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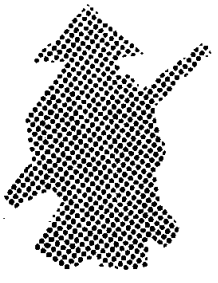
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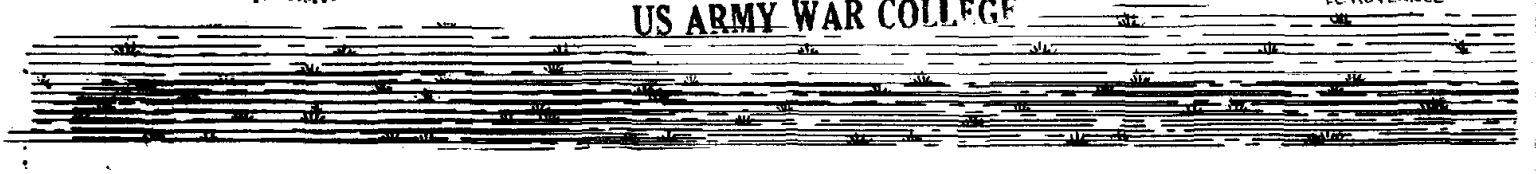
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COUNTERINSURGENCY

LESSONS LEARNED NO. 62

(DJSM-545-66)

SALIENT LESSONS LEARNED (U)

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HEADQUARTERS
UNITED STATES MILITARY ASSISTANCE COMMAND, VIETNAM
APO San Francisco 96222

MACJ343 11 March 1967

SUBJECT: Counterinsurgency Lessons Learned No. 62: Salient Lessons Learned (U)

TO: SEE DISTRIBUTION

1. (U) INTRODUCTION:

a. Previous issues of Lessons Learned have been concerned primarily with tactics and techniques in a purely military sense.

b. The conflict in Vietnam, by its very nature, involves many important military-civil relationships and objectives which play a fundamental role in the planning and execution of military operations.

c. This issue of Lessons Learned includes, in addition to military items, selected topics of a military-civil nature. It is based largely on pertinent extracts from the newly revised "Handbook for US Forces in Vietnam".

2. (CMHA) WINNING AND MAINTAINING CIVILIAN SUPPORT:

a. General. Winning and maintaining the friendship and cooperation of the Vietnamese civilians living within the operational area is an essential step in reducing the effectiveness of the local Viet Cong guerrillas - they cannot operate effectively without civilian support. The two main aspects of our military presence which contribute toward good civil-military relations are the individual soldier's positive attitude in his dealings with local civilians, and the planned civic actions of military units.

b. Individual Behavior. The Viet Cong attempt to separate our soldiers from the local civilians by showing that we are cruel, unthinking, and not concerned with the welfare of the local peoples. The VC can be defeated in these efforts by the strength and generosity we show in our daily life. The "Nine Rules" for the military man in Vietnam provide the guide for doing this (Figure 1).

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NINE RULES

1. REMEMBER WE ARE GUESTS HERE: WE MAKE NO DEMANDS AND SEEK NO SPECIAL TREATMENT.

2. JOIN WITH THE PEOPLE: UNDERSTAND THEIR LIFE, USE PHRASES FROM THEIR LANGUAGE AND HONOR THEIR CUSTOMS AND LAWS.

3. TREAT WOMEN WITH POLITENESS AND RESPECT.

4. MAKE FRIENDS AMONG THE SOLDIERS AND COMMON PEOPLE.

5. ALWAYS GIVE THE VIETNAMESE THE RIGHT-OF-WAY.

6. BE ALERT TO SECURITY AND READY TO REACT WITH YOUR MILITARY SKILL.

7. DO NOT ATTRACT ATTENTION BY LOUD, RUDE OR UNUSUAL BEHAVIOR.

8. AVOID SEPARATING OURSELVES FROM THE PEOPLE BY A DISPLAY OF WEALTH OR PRIVILEGE.

9. ABOVE ALL ELSE, WE ARE MEMBERS OF THE US MILITARY FORCES ON A DIFFICULT MISSION, RESPONSIBLE FOR ALL OUR OFFICIAL AND PERSONAL ACTIONS. REFLECT HONOR UPON OURSELVES AND THE UNITED STATES OF AMERICA.

Figure 1

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c. Unit Activities.

(1) The Vietnamese appreciate the danger of battle areas, and normally will take such actions as are feasible to protect themselves and their property. Unit commanders at all echelons can assist in protecting them by advance planning and timely battlefield assistance. When losses occur, early and effective action should be taken to minimize suffering. Thoughtfulness and consideration in such times of crisis will gain the support of the Vietnamese.

(2) Although a unit may be involved in military operations, its capability to assist in local civic action projects designed to improve the life of the people and win the willing support of the people toward their government should be exploited. Before beginning any specific projects, the unit commander always should contact the local MACV sector or subsector advisor and the local Vietnamese official -- district, village, or hamlet chief -- in order to determine how the unit can assist local plans and projects. In addition, an effort should be made to participate in joint civic action projects in which regular soldiers work side-by-side with local Regional and Popular Force soldiers. In any case, it is essential that the local civilians be required to assist to the maximum extent possible in any civic action project. Military units should provide only the assistance which the civilians cannot provide for themselves. When additional guidance or supplies are required for particular projects, the normal point of contact is the MACV sector or subsector advisor, who will then contact the appropriate GVN official or the US representative from the Joint United States Public Affairs Office (JUSPAO) or the United States Agency for International Development (USAID).

(3) In order to prevent inflation and its attendant hardships on the civilian population, commanders will coordinate with local GVN officials and the MACV advisory staff to establish local price and wage lists for items and services required by US forces from GVN nationals. US personnel must be impressed with the necessity to abide by these lists, not only to help prevent inflation but also to limit gold flow.

d. Operation SILVER LAKE, conducted recently by the 3d Brigade, 9th Infantry Division (US), exemplifies a successful effort toward winning and maintaining Vietnamese civilian support by US elements.

(1) The mission of the Brigade was to conduct cordon and search operations in BINH SON and AN VIENG villages, BIEN HOA Province, and operate in the Division Tactical Area of Responsibility (TAOR) to locate and destroy enemy infrastructure, installations and supply caches.

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In addition, the Brigade was to conduct civic action operations in the TAOR during the period.

(2) The success of the operation was due in part to the unit's efforts to win and maintain support of the people. These efforts consisted of the following:

(a) A new bridge was constructed to replace the old, damaged bridge at BINH SON.

(b) A MEDCAP program was conducted.

(c) A supplementary diet for the population was initiated.

(d) A price list was published in an effort to limit the inflationary effect of US spending.

(e) A loudspeaker and leaflet program advised the civilians why US forces were there.

(f) A Regional Force cultural platoon entertained the population.

(g) One of the more important lessons learned during the operation is the importance of respecting private property rights. Consideration should be given by all echelons to this important matter, and efforts should be made to repair or make proper restitution for damage done to private property.

3. (U) POPULATION AND RESOURCES CONTROL:

a. General. The objective of a population and resources control program is to deprive the VC of the support of the population and the material resources he needs to engage in continuous warfare. The extensive effort of the GVN to win over the population has resulted in the following procedures being established for population and resources control.

b. Population Control.

(1) The Vietnamese have been using individual identification cards since 1938. Today, all persons over the age of 18 must be in possession of an ID card. The present card is laminated and contains a photograph and prints of the left and right index finger of the bearer.

(2) Curfews are imposed only as necessary and primarily in areas where the VC or VC supporters are active. Any person having a legitimate need to be outside his area during curfew hours must be issued a special curfew pass. Curfew violators are assumed to be insurgents or supporters until proven otherwise.

(3) Travel permits in most areas are required for any travel outside a person's village or area. These permits may be issued to individuals or groups, either on a one-time basis or a multiple-day basis, usually not to exceed 90 days.

(4) Enforcement.

(a) To enforce the controls imposed on the population, a system of checkpoints is established on roads and highways, railroads and bus terminals and airlines. Along the 2,500 miles of waterways in the delta region, river craft and assault boats provide control. Mobile checkpoints, both land and water, are established on an irregular basis to apprehend personnel attempting to avoid or bypass fixed checkpoints.

(b) Civil police are more suited, by training and experience, to conduct this type of operation. Their normal police operation, in their own specific area, provides them with a familiarity of the area and its people. Police may require support from the military when insurgents or sympathizers are actively belligerent, but generally, the military is called in for support only in cases where superiority in manpower and armament is required for effective enforcement.

(c) US Forces do not have authority or jurisdiction over Vietnamese nationals. On joint operations, US military police check only US vehicles and personnel while civil police check Vietnamese vehicles and personnel.

c. Resources Control.

(1) It is imperative that the populace be controlled if basic resources are to be denied the VC. Resources required by the VC to continue operations are the same as required by insurgents everywhere. Critical items are:

(a) Food. This includes anything fit for human consumption. Most of the food obtained by the VC is procured locally, either by "taxation" of the local population or from sympathizers and supporters, or in some cases, is grown by the VC in remote areas.

(b) Medicines and medical supplies.

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(c) Arms, ammunition and explosives.

(d) Clothing and textile materials.

(e) Money.

(f) Transportation of all types.

(2) Various control procedures have been established to deny the VC access to the resources he needs. Among these are inventories of material manufactured and shipped from processors and importers, and maintenance of formal records of the amounts of material being shipped and the destination. Upon arrival at the final destination, the goods are inventoried again to insure that there has been no loss or pilferage.

(3) Food stuffs and clothing are rationed to prevent delivery of these items to the VC by local supporters. Police also guard supply depots and storage areas where such items are stored.

(4) The most effective method of resource control employed by the civil police is the search of land and water vehicles. Critical items required by the VC are hidden by sympathizers and supporters in every imaginable place in an attempt to pass inspection at checkpoints. Thorough inspections by land and river police are a tedious and painstaking process but are necessary if the resources control operation is to succeed.

4. (CMHA) RECONNAISSANCE AND SURVEILLANCE: Before the VC can be destroyed, they must be located. Once located, surveillance must be maintained over their movements and activities. This paragraph contains certain important lessons learned from reconnaissance and surveillance experiences in Vietnam.

a. Ground Reconnaissance and Surveillance.

(1) Ground agencies consist of observations posts, surveillance devices, and reconnaissance patrols. Short range radars, employed at two separate locations which permit target intersection, are a valuable source of data during periods of low visibility. Positions, estimated size, direction, and speed of movement of VC elements can be detected readily.

(2) Friendly forces employ squad-size long range reconnaissance units with considerable success in VC controlled territory. Once committed to an operational area, the teams are capable of operating for approximately seven days without resupply. When the team develops a

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target, a quick-reacting airmobile force or tactical air strikes may be called in to attack and destroy the target. These operations have an adverse psychological effect on the VC because they demonstrate that RVN forces are capable of penetrating VC areas and destroying targets which previously were considered to be within VC safe havens.

b. Visual Air Surveillance. Visual air surveillance is conducted primarily from O-1 type aircraft. Pilots and observers should be completely familiar with ground activity in their areas of responsibility in order to recognize any changes from normal patterns. Lessons learned from tactical experience indicate that continuous surveillance missions day after day by the same observer accomplish the following:

(1) Tend to restrict VC daylight movement to areas with dense vegetation.

(2) Locate and report likely landing and drop zones in fast moving situations, for reaction force employments, and for emergency medical evacuation.

(3) Provide information as to possible occupation of a hamlet by VC based on a change in the normal pattern of activity.

(4) Become so commonplace that reconnaissance flights for airmobile operations or air strikes do not constitute warning to the VC of impending actions.

c. Air Reconnaissance.

(1) Visual observation from the air is a rapid and effective means of locating and identifying enemy activity such as construction of field fortifications and road cuts, and the appearance of new track and trail activity. Although visual reconnaissance may be restricted by poor flying weather and VC ground fire, observers often can provide information vital to successful attacks on enemy units and fortifications.

(2) Aerial photographs are a prime source of information on terrain and VC installations and activities. Detailed photo interpretation produces accurate intelligence and often discloses hidden enemy installations or camps not visible to the air observer.

(3) Side Looking Airborne Radar (SLAR) and infrared devices are air reconnaissance means which provide special information.

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(a) SLAR, with its capability to detect moving targets and accurately determine their location, has been valuable in the discovery of movement along the coast, canals, and rivers. In many instances, detection of a moving target has resulted in an immediate attack on a target.

(b) Airborne infrared detection devices are useful for detecting enemy encampments and other activity at night. Because of the means by which the infrared detection is displayed, the information obtained usually must be correlated with maps and photographs to determine accurately the nature of the activity discovered. Fog, clouds, and rain reduce the effectiveness of infrared devices.

(4) The information developed by SLAR, infrared, aerial surveillance and photo imagery is analyzed and correlated with other information at Intelligence Centers. Intelligence of tactical value is passed by the most rapid means available, including aircraft, to appropriate organizations for necessary action.

5. (CMHA) SEARCH AND DESTROY OPERATIONS: Search and destroy operations are those conducted against enemy forces and installations with the primary objectives to find, fix and destroy the enemy; to destroy or seize his equipment, foodstuffs, medical supplies and base areas; and whenever possible, destroy his political and military infrastructure. An additional objective is to keep the enemy on the move and dispersed, to prevent him from planning, assembling and executing operations on his own initiative. Most of these operations are conducted without detailed prior information of the enemy, and the commander must necessarily produce his own intellignece as he goes. Sweep operations, that is, moving quickly through an area without diligent search, are not productive as the enemy sidestep such operations, maintain surveillance over them by the use of local guerrillas, and either evade contact or wait for an opportunity to strike and destroy detached small elements or larger forces whose guard is down. Thus, the success of offensive operations designed to destroy enemy forces depends upon finding the enemy and engaging him with superior forces. The following lessons have been learned with respect to the conduct of search and destroy operations.

a. Combat Intelligence.

(1) Combat reconnaissance. Aggressive, continuous combat reconnaissance is essential in all operations. Saturation patrolling by platoon-size or even smaller units, either on foot or delivered by helicopter, is a prime source of information. Platoon-size heliborne reconnaissance elements should reconnoiter all populated areas and likely concentration points within a wide radius around operating units.

(2) Locally available information. Another source of accurate information exists at province, district, village, RF and PF levels. Close liaison and frequent visits to sector/subsector advisors, GVN officials and ARVN/RF commanders can result in much accurate and useful information.

(3) Aerial surveillance and target acquisition -- aerial photography, infrared detection, SLAR and continuous visual observation -- have proven effective in Vietnam.

b. Operations to Destroy VC/NVA Base Areas.

(1) Offensive operations against VC base areas contribute to the defeat of the enemy by capturing or destroying his supplies and by causing him to move and thus to exhaust time and supplies. Since installations in VC base areas often are camouflaged completely and protected by security troops and booby traps, operations against these targets must involve a thorough combing of the base area, organized by the establishment of a series of search zones. Forces assigned to zones must be given full opportunity to cover each zone thoroughly and ample time and means to destroy what they find.

(2) Operations against VC base areas should be repetitive, based on a carefully designed campaign of sustained action which ultimately will dominate the bases and render them useless.

(3) Limited operations against VC base areas also are effective in keeping the enemy off balance, denying him free utilization of safe areas, and forcing him either to move frequently or to withhold forces for the defense of base complexes. Long range artillery, naval gunfire, fighter bombers, strategic bombers and land and amphibious raids will hamper his operations, reduce his forces, destroy his morale and materially detract from his ability to prosecute the war effectively.

c. Operations to Destroy VC or NVA Main Force Units.

(1) The success of offensive operations designed to destroy VC/NVA main forces depends first upon finding the enemy and then engaging him with superior forces. If reliable information becomes available regarding the size or location of such a force, the opportunity should be exploited immediately and aggressively in coordination with appropriate FWMAF and RVNAF commanders. However, instances in which firm intelligence is available are rare. Therefore, acquisition of detailed information in the early stages of operations is essential.

(2) Schemes of maneuver inherently must be flexible to enable immediate response to any opportunity which promises defeat and destruction of the enemy. Rigidly preplanned schemes of maneuver,

with successive objectives, by a force moving in one direction, nearly always or frequently will fail to fix the enemy unless the "fix" is at a place and time chosen by the VC/NVA.

(3) Once located, the first step in destroying VC or NVA main force units is to entrap or encircle the enemy force. It is not sufficient, in most cases, to use only an attacking and a blocking force - more is required. The VC on many occasions have slipped between these two forces, escaping relatively unscathed. Therefore, the enemy forces' most likely routes of withdrawal must be covered by ground combat elements, and the less likely routes of withdrawal by light reconnaissance on the ground, placed and extracted by helicopters, if available, in order to exploit time and space advantages.

(4) Once contact is made commanders must be prepared to adjust plans rapidly to enemy movements, and to alter schemes of maneuver to fix and destroy the enemy. Action must be quick, aggressive and responsive to the movement of the enemy. In this situation mission-type orders should be issued to combat units; they must move with great speed around, behind and on the flanks of any located force. This will require bold and skillful commanders at every echelon. Speed and deception must characterize tactical maneuver, and all this must be done with meticulous attention to continuous provision of air, artillery and where feasible, naval gunfire support.

(5) On 20 January, Operation TEB TAN BINH, a search and destory operation in GIA DINH Province, west of Saigon, was conducted by the 2d and 8th Airborne Battalions. One battalion made a sweep and the other battalion followed over the same area about four hours later. The second battalion surprized an estimated two companies of VC who according to prisoners had come out of their holes thinking the operation was over. Results were: Friendly; 1 KIA and 14 WIA. Enemy; 112 VC KIA, 11 VC and 26 individual weapons captured.

d. Operations to destroy VC local and guerrilla forces and the VC military/political infrastructure.

(1) Normally, operations designed to destroy local and guerrilla forces and the VC military/political infrastructure are classified as clearing operations or securing operations designed to bring specified areas permanently under GVN control. However, because the VC objective is to take over the government at every level through the gradual development of powerful local guerrilla and political organizations and because these local organizations provide intelligence, tactical support and resources to main force units, it is sometimes necessary to attack this local structure even if there is no capability or intention to establish permanent GVN presence. Therefore, search and destroy operations may be undertaken in areas where revolutionary development is not possible.

(2) US and Free World Forces of approximately brigade size often may be deployed into a province, or even a district, for sustained operations over 2, 3, or 4 week periods designed to destroy local and guerrilla forces and the political and military infrastructure of the VC. The techniques which are most effective are:

(a) The tactical commander establishes a base from which he can launch quick reaction forces by helicopter, by vehicles and sometimes on foot.

(b) The commander, his staff and his subordinate commanders establish liaison with the sector/subsector senior advisors and hamlet and village officials in order to coordinate the operation with the responsible GVN officials and to obtain from them most recent intelligence on enemy activities and forces in the area.

(c) It is necessary also to conduct extensive combat reconnaissance patrolling. Battalions will be assigned areas within which companies, platoons and squads will conduct extensive foot, motor and heliborne patrols identified by local officials as concentrations or areas of habitual enemy activity.

(d) US platoons and squads or sometimes companies may accompany Regional Forces and Popular Forces on local operations. This will bolster the morale of the RF/PF, provide them with the necessary communications for artillery and air support, and increase their combat effectiveness as a result of the training received.

(e) In coordination with local officials, Regional and Popular Forces and/or National Police, hamlets should be surrounded and searched. VC officials, identified through prior intelligence or interrogation, should be apprehended and turned over to GVN authorities.

(f) Saturation patrolling by small units over a long period of time will produce a number of small contacts. Intelligence acquired through these contacts should be exploited immediately. After a week or two, the intelligence picture in the area should become reasonably clear and a number of prisoners or ralliers should be in hand.

(g) Whenever a contact is made, a quick reaction by a large force should insure destruction of the VC while sustaining few friendly casualties.

(3) In the type of action described above most contacts will be with VC squads and platoons and only rarely with companies or battalions. Nonetheless, this type of operation strikes at the heart

of the VC organization and at his capability to conduct or support successfully his major operations. Troops should expect a large number of small successes. The cumulative effect of this type operation will be as important as engagements with a large VC force.

e. Civic Action Programs. During these operations security cannot be provided for any appreciable time. Therefore, civic action programs must be limited to those actions that will relieve suffering, such as first aid or evacuation of civilian injured, minimum replenishment of destroyed foodstuffs, and the evacuation of key local officials if they so desire. Civic action projects which may benefit the VC, may be destroyed by the VC in the event they return, or which may cause VC reprisals should not be undertaken.

6. (U) DEFENSIVE CONSIDERATIONS:

a. General. While continuous emphasis must be placed on offensive operations, establishment of sound defensive positions is essential. Planning and execution of the defense must be flexible and provide rapid reaction to enemy attacks.

b. Considerations.

(1) The best defense is offensive action; a series of outposts and ambush sites should be established in depth at dusk or shortly after dark. During daylight, saturation patrolling as well as outposts should be employed.

(2) Defensive positions must provide all-around protection with the capability for rapidly massing fires on any location around or within the perimeter. Always fire-in defensive concentrations if possible. This is important especially in temporary perimeters.

(3) For fixed and semifixed installations barbed wire barriers (concertina, single and double apron fence, tanglefoot) should be constructed around the perimeter of the installation and around sensitive locations inside the perimeter. Although a good barrier plan is essential, the internal security cannot depend solely on the physical barriers placed around the installation.

(4) Trenches should be dug in a zig-zag pattern between bunkers. Grenade sumps are required in trenches.

(5) Bunkers, by the nature of their fixed positions, are most vulnerable to infiltration attack, or attack by direct fire weapons. Bunkers must be located at least 50 meters behind the inner barrier wire to reduce the damage from VC emplaced claymore mines and to prevent hand

grenades from reaching them from positions outside the wire. All bunkers should have reinforced overhead cover capable of withstanding the effects of mortar fire. They should be camouflaged, if possible, to increase the problem of identifying them at night. Bunkers should be mutually supporting whenever possible.

(6) Claymore mines, emplaced inside the barrier wire for command detonation, are most effective against personnel. Improvised flame devices, such as the electrically detonated "fougasse," also are effective.

(7) The M79 grenade launcher is effective in covering dead space in final protective fires close to the edge of the defensive perimeter. A clear field of fire must be obtained to avoid premature detonation caused by rounds striking branches or limbs.

(8) A well coordinated illumination plan tightly controlled by the commander must be developed in order to prevent indiscriminate use of illumination. Improper illumination may reveal friendly forces and defensive positions to the enemy.

(9) Locate guard or reserve forces throughout the internal area to combat small unit infiltrations. A plan to utilize reserve forces to prevent or repel penetrations of the perimeter must be developed. This important fundamental lesson was learned the hard way by the valiant defenders at Camp Bu Dop. The enemy attacked with two battalions, succeeding in penetrating the northwest corner of the camp. From this position inside the compound the enemy fired into the backs of the defenders and inflicted heavy casualties. This situation could have been prevented if a reserve force had been constituted and committed to repel the penetration.

(10) Establish multiple means of communications within bunkers and internal security posts.

(11) There must be a minimum of movement inside the perimeter after dark. If firing of weapons or explosions of grenades occur inside the perimeter (not from protective bunkers or firing pits), all personnel not in protective positions should "freeze" in a firing position. Anyone running or moving about should be considered enemy. Signals must be used to identify friendly counterattack forces. After firing ceases conduct a sweep inside the perimeter.

(12) Disperse key personnel, weapons and equipment in order to avoid excessive losses.

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(13) The chain of command within all units must be well defined to preclude confusion resulting from key personnel becoming casualties.

(14) Emergency plans to restore communications to provide medical aid and to insure uninterrupted defense of the area must be developed and rehearsed.

(15) Search civilian workers upon their departure from the installation to prevent removal of arms, ammunition or other property. Areas where personnel were working must be swept to remove marker signs emplaced to locate bunkers, automatic weapons sites, or other sensitive fixtures for unfriendly forces outside the installation.

(16) Establishment of hasty defensive perimeters during the conduct of other operations requires consideration of the following:

(a) Provide for ambush patrols and early warning devices to cover avenues of approach into the perimeter. Emplace the ambushes while moving into the area.

(b) Stop before dark to set up camp for the night.

(c) Halt on the most defensive terrain available. During rest stops, insure that designated guards are alert and outposts are placed.

(d) Consider the technique of stopping an hour before last light, approximately 300-500 meters from the intended night base camp. Establish good local security, and then use this halt for chow, minor first aid, weapons maintenance or to accept a helicopter resupply. Send a patrol to reconnoiter your intended base. When this patrol locates suitable, defensible terrain for a base and reconnoiters for defensive ambush and OP/LP sites, the patrol sends back guides to the main body, and also maintains surveillance of the base area. After dark, the main body is guided to the actual base, occupies assigned sectors of the perimeter by units, and digs in quietly. Ambushes and OP/LPs are established in accordance with previous daylight reconnaissance, to include an ambush on the route used by the unit to reach the actual base. For normal indirect fire support planning for the actual base area, plan concentrations for the first (temporary) base, and likely approaches into that area.

(17) The enemy will make every effort to remove all casualties, weapons and documents from the battlefield in order to prevent accurate assessment of their losses. Use long range automatic weapons fire combined with continuous illumination of the area to keep the

enemy from "policing" the battlefield as they withdraw. Casualties left behind by the enemy are often booby trapped. Exercise extreme caution when searching or moving enemy casualties.

(18) Remove all trip flares and booby traps at first light.

(19) Do not disclose automatic weapon positions by firing when the enemy harasses with sniper fire.

(20) Increase security forces on nights of extremely limited visibility (no moon) and during periods of heavy rain. The enemy often attack at such times.

(21) When occupying hasty perimeters in the same area for a given period of time, do not occupy the same position for more than two nights. Even a two hundred meter move is sufficient to counter enemy daylight reconnaissance. One system is to occupy a position on the first night, operate from it the following day, and displace to a new position at dusk of the second night. Complete reconnaissance of the second position is essential.

c. Sentry Dogs. Sentry dog units are employed to safeguard installations against unauthorized entry. Each dog is trained to use its keen sense of hearing and smell to alert its handler of the presence of humans or animals. On order from the handler the sentry dogs will attack an intruder. Guard duty hours for sentry dogs should be about four hours long, covering a post approximately 200 yards in length. Rotation between guard posts should be on a regular basis to prevent the dog from becoming overconfident and less alert in familiar surroundings.

7. (U) AIR SUPPORT:

a. General.

(1) Air power in all its forms plays a vital role in the Vietnam war, and has been assigned a variety of tasks. Some of these tasks are adaptations of roles and missions which have been employed previously. A number of effective techniques of employment and lessons learned from air support operations are related below.

(2) Mobility and quick response are key elements of the tactical air concept. The ability to move quickly and forcefully is needed to keep the enemy from successfully mounting large scale attacks or finding safe havens for his activities. This is accomplished by a network of well-dispersed forces and bases coordinated by a tactical air control system designed to provide support for ground forces at a moment's notice.

b. Mission.

(1) The primary role of tactical air in Vietnam is to provide close air support for ground forces and to strike enemy concentrations, encampments, fortifications, storage areas and routes of communication and supply. Other missions include aerial reconnaissance, assault airlift, interdiction and counter air when required.

(2) In Vietnam, tactical air power is relied on to accomplish a number of missions. Some of these are:

(a) Providing close support to ground troops against preplanned targets or targets of opportunity. The environment of SVN often restricts ground movement and requires that maximum tactical air power be responsive to destroy an elusive enemy.

(b) Finding and engaging the enemy beyond the range of ground penetration. This type of tactic is employed to reduce the enemy's capability to infiltrate or move supplies through areas otherwise inaccessible to friendly forces.

(c) Moving ground troops into battle wherever the enemy can be found. This mission is accomplished by tactical airlift to remote airfields where troops can be introduced into battle.

(d) Conducting air strikes against landing areas for future operations. Landing areas are limited in many parts of SVN and are often well defended; thus the mission of saturating a proposed landing area for troops is an important one which is carried out by all types of tactical aircraft to supplement ground fire support or to replace it when the situation and range precludes use of ground fire support.

(e) Providing close air support to base camps, landing areas and defensive positions that the enemy attempts to overrun by human wave type attacks. This type of close support has become commonplace in SVN and has assisted greatly in the defense of such areas.

(f) Airlifting food, weapons, equipment and ammunition to ground forces. The insecure land routes of communications and the isolated location of many operations necessitate the delivery of many logistical support items by air.

(g) Providing illumination in the battle area. Flares are invaluable for the protection of outposts, ground troops, airbases, and villages under attack during hours of darkness.

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(h) Assisting in psychological operations. In support of ground and air operations, aircraft are used to drop leaflets and to broadcast near front lines and suspected VC strong holds.

(i) Providing tactical support by use of miniguns mounted in a FC-47 aircraft. The FC-47 mounts three 7.62mm miniguns. The FC-47 can also carry 20 flares to illuminate the target area. One of the most beneficial uses of this type aircraft has been to assist in the defense of airfields and other fixed installations.

(j) Providing a personnel and cargo parachute delivery capability. This capability was employed recently in Operation JUNCTION CITY when a battalion of US paratroopers spearheaded a multi-division operation.

(k) Interdicting the enemy's infiltration and movement of supplies.

(l) Providing air recovery and rescue service.

(m) Providing a visual reconnaissance program as a means to find and observe the enemy. SVN is divided into visual reconnaissance areas; each area can be covered normally by one O-1 aircraft. Pilots are detailed to cover the same areas on a periodic basis. By doing this, the pilot becomes familiar with the area and can detect any unusual VC activity.

(n) Providing escort cover to transport helicopters and their armed helicopters to and from areas of operations.

(o) Laying minefields. Aircraft are used for laying mines along routes of communication to restrict the enemy's movement of troops and supplies.

(p) Defoliating areas to restrict movement of or deny the enemy the use of covered areas, and destroying crops in fields controlled by the enemy.

(q) Providing B-52 air support. The B-52 force, with its precision and large area bombing capability, plays an important part in the air support role. Although not as responsive as fighter bombers timewise, B-52s are used effectively against almost every type of tactical target. When the need arises, B-52 strikes are employed in close support of friendly ground troops in direct contact with large

enemy forces. For example, during Operation HASTINGS in I Corps Zone during July 1966, numerous B-52 strikes were made in support of ARVN and Marine forces against elements of an NVA division.

(r) Providing an all-weather, day or night, area air defense capability for friendly forces, air fields and other military installations in SVN.

(s) Assisting in disaster relief by the timely provision of airlift supplies and medical evacuation.

(t) Convincing the enemy that he cannot hide, cannot hold the initiative, and cannot hope to win.

c. Close Air Support - III Marine Amphibious Force. Requirements for tactical air support for Marine combat units are essentially the same as for Army units. However, the concept of operations differs in that the USMC integrates both ground and air elements into a force "package" with the air element commander directly responsible to the overall ground commander.

d. Operating Techniques.

(1) Tactical Air Control System (TACS).

(a) The Tactical Air Control Center (TACC) is located at Tan Son Nhut Base near Saigon and is the combined US and VNAF facility which plans and coordinates the entire USAF/VNAF tactical air effort within Vietnam.

(b) Direct Air Support Centers (DASC) are located with the four corps headquarters. The primary function of the DASC is to process and approve all requests for immediate and preplanned close air support.

(c) Tactical Air Control Parties (TACP) are attached to each battalion and higher level ground force tactical headquarters. The TACP at separate brigade and division level consists of an Air Liaison Officer (ALO), four Forward Air Controllers (FAC's) and four radio operators. A FAC is attached to each province advisory team in Vietnam. This FAC advises the province chief on the use of tactical air and controls the air strikes within that province. TACP's are located normally

with the unit Fire Support Coordination Center (FSCC) or Tactical Operations Center (TOC) as appropriate.

1 The ALO advises the ground force unit commander on all matters pertaining to the capabilities and employment of tactical air.

2 The FAC is an experienced tactical fighter pilot who has extensive knowledge of tactical air ordnance capabilities and fighter delivery techniques, and who has been trained specially to perform his primary mission of directing air strikes. Experience in Vietnam has shown that the FAC is most effective in directing air strikes when he is airborne. When an ARVN Ranger Battalion in IV Corps was hit by a large enemy force, a FAC at province headquarters immediately requested a flareship and fighters. He proceeded to the battle area in an O-1F and established radio contact with the US advisors who were trapped in the compound. Being completely familiar with the area and having obtained the location of enemy forces from the US advisors, the FAC was able to direct the fighters effectively on target. The Ranger unit, together with the Americans, took advantage of this situation and withdrew to a secure area. A reaction force sent in the next morning credited the air strike with killing 38 enemy troops and preventing them from overrunning the post.

(2) Tactical Airlift Operations.

(a) The tactical airlift system in the RVN has proved to be both responsive and reliable in support of rapidly changing, fluid battlefield situations, and in maintaining a viable Air Line of Communications (ALOC). Command and control of the airlift force is exercised through a tactical airlift control system. This system is practically identical to the Direct Air Support net used to direct and control tactical strike and reconnaissance aircraft.

(b) The missions performed by the Air Force tactical airlift system in the RVN include air landing and air dropping combat personnel, supplies and equipment; resupply of ground forces; aeromedical evacuation; defoliation and crop denial; and maintaining the daily air line of communications to all major aerial ports, air bases and Army units - about 150 airfields throughout the RVN. During Operation ATTLEBORO,

from 18 Oct to 26 Nov 66, the tactical airlift fleet flew 3,314 airlift sorties while moving 10,270 tons of troops and equipment to several forward airfields. This was done without impairing the normal airlift support missions which still went on. Tactical airlift has proved to be an integral part and highly respected member of the joint air-ground team in the RVN.

(3) Locating VC Movement at Night. Two techniques for locating VC movement at night have proven to be extremely successful. Both methods: "Snipehunt" and "Firefly," employ airborne radar combined with quick reacting armed aircraft.

(a) Snipehunt. Fighter aircraft are the quick reaction power used in the Snipehunt. Once a target has been located by airborne radar and clearance has been obtained from the ground force commander, a flareship is called in to illuminate the target area for a FAC-controlled fighter aircraft. An example of the effectiveness of this technique was demonstrated in IV Corps. The enemy had just completed loading seven sampans with supplies, and started moving across the Saigon River in the middle of the night. The sampans' movements were detected by airborne radar and, in a matter of minutes, airborne fighter aircraft and a flareship were summoned and all seven sampans were sunk.

(b) Firefly. The Firefly method employs a team of searchlight-equipped helicopters and three or four armed helicopters. After the target has been located by airborne radar and clearance obtained from the ground force commander, the helicopter team is called into action. The searchlight helicopter illuminates the target and the armed helicopters attack and destroy it. A variation of this method is the armed ship and the search light helicopter working as a team without the assistance of radar. Once a target is identified and illuminated, the armed ships attack and destroy it. Firefly teams have been successful particularly against VC vehicular and boat movements.

e. Armed Helicopters.

(1) Armed helicopters can provide timely and accurate fire support in both offensive and defensive actions. They normally are employed to escort transport helicopters and deliver suppressive fires. Other missions include:

(a) Armed visual reconnaissance. The purpose of this mission is to obtain enemy information and to locate and destroy VC targets. Normally a minimum of two armed helicopters are utilized.

(b) Convoy escort. There are two methods of performing the mission. In the first method, an O-1 type observation aircraft stays with the convoy at all times, while armed helicopters deploy by bounds as the convoy progresses. The armed ships are always within five minutes flying time of the convoy. If the convoy is ambushed, the O-1 pilot immediately scrambles the armed ships by radio and directs the initial strikes on the enemy ambush force. The second method, armed helicopters flying continuous column cover, is used when an O-1 aircraft is not required because the convoy distance is short or if the danger is great.

(c) Overhead cover for ground operations. The purpose here is to allow uninterrupted movement of friendly forces by providing aerial fire support as needed. The armed ships fly at an altitude which will afford the best observation without undue risk. They assist the ground force commander by:

1 Screening flanks, front and rear of his troop units.

2 Advising him of likely ambush sites.

3 Advising him of likely enemy locations so he can reconnoiter by fire with small arms, artillery or armed helicopters.

4 Providing radio relay and control.

(2) Operating Techniques. For the proper employment of the ships and their armament the pilots must know:

(a) The location of friendly forces. Identify friendly unit locations by using panels, smoke, colored scarves or an easily identifiable terrain feature.

(b) The location of enemy forces. Identify positions of VC forces by giving the pilot an azimuth and distance from a known location. When identifying VC forces, exercise extreme care to avoid inflicting unnecessary noncombatant casualties.

(c) The long axis of the target. Maximum advantage should be taken of the armed helicopter weapons "beaten zone" by identifying the long axis of the target.

(d) Friendly force movements, artillery fires and the presence or absence of tactical air support. This information allows

the pilot to plan his time over the target area and his rate of ammunition expenditure.

(e) Armed helicopters can be used effectively to block a withdrawing enemy until ground troops can be employed.

8. (U) ARTILLERY SUPPORT: The mission assigned to artillery units, the ammunition used, and the basic techniques of employment are no different in Vietnam than elsewhere in the world. Here, as in Korea, artillery accounts for a large percentage of the enemy casualties. Instances are known in which the enemy actually has called off attacks on friendly installations because of their fear of artillery. There are, however, refinements in artillery techniques required by the special circumstances of the fight against this enemy. For example, special attention must be given always to the reduction of casualties among noncombatants who are often intermingled with the enemy troops. Salient lessons learned encompass many local variations in normal artillery employment procedures which increase the effectiveness of fire support missions.

a. Positioning of Artillery Units.

(1) Since the effectiveness of artillery fire decreases as the number of firing elements is reduced, artillery normally should not be employed in less than battery size units. Three suitable battery position layouts which may be used are the "triangular," "hexagonal," and "star" formations. The advantage of such dispositions is that a good dispersion pattern is maintained regardless of the direction of fire. The large number of areas requiring artillery support may reduce the number of units which can be massed on a single target; however, each fire unit should have another fire unit within supporting range for mutual defense against ground attack. Artillery must be disposed to provide support for all deploying units at all times. A direct support artillery battalion's capability to support multiple company/platoon size operations can be enhanced considerably through the formation of a fourth, 4-gun battery. Employing three 4-gun batteries and one 6-gun battery, the battalion can provide adequate fire power to support several small operations while still retaining the capability to mass the fires of two or more batteries.

(2) Be prepared for the unexpected; never assume artillery will not be needed. The threat of an enemy attack from any direction is constant. Artillery units should always be prepared to fire in any direction from the firing position.

(3) The requirement for all-around fire support necessitates a change in the normal plotting chart procedures used in the FDC. Battery positions frequently are plotted at the center of the chart and the size of the chart is increased on one or all four sides to permit maximum range measurements for the weapon being employed. The 1:50,000 scale firing chart normally is used for medium and heavy artillery units. A larger scale would be too large for a 6400 mil firing capability.

(4) Azimuth stakes should be positioned around the gun pit revetment every 800 mils to facilitate rapid change of direction and reduce the possibility of firing in the wrong direction (3200 mils out). For the same reason, fire commands include the desired azimuth of fire as their second element.

(5) The enemy tries to camp out of range of the artillery whenever possible. Enemy operational plans take into account range and location as well as probable time required for the artillery to respond to fire requests. Frequent changes of position will add to effectiveness and security of artillery and disrupt enemy plans.

(6) Artillery units should also be prepared for rapid movement to new areas by boats, helicopters, transport airplanes, M113's or conventional vehicles. Helicopter air movement has the advantage of increasing the number of accessible firing positions while not requiring secure ground routes.

(7) The enemy considers artillery positions prime targets for mortar and ground attack. Consistent with providing prompt fire support, defensive positions with overhead protection should be prepared and improved as time permits. The FDC and ammunition should be revetted first and the position continuously improved while occupied. Defensive positions should be destroyed upon departure, since the enemy may occupy abandoned positions and attempt to prevent our return. In most cases, artillery security requires reinforcement of artillery position area defense with infantry.

b. Observation and Adjustment of Fire.

(1) Ground observation of artillery fire is hampered by dense vegetation, especially in the jungle areas of II and III Corps. To overcome this limitation, units should take advantage of air observers for adjustment of artillery fire. The employment of WP, smoke, or a high air burst on the first round often will assist the observer in bringing subsequent rounds rapidly on target.

(2) Ground and aerial observers often can be employed effectively as a team. The ground observer marks his position and gives directions to the aerial observer, who subsequently adjusts the fire.

(3) A system has been developed for rapid location of target areas using an alphabetical designation for each 1000 meter map grid square within a unit's sector of responsibility. The system has been used to good advantage by some units.

c. Coordination and Communication.

(1) There is a great volume of air traffic throughout Vietnam. Consequently, the ability for close, rapid coordination must be maintained with operational flight elements at all times. In addition, each unit should have an individual at the firing position watching for friendly aircraft along the gun-target line. Artillery can be fired safely over air columns if the fires are coordinated closely with the flight leaders. One effective method of coordination is to place an artillery forward observer with each FAC to coordinate artillery firing during air strikes. This technique ensures that all elements are informed of firing in progress and provides immediate response for lifting or shifting of fires.

(2) Radio has been the primary means of communication for the artillery. Experience has indicated that most artillery units are employed beyond the normal rated range of their FM radios. As a result, it is necessary frequently to rely on continuous employment of FM airborne radio relays and on use of AM radio communications in order to control artillery fires.

(3) During field operations, aircraft control and coordination may be obtained by using an artillery advisory broadcast on a predetermined channel. The advisory consists of essential information such as the artillery position, direction of fire and impact area.

(4) The 1st Cavalry Division (AM) has airlifted successfully the 155mm howitzer into positions which otherwise would be inaccessible. The CH-54 "Flying Crane" is utilized to sling-lift the howitzers into position. This capability provides medium range artillery support to ground elements in practically all types of terrain.

d. Special Considerations.

(1) In addition to delivering destructive fires on the enemy, artillery can be utilized to illuminate critical areas at night, to orient friendly combat forces in dense undergrowth areas, to flush the enemy from hidden locations, to deny him escape routes, to deceive

him as to avenues of attack, to interdict suspected enemy positions and for numerous other missions. Harassing and Interdiction (H&I) fires based on an understanding of the current intelligence situation can be very effective in demoralizing the enemy both day and night.

(2) The selection of fuze action cannot be dictated by terrain alone, as might be expected; rather, the fuze action that actually gives the best results against each specific target must be determined and selected. For example, it has long been thought that the employment of the VT fuze in the dense jungle area would be ineffective. The enemy positions numerous snipers high in the trees of the jungle canopy. VT fuze action has been used to attack successfully this type of target

(3) Aerial artillery of the Air Cavalry Division (AM) provides an added artillery support capability. One of the artillery battalions in the division is equipped completely with helicopters armed with 2.75 inch rockets, SS-11 missiles, and searchlights. Elements of the battalion are used to provide closely coordinated fires in support of air assault elements, against targets that rapidly develop on the battlefield and for attacking moving targets. The artillery countermortar program is enhanced by placing aerial artillery helicopters on countermortar air alert. These airborne ships are alert continuously for mortar flashes and immediately strike known or suspected locations.

(4) Several methods have been developed for using artillery as navigational aids to infantry units in dense jungle when the sky is overcast or cannot be seen through the jungle canopy. Two such methods are:

(a) To help a lost patrol generally locate itself on a map, an artillery round is fired at a location such as a grid line intersection near the patrol. Several rounds may have to be fired and the patrol may have to shift rounds based on sound. When a round is close enough to the patrol for a definite sensing, the patrol can then determine its general location on a map relative to the coordinates fired by the artillery.

(b) To help a unit maintain its direction of attack in heavy jungle, artillery may be fired several hundred meters in front of the unit, shifting to new targets in the direction of march. The unit then "follows" the artillery to the objective. This system is preplanned and based on the infantry scheme of maneuver. The concentrations are preplanned so that the artillery forward observer with the infantry unit can call for particular concentrations.

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9. (U) NAVAL GUNFIRE SUPPORT:

a. General. U.S. Navy ships operating offshore can and do provide fast, accurate fire support for ground forces operating in the vicinity of the coast. This support can be either direct fire, where the target is visible from the ship, or indirect fire directed by air or ground observers. Because of their mobility, ships can provide fire support over a wide area with little time lost between missions. Ammunition available includes high explosive, white phosphorous, and illumination rounds with mechanical, point detonating or VT fuzes.

b. Requests for Naval Gunfire. The request for Naval Gunfire Support (NGFS) is transmitted through normal fire support channels to the nearest Fire Support Coordination Center (FSCC) where a naval Gunfire Liaison Officer (NGLO) is located or to the nearest Coastal Surveillance Center (CSC). The CSC or NGLO will complete processing of the request. The NGLO also will make arrangements for the necessary observers or spotters. Requests for NGFS must contain the following information:

(1) Coordinates of the target.

(2) Target description (troops in open, bunkers, ets.).

(3) Time ship is to commence firing.

(4) Type ammunition required.

c. Gunfire Support. NGFS falls into two broad categories:

(1) Preplanned (requested or scheduled 48 hours or more in advance).

(2) Nonscheduled (normally requests requiring quick response).

d. The configuration of Vietnam, with its long coast line and many strategic areas located in coastal enclaves, makes NGFS extremely valuable. Commanders operating in this coastal environment should always consider support by NGFS. An example of the rapid reaction and accuracy of naval gunfire support occurred during the U.S. Marine Corps operation "Starlite." A large group of VC attempting to cross a clearing to escape encirclement was seen by a forward observer. The grid coordinates of the clearing were radioed to the offshore ship and within seconds, the first round was on the way. When the mission was completed, the clearing was littered with the bodies of 60 VC.

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10. (U) COMBAT SUPPORT COORDINATION CENTER (CSCC): The CSCC is an ad hoc field operations center developed incountry for implementation with combined forces.

a. Functions and Operation. The functions and operation of the CSCC are similar to those of a Fire Support Coordination Center (FSCC), except that the CSCC encompasses a broader span of operations. It is used to insure effective and coordinated use of all available combat support.

b. Implementation. The CSCC is implemented at those levels of command required to integrate plans and combat operations involving US, RVNAF, ROK or other FWAF.

c. Organization. A CSCC should be organized normally for regimental or smaller operations. In operations involving combined forces exceeding those of regimental size, a CSCC is established and may be modified as necessary to suit the combat support elements available for the contemplated action.

d. Representation. Representatives of Artillery, Air, Naval Gunfire, Psychological Warfare, and other agencies as deemed necessary by the commander are grouped at the CSCC to assist the commander(s) in planning, coordinating, and controlling the means of combat support available in an operation.

(1) As a minimum, the CSCC is staffed with the following:

(a) Coordinator.

(b) Aviation Support Element.

(c) Artillery Support Element.

(d) Tactical Air Control Party.

(e) Psychological Warfare Element.

(2) Additionally, the following may be represented in the CSCC as required at the discretion of the commander:

(a) Naval Gunfire Support Element.

(b) Logistics Support Element.

(c) Intelligence Element.

(d) Liaison Officers from US, ARVN and/or FWMAF artillery units supporting the operation.

(e) Liaison personnel from province or district to advise on territorial matters which may be effected by the tactical operation.

(f) Other support elements (e.g., River Assault Group Element, Junk Fleet Element).

11. (U) ARMOR/ARMORED PERSONNEL CARRIER-M113 OPERATIONS:

a. Armor/M113 Operations. The use of armor in counterinsurgency operations in Vietnam exploits its major characteristics of armor protected firepower, mobility and shock effect. Concepts of employment of armor have been modified to adapt to conditions in Vietnam and some changes in organization and equipment have been made. Heavy armor protection has been sacrificed in favor of mobility and firepower.

(1) M113. The most striking innovation has been the use of the M113 as a "fighting vehicle." In addition to being used to transport troops to a battle area, they are employed as light tanks using the fires of mounted weapons to destroy the enemy in close combat. The infantry rides on or in the carriers until contact with the enemy is made, then they dismount. Carriers lead the assault, clearing paths through the underbrush as they go. Particularly dense foliage and mine infested terrain has made it more propitious, in many cases, for the infantry to remain mounted and assault the objective as the carriers detonate antipersonnel mines and booby traps. M113 carriers employed as assault vehicles have been modified to add mounts for M-60 machine guns and a protective shield for the vehicle commander (Fig. 2). A vehicle thus modified is referred to locally as an "ACAV" (Armored Cavalry Assault Vehicle). Sand bags are used extensively either on top of the vehicles or to line the floors. These reduce the effects of enemy weapons, especially antitank mines. The decision to add weight to the vehicle in the form of sand bags must be weighed against the possible decrease in cross-country mobility.

(2) Tanks. Techniques of tank employment used in Vietnam are not unusual, but during many operations the tanks may only support by fire due to trafficability limitations. Gunnery techniques are unchanged, but the majority of targets engaged are "soft" targets at very close ranges (100 - 500 meters). Ammunition basic loads have been adjusted to include more HE, cannister and WP rounds at the expense of armor defeating rounds. In some units, basic loads have contained up to two-thirds cannister. In many cases tanks have been modified to



Armored Cavalry Assault Vehicle (ACAV)
(M113 Modified)

FIGURE 2

provide an external pedestal mount for the .50 caliber machine gun with some light protective shielding for the tank commander (Fig. 3). This configuration is preferred to the cupola which is a part of the tank for use against ground targets.

b. Organization and Equipment.

(1) Armored cavalry units deployed to Vietnam have been reorganized to adapt to local conditions. One basic change common to all cavalry units has been the replacement of authorized M114 Command and Reconnaissance Vehicles by M113 carriers. In many cases rifle squads and support squads have been converted to additional scout squads mounted in ACAVs. The armored cavalry regiment has substituted M113s for the tanks within the armored cavalry troops.

(2) Tank and mechanized infantry battalions have made no significant changes in organization or equipment.

c. Capabilities. Armor capabilities significant to employment in Vietnam include:

(1) Heavy firepower.

(2) Off-road mobility.

(3) Battlefield illumination.

(4) Lesser vulnerability to antipersonnel mines and booby traps.

(5) Lesser vulnerability to enemy ambush.

d. Limitations. Armor units operating in Vietnam are limited by:

(1) Vulnerability to enemy antitank mines.

(2) Numerous water obstacles, and limited capacity or narrow bridges.

(3) Reduced cross-country mobility during the wet seasons.

e. Planning Considerations. Planning for Armor operations in Vietnam should consider:

(1) Trafficability of the terrain.



Tank, M-48A3 (Modified)

FIGURE 3

(2) Enemy mine threat.

(3) Means of land navigation and control.

(4) Rules of engagement.

(5) Formations.

(6) Enemy ambush threat.

(7) Requirement for and availability of bridging.

f. Salient lessons learned from armor tactical operations in Vietnam highlight the following:

(1) When crossing areas of marginal trafficability, maintain speed and avoid tracking and turning in the same area of the vehicles ahead unless in a known antitank mined area.

(2) Be prepared for extensive field expedient recovery and self-recovery. Obtain long cables, capstan kits etc, and train in their uses.

(3) Ammunition basic loads for tanks should be adjusted to include predominantly antipersonnel rounds.

(4) Be alert for trafficability indicators. For example, a rice paddy in which water buffalo are moving usually is trafficable for M113.

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5 - US Army Forces Southern Command
14 - CG, USARAL
2 - CG, 1st US Army
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2 - CG, 4th US Army
2 - CG, 5th US Army
2 - CG, 6th US Army
2 - CG, 7th US Army
2 - CG, 8th US Army
5 - CG, XVIII Abn Corps
5 - CG, III Corps
20 - CG, 101st Abn Div
5 - CG, 82nd Abn Div
5 - CG, 1st Armd Div
5 - CG, 2d Armd Div
5 - CG, 5th Mech Div
3 - CG, USAMC
10 - CG, CDC
2 - CG, USACDEC
1 - CG, USACDC
3 - COMPHIBTRAPAC
3 - COMPHIBTRALANT
5 - COMUSMACTHAI
2 - COMUSJAPAN
2 - CHMAAGCHINA
2 - CHMAAGJAPAN
2 - CHPROVMAAGKOREA
2 - CHMILTAGINDONESIA
2 - CHMEDTBURMA
5 - Chief, R & D
2 - Ch ARPA RD FU (THAI)
5 - Chief, JUSMAG, PHIL
2 - JFK Center SW
5 - Defense Document Center
3 - CO, USA Lim War Lab
3 - CO, Seal Tm 1
3 - CO, Seal Tm 2
1 - PAC MSL Tange
1 - NAV Ops Spt Gp LANT
2 - COM NAV Ops Spt Gp PACAF
1 - COM NAV Const Bn LANT
2 - COMDT, NWC
5 - COMDT, AFSC
2 - COMDT, ICAF
5 - COMDT, USAWC
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2 - President, Naval War College
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2 - COMDT, USACMLCS
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2 - COMDT, USAES
5 - COMDT, USACGSC
5 - COMDT, USARPAC Intll Sch
2 - Supt, USNA
2 - Supt, USNPGS
3 - Supt, USMA
2 - Supt, USAFA
5 - USA Sch of Americas
5 - CO, USNCES Sch
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