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REMARKS

Attached first draft will be mimeographed and passed out at the Arty Seminar on Wednesday if you concur

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Recommended article for "Artillery Trends"

Supporting Air Assault Operations

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1. General

The initial employment of artillery in the air assault operation varies but slightly from employment in normal land warfare.

a. Tube artillery normally does not engage in the preliminary preparation for the objective assault. Aerial fire support or missiles are used instead. Usually, tube artillery does not enter action until after the infantry attack is initiated. This procedure allows surprise to be maintained to the last minute and precludes the enemy from determining friendly ^{intentions} ~~intentions~~.

b. As in conventional land warfare, the amount, type, and organization of the artillery force must be suited to the needs of the operation. However, the types of aerial prime movers available and the characteristics of the objective area may prevent the landing of the quantity and caliber of artillery required by the strength of the enemy and the characteristics

of the area. In this situation, a compromise decision must be made.

c. Initial positions are usually very small in area and within friendly bases of operation.

d. The limitations imposed by a shortage of specific aerial prime movers and other transportation means create difficulties in:

- (1) Occupation of positions.
- (2) Supply and resupply, particularly of ammunition.
- (3) Establishment and maintenance of communications.
- (4) Displacing to new positions.

e. The ground forces in an air assault operation are organized in the following sequence:

- (1) Organization for movement.
- (2) Organization for the initial assault.

f. Centralized control of artillery is maintained from the time it is loaded, through aerial movement, until it is landed and is reorganized in the objective area ready to fire. This control is essential to provide instantaneous reaction to changes in missions once the artillery is helicopter-borne. Diversion to other position areas or other objective

areas is not unlikely.

2. Initiation of Planning

a. The air assault force commander begins planning on receipt of the initial directive for the operation. The artillery commander with the air assault force insures that liaison is established immediately between all artillery echelons. As the broad plans for the operation are formulated, the artillery commander of the air assault force issues training directives to lower echelons to ready them for combat along the lines of the proposed plan. On approval of the fire support plan by the air assault force commander, the necessary instructions are prepared to put the plan into effect. The fire support plan furnishes complete tactical and technical instructions to the fire support means with the force.

b. In a corps operation, each division artillery commander and his staff initiate planning on receipt of the corps warning order. The details of the air assault division fire plan are completed as soon as possible after the corps fire support plan is received.

c. The air assault division fire support plan will be detailed. Artillery unit plans will contain pertinent extracts from and references to the division fire support plan

and plans of supported units.

3. Estimates

a. The air assault force commander in preparing his estimate of the situation, requires his artillery commander to make an estimate of the artillery requirements. The artillery commander's estimate of requirements must be changed continually so that recommendations and plans can be kept abreast of the situation.

b. Normally, the initial operational directive indicates the means to be placed at the disposal of the air assault force commander. From the number and the size of the major units allocated and the terrain, mission and enemy situation, the air assault force commander estimates the artillery requirements to support the force. This estimate is made initially to determine the amount and type required of:

- (1) Cannon artillery.
- (2) Missile artillery.
- (3) Aerial rocket artillery.
- (4) Fixed-wing aerial fire support.
- (5) Ammunition.
- (6) Special equipment.
- (7) Aerial prime movers/transporters.

c. In arriving at the estimate of artillery requirements, the factors below are given special consideration:

(1) Mission of the air assault force. In an air assault operation, the mission directly affects the aerial prime mover and resupply requirements. The estimated duration of the operation will have its greatest effect on the amount of ammunition accompanying the artillery units. If the air assault is to be followed by sustained ground operations beyond initial objectives, aircraft allocations must be adequate to support artillery ammunition resupply and replacement requirements. For a short operation, emphasis is placed on initial accompaniment of ammunition, whereas a long campaign necessitates provision for resupply of virtually all equipment in addition to ammunition.

(2) Plan of maneuver of the air assault force. Artillery requirements will vary with the plan of maneuver of the ground force as well as with the relative location of the air assault objective area(s). The artillery support problem is much simpler if the infantry assault force lands on adjacent areas in a single sector. The plan of maneuver after seizure of the base strongly influences the amount of artillery required.

(3) Terrain, weather and geographic characteristics.

In addition to the information normally required concerning weather and terrain in the objective area, special information is needed pertaining to artillery position areas and laager areas. Gradients and widths of positions, prevailing wind conditions, presence of concealed barriers, texture of ground surface, and existence of obstacles in and around the position will affect the types and number of aircraft and special equipment required by artillery in getting into the positions.

(4) Enemy capabilities. Enemy capabilities based on enemy strength, composition, disposition, status of supply, reinforcements, morale, and training must also be considered and evaluated in order to determine artillery requirements.

(5) Employment of other fire support means. Estimates of artillery requirements should include consideration of the aerial cavalry squadron weapons such as the XM3, XM6, and SS11 systems; the aerial attack and surveillance battalion weapons such as HVAR, napalm and bombs; attached or reinforcing medium, heavy, or very heavy artillery which is within supporting range; air defense artillery; naval gunfire; and close air support. The required ammunition supply rate

for all these weapons must be considered concurrently with resupply difficulties in order to permit them to assume an effective artillery role for the specified period of the operation.

d. Close air support provides an important means of fire support for air assault units, particularly in the early stage of an operation. While close air support cannot replace artillery fire, the amount and type available must be considered in determining overall artillery requirements.

e. Reinforcing artillery from behind the FEBA and naval gunfire are suited to assume some of the division artillery's missions. When planning to employ such fires, its short comings must be kept in mind. If the air assault operation progresses beyond the range of easily massed artillery, the estimate must provide for the landing of artillery of the proper type to replace these fires. The longer ranges of missiles, corps gun battalions and naval gunfire do not have the ability to deliver in all cases precision or close supporting fires.

f. The estimate of artillery requirements should be written, because of its operational importance and the desirability of keeping a permanent record of the estimate

for assistance in future planning. In determining the artillery requirement, each of the factors discussed in "a" through "e" above are considered in turn.

4. The Artillery Plan.

a. Organization for combat. The principles of organization for combat that apply to ground operations are applicable in air assault operations. When combat elements of the division are to land in widely dispersed areas, it may be necessary to attach some division artillery to the assault elements. Other divisional artillery units should be given a mission of general support or reinforcing. Centralized control of division artillery is accomplished as soon as practicable after landing to provide flexibility of fire support. Corps artillery battalions should be either attached to division initially or assigned the mission of reinforcing division artillery. Aerial prime movers to be used by the artillery for movement should be attached to the artillery for loading and for the period necessary to land the artillery and its ammunition. Armed escort aviation may be assigned primary and secondary missions. When these units are attached or placed under the operational control of division artillery, their unit integrity will be maintained during

employment.

b. Organization for movement.

(1) Division artillery should normally be organized for movement as a separate movement unit. Direct support artillery will normally move with the supported unit. The following personnel are usually prepared as indicated:

(a) Corps artillery and division artillery commanders, with their fire support element (FSE) personnel, normally move concurrently with their respective corps or Division Operation Centers.

(b) Aerial observers and liaison parties move with their appropriate supported units.

(c) The remainder of the artillery should move in such a manner as to maintain the tactical unity of the organizations.

(2) It has been found that the transport helicopter, CH47 (CHINOOK), is, in most instances, the best ship for transporting artillery. It is not wise to land the transport airplane, CV2 (CARIBOU), in an unprepared position area; however, this is another acceptable means. A less desirable means of transport is the smaller utility helicopter; section integrity is lost, operational range is reduced and the mass of aircraft required is tactically uneconomical except for

special operations.

c. Zones of fire. Principles for establishing zones of fire in ground operations are applicable to air assault operations. However, an air assault objective requires that the artillery have a field of fire greater than 3,200 mils. It is very difficult in such a situation to mass the preponderance of the division artillery firepower, and it may be several hours before all artillery units participating in an assault can prepare the necessary positions to cover zones other than their normal zones of fire. Aerial rocket and missile platoons and batteries provide fire into spaces defiladed or out of range from other units. With proper planning and by assigning contingent zones of fire, some massing of artillery fires may be possible. Assigning of normal and contingent zones of fire should provide for rapid aerial displacement of artillery and resultant massed fires on suspected areas of enemy concentration. Zones are normally assigned laterally; however, zones in depth may be assigned. In determining the zones of fire, the artillery commander must consider the necessity for covering dead spaces in the zones of action of assault units. Units to the flank may be able to provide fire into spaces defiladed from other

units. In such cases, cross fire must be employed for maximum fire support. Minimum range considerations may also dictate the sole use of aerial rocket fires in order to provide fire support early in the operation while the assault units are expanding the base of operation.

d. Position areas. The air assault artillery commander must coordinate the assignment of position areas for artillery units with the force. Each lower echelon artillery commander must further subdivide the assigned area for the units of his command. A map and photo reconnaissance will be made considering:

(1) The ability of the artillery to cover the designated zones of fire.

(2) The coordination of position areas with the location of ammunition points, aircraft refueling points, prime mover laager areas, engineer support and routes of communication.

(3) In the limited space of the objective area, few good position areas will be available and many desirable features such as defilade and concealment, dispersion and good roads must be partially or completely sacrificed.

(4) Areas should be selected to provide the maximum possible security for the comparatively immobile artillery.

General support and attached medium and heavy artillery must be located so that a temporary change in lines of contact will not expose them to enemy small arms fire.

(5) Alternate positions that are readily accessible from initial positions should be chosen to provide additional capability in massing fires readily on targets which would otherwise be out of range.

e. Target information. Artillery intelligence exploits every available source and agency to locate targets during the planning phase. Aerial photographs taken at frequent intervals must be made and studied at all echelons. Schedules of targets and priority for attack are made by the fire support coordination agency. These schedules are kept current by study of the latest aerial photographs and post strike analysis reports of air strike and other preparations delivered on the objective. At every opportunity, corrections are furnished to those headquarters previously issued the schedules of targets.

f. Survey. Artillery intelligence exploits every possible source and agency to determine the amount of survey control existing in or near the objective area. Each echelon of survey makes detailed survey plans based on complete map and photographic reconnaissance. Survey sections are parachuted

or landed as early as possible in the area of influence in order to insure maximum capability for massing fires.

g. Communication

(1) Radio. The control and coordination of artillery units of the air assault force during the movement makes it imperative that a communication plan meeting the requirements of simplicity, reliability and flexibility be placed in effect. The artillery communication plan provides for communication between the force artillery commander, all subordinate elements, and the tactical logistics group controlling the movement, whether they have reached the objective or are still in assembly and loading areas. It must provide communication between the artillery commander and subordinate elements; to direct support artillery; and to forward observers and liaison officers with the infantry, whether in movement or in the objective area. Radio channels assigned must be utilized to establish communication on the simplest and most flexible net possible. A detailed radio plan to include all frequencies of artillery units is usually included as a tab to the artillery appendix to the fire support plan annex. During the planning phase, communication equipment that will be needed by other supporting units to

communicate with the artillery must be determined and requested from the supply source; these units are included in the artillery communication plan.

(2) Wire. Complete wire communication may not be able to be established; however, that which is possible is established at the earliest practicable moment. Wire communication plans are detailed and include the proposed line route maps of all lower echelons. Decentralization of wire laying is planned. Wire teams are briefed with maps and aerial photographs on aerial and ground routes for laying of wire nets.

h. Ammunition supply. The artillery commander of each echelon must have a detailed ammunition plan. This plan should provide for the rapid unloading of ammunition and its delivery to aerial rocket, cannon and missile artillery units in firing positions and laager areas without confusion as to type, size, type of fuze, warheads, propellants or powder lot number. In addition, each plan provides for delivery of ammunition to firing units or forward ammunition points with minimum rehandling enroute. Often, when it can be done with stealth inside enemy territory before hand, plans will call for stockage of forward, hidden ammunition caches to be used

by batteries displacing forward hours or days later in accordance with predetermined axes of advance. It must be determined whether palletizing all or a portion of the artillery ammunition will accelerate or delay its delivery. Consideration should be given to the amount of aerial prime mover space available for initial lift of ammunition into positions. Coordination of ammunition unloading with aircraft crews is necessary to insure that aerial prime movers are not detained or diverted to other use. To insure ability to maintain sustained fire support, regardless of the effect weather or other deterrent may have on aerial resupply, ammunition loads accompanying artillery units may often be greater than the normal basic load.

i. Time of landing. The time of landing of the artillery depends on such variables as availability of position areas, need for artillery at the objective over and above aerial rocket means, saturation of aerial approach and retirement corridors, and the ability of pathfinders or advance parties to effect the landing. Direct support artillery lands with the supported units. Artillery plans usually state that general support units will land on order of the division commander. The division artillery commander will make a

continuous study of the situation in the objective area in order to recommend the landing of elements at the most propitious time. His study is based on all available information that is received from the division command operations center and particularly on the reports of forward observers and liaison officers in the objective area. Reconnaissance parties recommend to the division artillery commander the proper times for loading and movement forward of the remaining artillery elements.

j. Reconnaissance. During planning, a continuous reconnaissance is made by utilizing all available maps and photographs of the objective area. If practicable, an aerial reconnaissance is made of the objective area and the terrain immediately surrounding by artillery officers to select the best landing areas, laager areas, position areas, approach and retirement routes and observation facilities. The plan for the ground reconnaissance includes the size of the party and its composition. Appreciably larger parties than are used in normal land warfare are often employed to facilitate the selection and preparation of position areas to enable immediate entry into action of units on landing. Sufficient guides and communication, survey, fire direction, local security

and pioneer personnel are included to insure thorough reconnaissance and rapid preparation and occupation of positions. During planning, arrangements should be made with the aerial cavalry squadron for that unit to reconnoiter for artillery position areas and aerial rocket laager areas.

k. Movement to the objective. Planning the movement to the objective area consists of determining the best procedure for landing the artillery elements. The best procedure will be determined after consideration of the factors listed in "a" through "j" above. This will ^{mean} ~~be~~ provision of airplanes or helicopters, depending on landing areas available, in sufficient quantity at the proper place and time. The division operation order must provide an aircraft assignment table which schedules these aerial prime movers.

1. Artillery support of the initial assault. When possible, artillery is employed to support the air assault. Considerable advantage accrues to the infantry when the artillery is set up to give normal and continuous fire support throughout the initial assault. Artillery can bring concentrations in close to the infantry, place accurate destruction fire on targets susceptible to destruction, and fire with accuracy at night and during periods of low visibility. Such

support is possible in vertical envelopments and on large land masses when the geographical and tactical situation is favorable to prepositioning artillery units. The artillery units may be emplaced on "islands" adjacent to the assault objectives from which fire can be placed on the proposed landing areas. The plan must provide detailed schedules for supporting, preparatory and on-call fires. The primary concern is that the main landing area be within effective range so that the artillery can support the assault objective and the continuation of the attack.

5. Rehearsal. Because of the many details involved, it is essential that the plans for a large size air assault operation be tested by rehearsal to insure that all units are familiar with the loading and movement schedules, procedures and techniques. The rehearsal should simulate as closely as possible the conditions to be expected in the objective area, to include firing of live ammunition by the units participating. Coordination of fires with air assault is essential to success.

6. A typical Battalion assault

a. In an air assault operation the force commander selects flight corridors for the approach to the objective

area taking into consideration the enemy, navigation aids and the time available. Control points are selected enroute for the proper coordination of assault infantry in helicopters with the fire support means available for the operation.

b. At the proper time, infantry rendezvous with the squad carriers in the battalion base. While they are loading, the division's aerial cavalry squadron with its organic fire and reconnaissance elements screens the battalion's area of influence. A direct support artillery battery is prepositioned near the objective in order to ready themselves for preparation or on call fires. Continuous intelligence reports to the battalion CO from surveillance and reconnaissance elements indicate readiness of the objective for assault.

c. As the formation proceeds along the flight corridor, it flies at the nap of the earth; for example, in "V of Vs" formation. This formation subjects the squad carriers for the shortest possible time to ground fire from any one point along the corridor.

d. Active defense of the formation is provided by the aerial attack and surveillance battalion. Helicopters of the assault helicopter battalion provide additional protection for the squad carriers during the movement to the objective, during the actual landing, during the disembarkment of

of troops and during departure.

e. Artillery aerial rocket helicopters join the formation at a predesignated point along the corridor. These ships assume a position of readiness to participate in the delivery of preparatory fires or to furnish on-call fires as required.

f. The force commander, from a flying operations center, controls the action to the extent required on a common communications channel in order to keep all facets of the operation perfectly in time. Prepositioned artillery starts the preparation on a timed and monitored schedule.

g. At the release point (RP), the formation slows to 70 knots, prepositioned ground artillery lift their fires and signal all clear with a last few rounds of colored smoke and stand by for on call missions or observed fire. Mohawks speed ahead to hit the objective and then orbit the area or return to strip alert in the division area. As soon as the Mohawks clear the area the aerial rocket ships move ahead to continue and complete the preparation.

h. The aerial rocket ships climb to a suitable altitude and provide a visible fire coordination line around the objective by circling counter-clockwise at a radius specified by the infantry commander. If desired, the aerial rocket

ships may orbit in another area or laager in a preselected area.

i. The infantry company commander directs the artillery forward observer to neutralize a target. Knowing the fire support available and the time to accomplish the mission, the FO may select aerial rocket fires. Using an FM radio he contacts the flight leader of the orbiting aerial rocket helicopters and gives him the fire mission. The artillery liaison officer at the infantry battalion CP acknowledges the transmission. His further silence indicates approval. If the aerial rocket ships are in a laager area, the liaison officer relays the fire mission. The flight leader determines the aircraft nearest the target and directs the leader of that group to take the mission. Results are reported to the artillery liaison officer.

j. The FO contacts his liaison officer at infantry battalion headquarters and requests MOHAWK fires. If the request is considered valid, and in the case of MOHAWKS supporting the force as a whole, the request is passed through fire support coordination channels to the Aviation Group who then directs the mission; or, in the case when MOHAWKS are in orbit in support of the particular operation, the FO is directed

to contact the aircraft commander directly. In either case, the MOHAWK pilot contacts the FO who guides him to the target by radio.

k. The FO (coordinating with the Forward Air Controller (FAC) in his area) determines that close air support is required and sends the fire mission to the artillery liaison officer at the infantry battalion headquarters. The LNO coordinates with the battalion commander who gives approval for the airstrike. The ALO in this headquarters then transmits the request over his radio directly to the DASC (Direct Air Support Center - an Air Force agency near the Corps TOC).