To Hold It High, The History of the 77th Infantry Division in World War II (Washington: Infantry Journal Press, 1947), 171.
- 83Cannon, 330-331.
- 8477th Division, Hold It High, 173.

- ⁸⁵Cannon, 329, 333.
- ⁸⁶Cannon, 332-333.
- ⁸⁷77th Division, Hold It High, 171.
- ⁸⁸Cannon, 333-334.
- ⁸⁹Cannon, 334.
- ⁹⁰77th Division, Hold It High, 178.
- ⁹¹Cannon, 333.
- ⁹²77th Division, Hold It High, 171.
- ⁹³77th Division, Hold It High, 172 and 176.
- ⁹⁴77th Division, Hold It High, 176-177.
- ⁹⁵Cannon, 333.
- ⁹⁶Cannon, 334.
- ⁹⁷77th Division, Hold It High, 175.
- ⁹⁸77th Division, Hold It High, taken from the combat examples illustrated on 154 and 173.
- ⁹⁹Cannon, 336.
- ¹⁰⁰Cannon, Map #22, following 328.
- ¹⁰¹S.L.A. Marshall, Vietnam Primer (Sims, Arkansas: Lancer Militaria, 1967), 25.
- ¹⁰²Marshall, Primer, 11.
- ¹⁰³Allan W. Sandstrum, "Three Companies At Dak To", in Seven Firefights in Vietnam (Washington: Government Printing Office, 1970), 87-88.
- ¹⁰⁴FM 7-20 (1991-AFD), 3-38 through 3-40.
- ¹⁰⁵Sandstrum, "Dak To," 88.
- ¹⁰⁶Sandstrum, "Dak To," 91.
- ¹⁰⁷Sandstrum, "Dak To," 92-93.
- ¹⁰⁸Sandstrum, "Dak To," 92, 102-104.

¹⁰³Sandstrum, "Dak To," 100-101.

¹¹⁰Sandstrum, "Dak To," 104.

¹¹¹Sandstrum, "Dak To," 108.

¹¹²COL David H. Hackworth, About Face (New York: Simon and Schuster, 1989), 653.

¹¹³COL David H. Hackworth, "Guerrilla Battalion, US Style," Infantry 61-1 (January-February 1971): 23.

¹¹⁴Hackworth, "Guerrilla Battalion," 24.

¹¹⁵Hackworth, "Guerrilla Battalion," 25.

¹¹⁶Hackworth, "Guerrilla Battalion," 24.

¹¹⁷Hackworth, "Guerrilla Battalion," 24.

¹¹⁸Hackworth, "Guerrilla Battalion," 24.

¹¹⁹Hackworth, "Guerrilla Battalion," 24.

¹²⁰Hackworth, About Face, 680.

¹²¹Hackworth, "Guerrilla Battalion," 24.

¹²²Hackworth, "Guerrilla Battalion," 24.

¹²³Hackworth, "Guerrilla Battalion," 24.

¹²⁴Hackworth, "Guerrilla Battalion," 23, 26-27.

¹²⁵Hackworth, "Guerrilla Battalion," 28.

¹²⁶Sandstrum, "Dak To," 91-92.

¹²⁷Sandstrum, "Dak To," 87-8.

¹²⁸Hackworth, About Face, 697-698 and 701-702.

¹²⁹Hackworth, "Guerrilla Battalion," 23-24.

¹³⁰Sandstrum, "Dak To," 94, 97, 106.

¹³¹Sandstrum, "Dak To," 88.

¹³²LTG Hay, Innovations, 38-39 and 103-104.

¹³³Hackworth, "Guerrilla Battalion," 24.

¹³⁴Hackworth, "Guerrilla Battalion," 24.

¹³⁵Hackworth, About Face, 657.

¹³⁶LTC Archibald Galloway, "Light Infantry In The Defense: Exploiting The Reverse Slope From Wellington To The Falklands And Beyond," (AMSP Monograph, U.S. Army School of Advanced Military Studies, 1985), 36.

BIBLIOGRAPHY

Books

Cannon, M. Hamlin. Leyte: The Return to the Philippines. The U.S. Army in World War II: Pacific Theater. Washington, DC: Government Printing Office, 1954.

Funston, BG Frederick. Memories of Two Wars. New York: Charles Scribner's Sons, 1911.

Garland, LTC Albert N. A Distant Challenge: The U.S. Infantryman in Vietnam, 1967-1972. Nashville: The Battery Press, 1983.

Gates, John M. Schoolbooks and Krags. The U.S. Army in the Philippines, 1898-1902. Westport: Greenwood Press, 1973.

Hackworth, COL David H. About Face. New York: Simon and Schuster, 1989.

Hay, LTG John H., Jr. Tactical and Material Innovations. The U.S. Army in Vietnam Studies. Washington, DC: Government Printing Office, 1974.

Infantry In Vietnam. Fort Benning, Ga: Infantry Magazine, 1967.

Lininger, COL Clarence. The Best War at the Time. Ann Arbor: Edward Brothers, 1964.

Linn, Brian M. The U.S. Army and Counterinsurgency in the Philippine War, 1899-1902. Chapel Hill, NC: University of North Carolina Press, 1989.

Marshall, S.L.A. Ambush, The Battle of Dau Tieng. Nashville: The Battery Press, 1969.

Marshall, S.L.A. Vietnam Primer. Sims, Arkansas: Lancer Militaria, 1967.

McDonough, LTC James R. Platoon Leader. New York: Bantam Books, 1985.

Rogers, LTG Bernard W. Cedar Falls-Junction City: A Turning Point. U.S. Army in Vietnam Studies. Washington, DC: Government Printing Office, 1973.

Sandstrum, Allan W. "Three Companies at Dak To." In Seven Firefights in Vietnam. Washington, DC: Government Printing Office, 1970: 85-108.

Sun Tzu. The Art of War. Trans. by S.B. Griffith. London: Oxford University Press, 1982.

77th Infantry Division. Ours To hold It High. Washington, DC: Infantry Journal Press, 1947.

MANUALS

US Army. FM 100-5, Operations. Washington, DC: Department of the Army, 1986.

US Army. FM 7-20, The Infantry Battalion (Approved Final Draft). Washington, DC: Department of the Army, hand dated 19 Aug 91.

US Army. FM 7-72, Light Infantry Battalion. Washington, DC: Department of the Army, 16 Mar 87.

US Army. FM 7-20, The Infantry Battalion (Infantry, Airborne, and Air Assault). Washington, DC: Department of the Army, 28 Dec 84.

US Army. FM 7-20, The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger). Washington, DC: Department of the Army, 1978.

US Army. FM 7-20, The Infantry Battalions. Washington, DC: Department of the Army, 1969.

US Army. FM 7-20, Infantry, Airborne Infantry, and Mechanized Infantry Battalions. Washington, DC: Department of the Army, 1965.

US Army. FM 7-10, The Infantry Rifle Company. Washington, DC: Department of the Army, 14 Dec 90.

US Army. FM 90-8, Counterquerilla Operations. Washington, DC: Department of the Army, Aug 86.

US Army. Infantry Drill Regulations. Washington, DC: War Department, 1911.

US Army. FM 101-5-1, Operational Terms and Symbols. Washington, DC: Department of the Army, Oct 85.

US Army Training and Doctrine Command. TRADOC Pam 11-9, Blueprint of the Battlefield. Fort Monroe, Va: Department of the Army, Training and Doctrine Command, 1990.

ARTICLES

Dexter, LTC George E. "Search and Destroy in Vietnam," Infantry 56, issue #4 (Jul-Aug 1966): 36-42.

Hackworth, COL David H. "Guerrilla Battalion, US Style," Infantry 61, issue #1 (Jan-Feb 1971): 22-28.

Williamson, BG Ellis W. "Combat Notes: ben cat iron triangle," Infantry 56, issue #2 (Mar-Apr 1966): 40-43.

MONOGRAPHS

Galloway, LTC Archibald. "Light Infantry In The Defense: Exploiting The Reverse Slope From Wellington To The Falklands And Beyond." Advanced Military Studies Program Monograph, US Army Command and General Staff College, 1985.