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# FM 17-15

WAR DEPARTMENT FIELD MANUAL

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## COMBAT PRACTICE FIRING

### ARMORED UNITS

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WAR DEPARTMENT • 13 APRIL 1945

WAR DEPARTMENT FIELD MANUAL  
FM 17-15

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**COMBAT PRACTICE FIRING**  
**ARMORED UNITS**



WAR DEPARTMENT—13 APRIL 1945

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WASHINGTON: 13 APRIL 1945

WAR DEPARTMENT

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FM 17-15, Combat Practice Firing, Armored Units, is published for the information and guidance of all concerned.

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## WAR DEPARTMENT FIELD MANUAL

**COMBAT PRACTICE FIRING  
ARMORED UNITS\*****Chapter I****GENERAL**

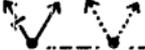
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**Section I****GENERAL**

**1. PURPOSE.** The purpose of this manual is to outline a general guide for combat practice firing problems for armored units. The typical problems in this manual progress logically from basic ones, involving small units such as tank crews, rifle squads, and gun crews, to the more complex problems involving combined units and arms. These problems are flexible and are to be modified to meet local training conditions and ranges. If the problems given cannot be modified to fit local conditions, similar problems should be originated and used by the training unit. The following points are to be emphasized in all combat firing problems, and will be brought out in all modified or new problems:

\*For definition of military terms not defined in this manual see TM 20-205; for list of training publications, see FM 21-6; for films, film strips, and film bulletins, see FM 21-7; and for training aids, see FM 21-8.

**LEGEND—**

-  TANK (PRESENT POSITION—FUTURE POSITION)
-  TANK (WITH FLAMETHROWER)
-  TANK, ENEMY (PRESENT POSITION—FUTURE POSITION)
-  TARGET TOWING VEHICLE
-  HALF-TRACK (STATIONARY)
-  ¼-TON, C&R
-  PLATOON LEADER
-  RIFLEMAN
-  LMG (PRIMARY POSITION—ALTERNATE POSITION)
-  SP GUN
-  AT GUN
-  FIRING POINT AND SAFETY LIMIT
-  SAFETY PANEL
-  INFANTRY TARGET (SILHOUETTE)
-  PANEL TARGET
-  TOWED TARGET (TANK)
-  TOWED TARGET (ARMORED CAR)
-  ANCHOR AND PULLEY

*Figure 1. Legend.*

a. Coordination and teamwork among all members of a tactical unit.

b. Coordination among tactical units, such as squads of a rifle platoon and sections of a tank platoon.

c. The conservation of ammunition by firing only at profitable targets, within effective range, with the appropriate weapon and ammunition.

d. The training of leaders in range estimation, in the distribution and control of the fire power of their available weapons, and in target designation methods which are sound, clear, and concise.

**2. SCOPE.** A complete course in combat firing includes all possible tactical situations involving units of the organization. This type of training is limited by time, ammunition, and equipment, by the availability of troops for combined training, and by the imagination of the instructor.

**3. PRIOR TRAINING.** Combat practice firing is the concluding phase in the training of small units. Preceding phases of communications, combat drill, crew drill, marksmanship, and gunnery are preparatory steps to this final phase, and should lead in a definite manner to combat practice firing. Small unit tactical principles must be mastered prior to combat practice firing. This final phase of training should not be attempted prematurely, as its value will be lost if the participating units are not fully prepared.

a. **Tank units.** (1) Tank crews must be drilled in teamwork prior to combat firing training. The tank commander must be able to control his tank and crew members at all times. Preliminary training for combat firing problems should include practice runs of simulated combat conditions, to develop teamwork between the gun-

ner and loader in the various phases of firing. The driver must be trained in notifying the gun crew when he is about to cross obstacles and rough terrain or turn sharply. He should be competent to maneuver the tank into the most favorable position for the gun crew to fire, and to hold the tank on a straight, even course when firing is done on the move. (For details on tank gunnery, see FM 17-12.)

(2) Tank crews must have mastered battle formations as a drill and their application to combat situations. (See FM 17-32.)

b. **Infantry units.** Each individual in infantry units should be well drilled in individual combat practices, such as terrain appreciation, the use of cover and concealment, and the handling and employment of his individual weapon. The mortar, antitank, and machine-gun units should be trained in the reconnaissance, selection, and occupation of gun positions. Small unit leaders must know how to fulfill transportation and ammunition needs, how to select targets, how to move from principal to secondary positions, how to switch fire from primary to secondary targets, and how to open fire quickly. (For details on infantry gunnery see the appropriate field manuals.)

c. **Supporting units.** Preliminary training in gunnery, marksmanship, and tactical principles must have been completed for the assault gun, mortar, and antitank gun platoons. Preliminary training should stress speed and accuracy in going into and out of action, and the selection and occupation of gun positions. Observation and adjustment of fire must be rapid and accurate, with clear, direct fire orders, and rapid, positive fire control.

d. **Reconnaissance units.** Preliminary training for reconnaissance platoons should stress the mission of re-

connaissance units. It is important that each individual realizes that reconnaissance units engage in combat only when necessary. All must recognize, however, that they will be forced to fight at times. Problems should be such that they will be forced to engage the enemy in combat under conditions applicable to reconnaissance units.

**e. Infantry-tank training.** (1) Preliminary training for combined infantry-tank units must emphasize coordination and intercommunication. It is necessary that the doctrine, capabilities, limitations, organization, and equipment of each arm be understood by all. (Infantry-tank coordination is covered in FM 17-36, Employment of Tanks with Infantry.)

(2) The study and practice of communication procedures and techniques is to be emphasized, as it is of particular importance in infantry-tank cooperation.

**4. CONDUCT OF TRAINING.** **a. Instruction.** The value of instructions depends in part upon the ability of the instructor to maintain the interest of the participants. Interest is held by variety, visual evidence of the effect of firing, and the ingenuity of the instructor. Instruction is progressive, beginning with the smallest combat units, the tank section, gun crew, or rifle squad. Sub-caliber firing for the mortar, the antitank gun, and the tank cannon is completed before problems are fired with service ammunition, to obtain the maximum instructional value from the service ammunition.

**b. Methods of instruction.** The methods of instruction for combat firing problems are:

(1) *Demonstrations.* Demonstrations are of the most value in the primary stages of instruction in combat firing. Trained and rehearsed troops, demonstrating the solutions of tactical problems, are used initially to

show the proper actions of troops and the effectiveness of properly controlled fire power in combat firing. The application of combat principles and fire control and technique are stressed in these demonstrations.

(2) *Fire problems.* After units have witnessed demonstrations in combat firing problems, they are required to participate in similar problems. The problems should be designed to have the unit leaders make an estimate of the situation, issue orders, and supervise the executions of the initial and subsequent orders. (See FM 101-5, The Staff and Combat Orders.) The state of training of the unit is indicated by the teamwork and fire discipline shown in the execution of the problem. Problems are designed to encourage, as far as practicable, the initiative of each individual. Where the same problem is given to several units, those completing the problem are permitted to observe the solution of the units following, unless such practice would interfere with the problem. The scored results of problems are discussed at the critique.

(3) *Competitions.* Competitions between units which have completed basic combat firing problems maintain interest in training. Two or more officer instructors are used to judge the units; and scores, based on the effectiveness of fire and the execution of solutions, are announced promptly, before interest in the problem has dwindled.

c. For details on instruction and planning of the problems and classes see FM 21-5, Military Training; TM 21-250, Army Instruction; and TF 7-295.

**5. PREPARATION.** a. Combat firing problems should be prepared with careful consideration of all factors involved. A decision must first be made as to the phases of combat firing that are to be covered and the funda-

mental points of these phases outlined. (A list of some suggested phases of combat firing to be considered in formulating combat firing problems is given in Appendix I.) Combat firing problems are then designed to fit the terrain under tactical conditions without assuming or disregarding ground features. The positions, strength, and probable action of the enemy is planned to bring out the action desired. Targets representing enemy weapons will be located with due regard to cover, concealment, and tactical doctrine of a specific enemy. The missions of the unit and of the next higher unit should be clear and logical for the situation. Adjacent troops, if assumed present, are considered and located by flags or terrain features. In working up the problem, care must be taken to insure that points to be stressed will be shown clearly to both participants and observers. Suitable material should be available to represent the various targets in a realistic manner.

b. A combat firing problem is prepared in two parts: one the information for the participating unit, and the other the instructions for the umpire and his assistants.

(1) *Information for the participating unit.*—

- (a) Units to fire.
- (b) Schedule of participation.
- (c) Uniform and equipment.
- (d) Situation.
- (e) Requirement.
- (f) Restrictions.

(2) *Instructions for the umpire.*—(See FM 105-5.)

- (a) Object.
- (b) Preparation of the range.
- (c) Special situation.
- (d) Points for criticism.
- (e) Remarks.

c. For writing up combat practice firing problems see the form given in Appendix II.

**6. CONTROL.** The problems are controlled by the umpire. He supervises preliminary work, conducts the exercise, observes the performance of units participating, conducts the critique, and records the results. The number of assistants, both officer and enlisted personnel, varies with each problem.

**7. PRESENTATION.** a. When all preliminary arrangements have been completed, the leader of the participating unit is oriented on the ground, the situation explained, and the requirement made known. An effort is made to picture the situation as if it were real instead of assumed. The situation must be given in enough detail, particularly in regard to the friendly troops and the assumed past action of the participating unit, to permit members of the unit to imagine themselves as being in a real situation. Unless imagination is fostered, troops will not apply tactical principles properly and the maximum benefits of the training will not accrue.

b. After receiving the situation and requirement the leader presents the situation to his unit, issues his order, and proceeds with his solution. In the earlier stages of training, the value of the instruction may be increased by suspending the exercise and commenting on errors at the time they are made. However, in later stages, particularly in tests and competitions, the exercise should be permitted to continue regardless of errors. As a general rule the umpires interfere as little as possible, the leader of participating troops being allowed to solve the problem in his own way and being required to abide by his own and his subordinates' uncorrected mistakes.

**8. CHECK LIST.** The umpire and his assistants for a problem are supplied with check lists and score sheets covering the various points that the problem is designed to bring out. The check lists are used to grade the performing unit. The form given in Appendix III may be used as a guide in preparing such a list.

**9. CRITIQUE.** a. An intelligent, tactful, and constructive discussion, or critique, is held at the end of the problem. The umpire conducts this critique after receiving the reports of his assistants. He discusses the solution offered and compares it with other possible solutions. It is best given on the ground immediately after the conclusion of the exercise.

b. In his critique the officer in charge commends good performances and calls attention to poor or incorrect performances. Where errors have been committed, a correct solution should be offered in such a manner that the whole unit benefits by the criticism. In making corrections the umpire avoids ridicule, sarcasm, or any remarks which might be harmful to initiative. The illustration of principles and intelligent criticism depends solely on the ingenuity and alertness of the umpire.

c. The critique should indicate whether in the opinion of the umpire the mission would have been accomplished; however, the critique should not convey the impression that there is only one correct method of solving the problem. The umpire should emphasize that frequently the success or failure of a plan depends more on the technique of its execution than on the distinctive features of the plan itself.

## Section II

### RANGES AND SUPPLIES

**10. GENERAL.** The conduct of combat firing training requires a large amount of supplies, including ammunition and equipment, and varied terrain to suit the numerous problems. Careful and precise prior planning is essential to provide continuity without interruption in the training schedule. Necessary supplies and ranges should be requested far enough in advance to insure that all necessary preliminary work is completed prior to the problem.

**11. RANGES. a.** The availability of ranges largely determines the selection of terrain for the problems. Ground suitable for the employment of armored units, and large enough to accommodate the problem, should be selected. The situation and range organization is based on the terrain available. The employment of faulty tactics or unnatural assumptions to force the problem to fit the terrain will be avoided.

**b.** Where possible, problems are conducted over terrain unfamiliar to the troops. Fixed terrain or an unchanged tactical situation soon become routine, uninteresting, and uninstructional to the participating troops. If possible, units should be given problems involving the same number and type of both friendly and enemy troops, with similar situations but on different terrain, making it necessary for the unit and subordinate commanders and leaders to completely revise their original solutions. (For details on terrain appreciation see FM 101-5, The Staff and Combat Orders, and FM 100-5, Operations.)

**12. TARGETS.** Both ordnance targets and those made locally are used in the problems. At times natural terrain features, such as bushes and second growth trees along stream lines, make good targets.

a. Interesting and realistic problems can be set up and valuable training obtained by using tanks as targets for subcaliber fire in tank-versus-tank problems. Target tanks will be stripped of vulnerable accessories, such as lights, siren, and guns. Firing may be done with the subcaliber device in the tank cannon, or with the coaxial machine gun firing single shot. Ammunition for such firing must be all tracer. Radio control of the target tanks is necessary, and alternate means of communication by flags or other means will be provided for use in case of failure or damage of radio equipment.

b. Enemy riflemen, gun crews, bazooka teams, and other personnel are represented by the standard E and F silhouette targets. Machine guns, tanks, antitank guns, and emplacements can be represented by wooden models. Close-in antitank means will be represented in the problems whenever possible. Wooden frames covered with olive drab or other dark paper are placed behind all targets for the purpose of scoring. In problems involving only small arms ammunition, surprise targets may be operated from pits or other shelters on the flanks of the course. Electrically fired explosives and simulated ammunition should be used to represent the firing of enemy weapons, adding realism to the problem.

c. The targets are located with due regard to cover and the all-around defense that would likely be used by an intelligent enemy. The tactical doctrines of enemy armies are considered in setting up the enemy situation.

d. For details on the construction of targets see TM 9-855 and the appropriate field manuals pertaining to the weapons to be used in the problem.

**13. SAFETY.** a. All range safety regulations as prescribed by AR 750-10 are adhered to.

b. A critical analysis of the available terrain should be made with the local range officer in regard to the limitations imposed by safety regulations. A careful study of the range and the basic safety requirements will frequently reveal additional firing points and permissible directions of fire.

## Chapter 2

### TANK UNITS

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#### Section I

#### TANK CREW AND SECTION

**14. TANK SECTION IN ATTACK.** An illustrative problem.—The following combat firing problem for a tank section can be adapted for an individual tank.

**a. Purpose.** This problem illustrates the actions of a tank section advancing as part of a tank platoon. Decisions and orders of the section leader are emphasized.

**b. Time.** Thirty minutes.

**c. Equipment.** (1) *Range.* Rolling terrain, with a slight amount of cover for antitank gun positions and for routes of advance, should be selected. Minimum size should be 700 yards in width and 1500 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* (a) Two model antitank guns, one model machine gun, one towed tank target.

(b) Explosives and electrical detonation equipment for simulating enemy gun fire.

**d. References.** FM 17-30, Tank Platoon; FM 17-32, Tank Company; FM 17-12, Tank Gunnery.

**e. Situation.** (1) (Figure 2.) First platoon, Company A, an interior platoon within the battalion, is advancing



north from WOODS A. The enemy position is not strongly organized, but areas defended by AT guns may be encountered.

(2) Prior to moving out from WOODS A, movement is observed in the hedgerow at E. The platoon leader reconnoiters by fire, and return fire is received from an enemy AT gun. The platoon leader orders the 1st section to establish a base of fire and the 2d section to move through the woods on the right and flank the AT gun position.

f. Action. (1) The section leader of the 2d section moves his section through WOODS C and D in a column formation. Fire and maneuver within the section is employed when crossing the open space between WOODS C and D. Upon arrival in WOODS D, suitable firing positions on the west edge are taken by the section and the AT gun is destroyed by fire. The section then moves into the hedgerow, takes up supporting positions, and awaits the arrival of the 1st section on its left.

(2) After the arrival of the 1st section the platoon leader orders the 2d section to move to RIDGE F. The section moves out as ordered and is fired upon at POSITION 1 by a machine gun at G.

(3) The section leader orders his second tank to continue to RIDGE F; his own tank halts and destroys the machine gun and crew by fire, then continues forward. Both tanks are fired on again at POSITION 2 by an AT gun at H.

(4) The section leader orders the section to move as rapidly as possible to protective cover on RIDGE F, firing all the while at the AT gun from the moving tanks (with the gyro-stabilizer on). Both tanks arrive safely at RIDGE F, take up covered positions behind the nose of the ridge, and await further orders from the platoon leader.

(5) The fire from the moving tanks combined with the supporting fire of the 1st section destroyed the AT gun and the 1st section moves forward to RIDGE F. The 2d section, which had moved to defilade positions on the crest of the ridge, observes an enemy tank moving west along the road to the front.

(6) The section leader decides to ambush the enemy tank. He alerts the section, orders fire to be withheld, and then allows the enemy tank to reach a position on the road directly to his front before ordering the section to fire. The enemy tank is destroyed.

(7) The 1st section arrives at RIDGE F. The 2d section is ordered to continue to WOODS J.

(8) The section leader orders his section to move rapidly in a line formation across the open area to the woods. Upon arrival at the woods the two tanks proceed in column through the woods and take up concealed positions on the north side.

**g. Critique.** The points to be emphasized in the critique include the methods of movement and the use of cover and concealment by the tanks, the selection of weapons and ammunition used against the various targets, the fire control of the tank commanders, and the decisions and orders of the section leader. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Section II

### TANK PLATOON

**15. TANK PLATOON IN ATTACK.** An illustrative problem.—Problems for the tank platoon in the attack should include situations which require the platoon

leader to control and maneuver the sections of his platoon.

**a. Purpose.** This problem illustrates the actions of a tank platoon employing fire and maneuver while advancing in an attack as part of a company.

**b. Time.** One and one-half hours.

**c. Equipment.** (1) *Range.* The range for this problem should be fairly open rolling terrain suitable for tank action. The minimum size is 1000 yards in width and 2000 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* (a) Two model antitank guns and one moving tank or armored car target.

(b) Explosives and electrical detonation equipment for simulating enemy antitank gun fire.

**d. References.** FM 17-30, Tank Platoon; FM 17-32, Tank Company; FM 17-12, Tank Gunnery.

**e. Situation.** (1) (Figure 3.) Company A of ——— Tank Battalion had been given the mission of attacking HILL 206 from the southwest to assist a concurrent infantry attack from HILL 208. Company A has been held up along line AA by an enemy position at RJ 150. The infantry has reached the stream bed west of HILL 208.

(2) The 1st platoon which has been in support is ordered to make a flanking attack on the right along the base of HILL 208 to assist the infantry advance and to destroy the enemy position at RJ 150.

**f. Action.** (1) Starting from the concealed position (POSITION 1), the platoon leader moves the platoon forward by successive bounds. As the maneuvering element (1st section) moves out from POSITION 2, No. 1 AT gun at RJ 150 opens fire. Tanks take available cover and return fire.

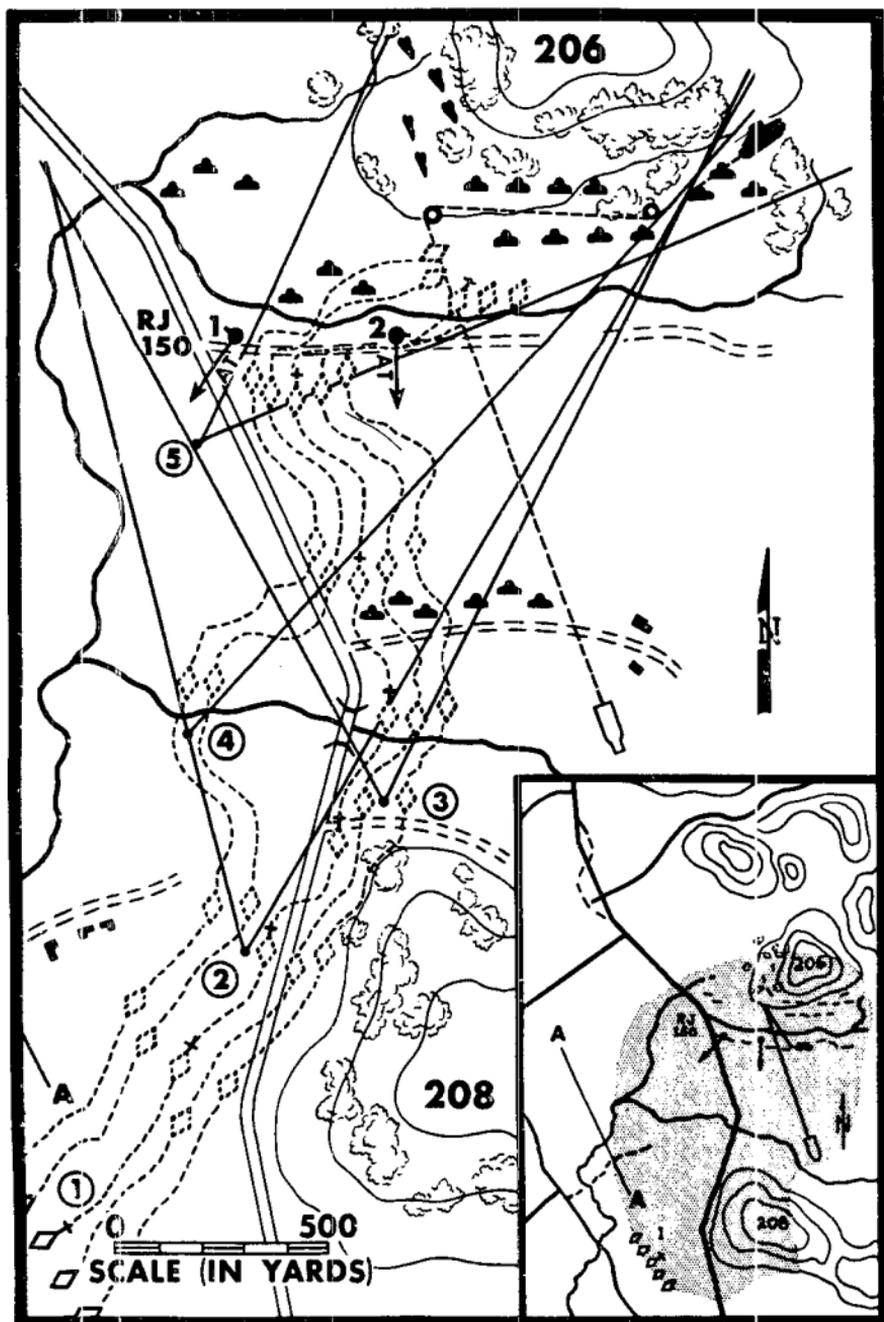


Figure 3. Tank platoon in attack.

(2) By using a concealed route along the base of HILL 208, the 2d section moves to POSITION 3 and neutralizes the AT gun No. 1. AT gun No. 2 now opens fire on the 2d section.

(3) The 1st section moves to the dry creek bed (POSITION A) from where they are able to neutralize AT gun No. 2.

(4) The platoon leader is directed by radio (from the umpire) to help the infantry by firing on enemy infantry along the old road running east across the creek. The infantry points out the targets. The tanks of the 2d section destroy the enemy and the infantry continues its advance.

(5) The tank platoon advances by bounds toward HILL 206 covering the advance of the infantry. Targets on HILL 206 are fired on as they are seen or pointed out by the infantry.

(6) As the tanks approach RJ 150 the infantry company commander (the umpire) reports that an enemy tank is in action on the southeast slope of HILL 206 and requests help. The tank platoon moves toward the reported location and engages the enemy tank, which is destroyed.

(7) The tank platoon covers the infantry occupation of HILL 206 and reorganizes.

g. Critique. The points to be emphasized in the critique include the decisions and orders of the platoon leader, the selection of routes and use of cover and concealment by the tank commanders, the cooperation with the infantry troops, the choice of weapons and ammunition used against the various targets, and the control exercised by the platoon leader during the advance and the reorganization at the objective. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## 16. THE TANK PLATOON AS AN ADVANCE PARTY.

An illustrative problem.

**a. Purpose.** This problem illustrates the actions of the advance party when enemy resistance which it can overcome is met. Decisions and orders of the point and advance party leaders are emphasized.

**b. Time.** Two hours.

**c. Equipment.** (1) *Range.* The range for this problem should have a rolling, partially covered terrain with suitable features for emplacing enemy antitank guns. The minimum size must be 1000 yards in width and 2500 yards from POINT A to POINT H. The safety zone will be as prescribed by AR 750-10 for weapons and ammunition to be used.

(2) *Special equipment.* (a) Two model enemy antitank guns.

(b) Explosives and electrical equipment for detonating same to simulate enemy antitank gun fire.

**d. References.** FM 17-32, The Tank Company; FM 17-30, The Tank Platoon; FM 17-12, Tank Gunnery.

**e. Situation.** (1) (Figure 4.) Task Force X, a mixed force of infantry and tanks, is advancing north along ROAD T. The enemy is in general withdrawal, fighting primarily a delaying action.

(2) The 1st platoon of Company A, —— Tank Battalion, with two squads of infantry and a mine detection team attached, is designated as the advance party and point.

**f. Action.** (1) Lieutenant, tank platoon, organizes his advance party and point with the 1st section of tanks as the point and the rest of the platoon as the advance party. The infantry is mounted on the tanks with a half squad on each tank except the lead tank.

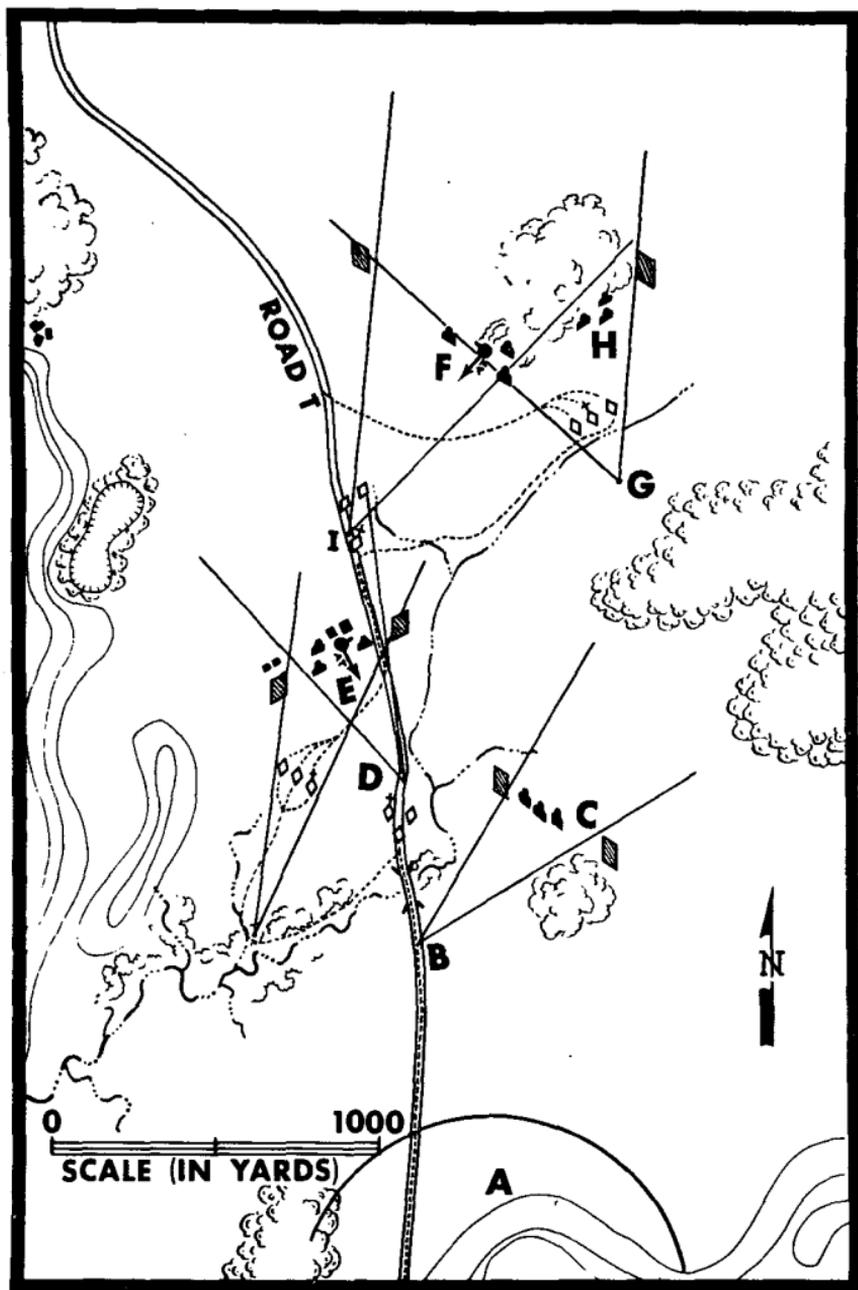


Figure 4. Tank platoon as advance party.

(2) The point advances by bounds along ROAD T. The lead tank halts in a covered position about 50 yards short of the bridge at POINT B. The infantry half squad and the mine detection team is sent forward to reconnoiter the bridge. While checking the structure and the roadway for mines they are fired on by enemy infantry to the northeast.

(3) The infantrymen locate the position of the enemy and notify the tank section leader. The enemy are fired on by the point tanks and are eliminated.

(4) The advance is continued to D where the point is fired on by an AT gun at E. The point tanks and infantry take cover, observe, and fire upon the enemy gun as soon as it is located. The advance party commander comes up and decides to lead the 2d section with the infantry to a position on the right flank of the enemy gun. The point tanks furnish a base of fire and the infantry-tank attack is successful in destroying the gun.

(5) The movement north on ROAD T is continued and the point is again fired on by an AT gun at F. The advance party commander orders an attack on the left flank of the enemy position in the same manner as before. When the 2d section is advancing from G toward the enemy position it is fired on by enemy personnel at H with an antitank grenade launcher. The advance party commander orders an infantry squad with one tank to attack this position.

(6) The enemy personnel are destroyed and the point and advance party continue their mission until halted by the umpire.

g. Critique. The chief points to be emphasized in this problem should be brought out in the orientation of the platoon leader by the umpire, and covered in the critique following the problem. These points include choice of weapons and ammunition used to destroy the enemy tar-

gets, speed and correctness of orders resulting from decisions of the point and advance party commanders, the coordination of the infantry and tank actions and movements, tactical control by these leaders and tank commanders, movement of the tanks from one position to another, proper use of cover, fire control, and accuracy of fire. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## **17. TANK PLATOON AS A COVERING DETACHMENT.** An illustrative problem.

**a. Purpose.** This problem illustrates the action of a tank platoon acting as a covering detachment for the advance of a tank battalion. The actions, decisions, and orders of the platoon leader in controlling his platoon are emphasized.

**b. Time.** Two hours.

**c. Equipment.** (1) *Range.* The range for this problem should have rolling, lightly covered terrain. The minimum size is 1000 yards in width and 2000 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

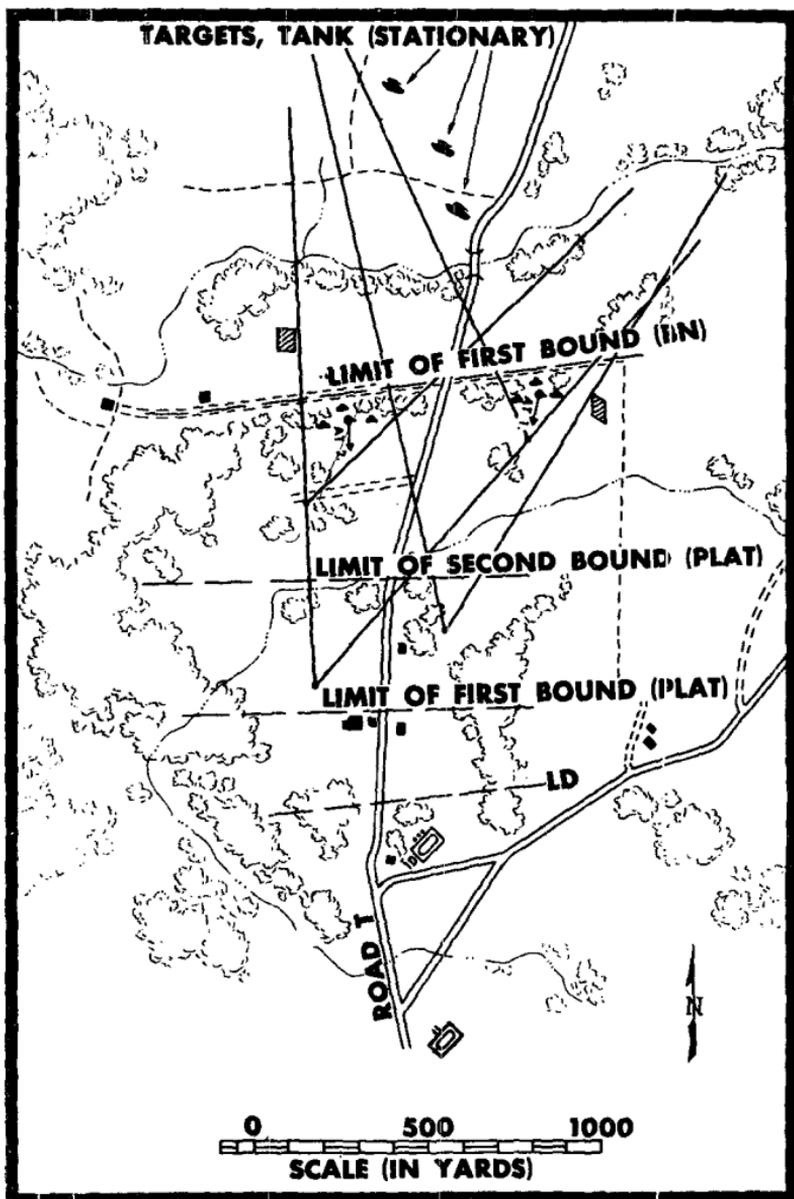
(2) *Special equipment.* (a) Two model antitank guns and three tank targets.

(b) Explosives and electrical detonation equipment for simulating enemy antitank gun fire.

**d. References.** FM 17-30, Tank Platoon; FM 17-32, Tank Company; FM 17-33, The Tank Battalion; FM 17-12, Tank Gunnery.

**e. Situation.** (1) (Figure 5.) First platoon, Company D, ——— Tank Battalion is the covering detachment for the battalion in its advance against scattered enemy resistance to the north.

(2) The direction of advance is N along ROAD T



*Figure 5. Tank platoon as a covering detachment.*

and the platoon is covering a front of 700 yards. Limits of bounds are as indicated on sketch.

**f. Action.** (1) From the line of departure the platoon leader moves the platoon forward in line formation, halting momentarily at the limit of each bound.

(2) From the second intermediate bound the platoon fires caliber .30 weapons at infantry to its front and also reconnoiters by fire the hedgerow at the limit of the battalion first bound.

(3) As the platoon moves out from the second intermediate bound, two antitank guns in the hedgerow beyond open fire. The tank platoon, using fire and maneuver, destroys the AT guns one at a time and then moves on to the battalion first bound.

(4) From this position, three enemy tanks are observed in position to the N. The covering detachment engages the enemy tanks with fire and the platoon leader reports the situation to the battalion commander who orders the leading company to pass through the covering detachment and take up the attack.

**g. Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the platoon leader by the umpire, and covered in the critique following the problem. These points include the decisions and orders of the platoon leader covering the formations and control of his platoon, the use of cover and concealment of the tanks in their movements, the choice of weapons and ammunition used against the various targets, and the gunnery technique of the tank gunners. The officer conducting the critique indicates whether the unit would have accomplished its mission.

**18. TANK PLATOON IN A WITHDRAWAL.** An illustrative problem.

**a. Purpose.** This problem illustrates the action of a tank platoon withdrawing in the face of superior enemy forces. The tank platoon will fire only subcaliber fire against the target tanks, which will be stripped of all external accessories. The enemy tanks will not fire during the problem. Their actions will consist of maneuver only.

**b. Time.** One hour.

**c. Equipment.** (1) *Range.* The range for this problem should be open rolling terrain with terrain features suitable for successive delaying positions. The minimum area is 1000 yards in width and 1800 yards in depth. The safety zone will be prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* Ten target tanks which have been stripped of exterior accessories vulnerable to caliber .30 fire.

**d. References.** FM 17-30, Tank Platoon; FM 17-32, Tank Company; FM 17-12, Tank Gunnery.

**e. Situation.** (Figure 6.) Company A, —— Tank Battalion has been ordered to withdraw from positions in the vicinity of RIDGE X and RIDGE A to conform to a withdrawal of higher units. The 1st platoon of Company A has been ordered to cover the withdrawal from a position on RIDGE A of the rest of the company to position in rear of RIDGE Z. Company A has reached RIDGE Z.

**f. Action.** (1) Two platoons of enemy tanks are observed emerging from the woods at the west end of RIDGE X into the open field north of the railroad. The platoon leader, friendly platoon, notifies his company commander, who has reached RIDGE Z, of this fact, and that he will delay the enemy tanks while falling back to join the company.

(2) When the enemy tanks are within effective range,

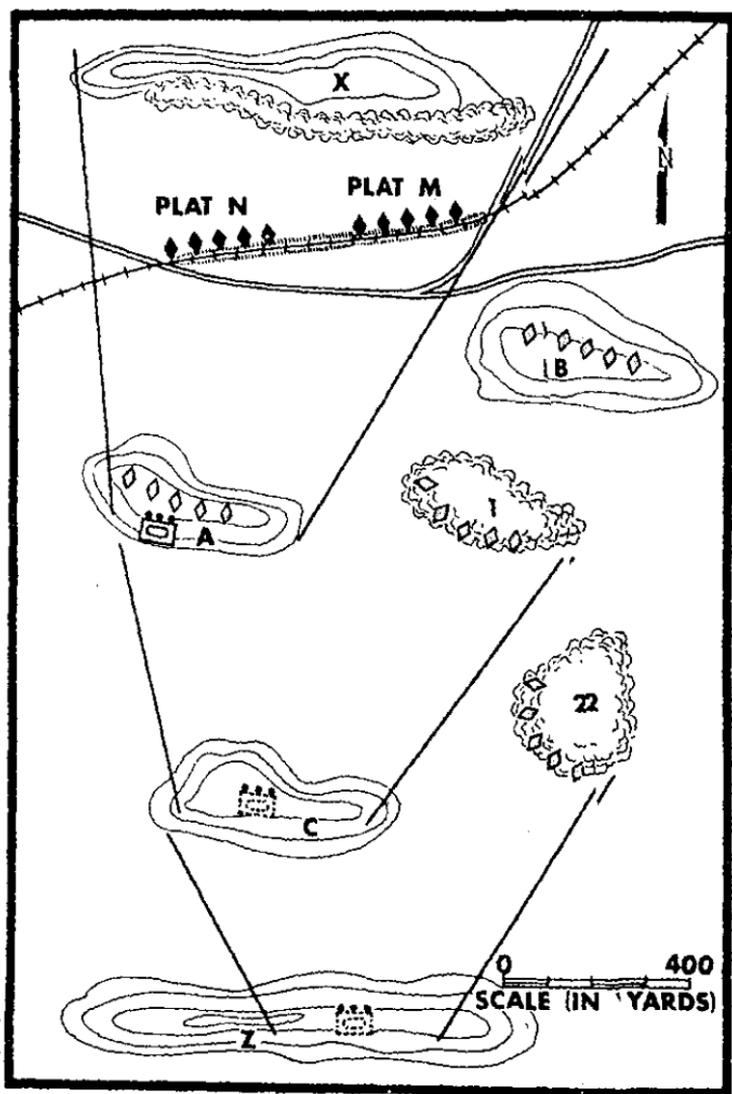


Figure 6. Tank platoon in a withdrawal.

the friendly platoon opens fire from positions on RIDGE A. Both enemy platoons take up defilade positions on the north side of the railroad bed. Enemy platoon M begins moving towards RIDGE B while supported by fire from enemy platoon N.

(3) The platoon leader, friendly platoon, realizing that an enemy envelopment of his right flank is imminent, orders the 2d section to withdraw to firing positions on RIDGE C.

(4) As soon as the 2d section is in firing position on RIDGE C the platoon leader, friendly platoon, withdraws the 1st section to RIDGE C and takes positions near the 2d section.

(5) Enemy platoon N moves from its positions along the railroad track to RIDGE A under the supporting fire of enemy platoon M on RIDGE B.

(6) As soon as enemy platoon N takes up positions on RIDGE A, enemy platoon M moves to new positions along the south edge of WOODS 1.

(7) The platoon leader, friendly platoon, orders his 2d section to join the company on RIDGE Z. The 2d section withdraws and takes up positions on RIDGE Z.

(8) Enemy platoon M moves from WOODS 1 to WOODS 2 in continuance of its plan to flank the friendly platoon.

(9) Platoon leader, friendly platoon, withdraws to RIDGE Z with the 1st section. He takes up positions near the 2d section and reports to the company commander for further orders.

**g. Critique.** The main points to be emphasized in the critique of this problem include the decisions, actions, and orders of the platoon leader in controlling the action of his platoon in the withdrawal and the use of cover and concealment and fire and maneuver by the section

leaders and tank commanders in the movements of the tanks. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## 19. TANK PLATOON IN INDIRECT FIRE SUPPORT.

An illustrative problem.

a. **Purpose.** This problem illustrates the actions of a tank platoon employed to support attacking units by indirect fire. The actions of the platoon leader in getting his platoon into position and opening fire are emphasized.

b. **Time.** Two hours.

c. **Equipment.** (1) *Range.* An artillery range with rolling terrain, a suitable firing position, and observation point. The minimum area is 2000 yards in width and 5000 yards in length from the firing point. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* None.

d. **References.** FM 17-32, The Tank Company; FM 17-30, The Tank Platoon; FM 17-12, Tank Gunnery.

e. **Situation.** (Figure 7.) Company B, ---- Infantry with 1st and 2d platoons Company C, ---- Tank Battalion attached, has been attacking, as part of a larger force, since early morning generally parallel to HIGHWAY 1. The attack has been held up along the stream line from A to C by heavy machine gun fire, and mortar and antitank fire from the vicinity of the buildings at D. The platoon leaders are assembled at HILL A and captain, infantry company, issues his orders for the continuation of the attack. An excerpt of the order is as follows: "The enemy is strongly entrenched and dug in at the farm buildings at D, and has strong fire support from the CROSSROADS at E. This company will attack, overcome the strong point, and secure the

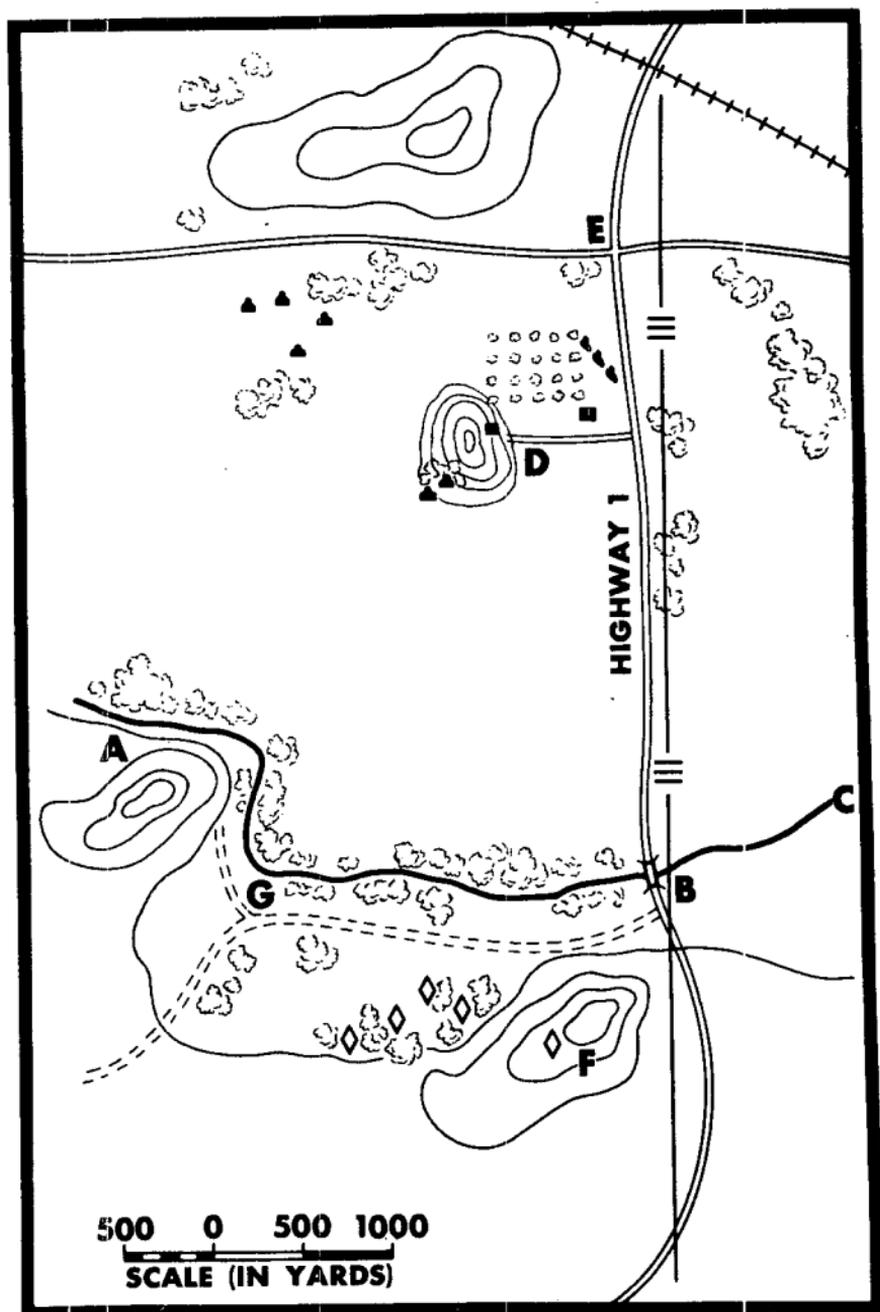


Figure 7. Tank platoon in indirect fire support.

railroad embankment 1000 yards beyond CROSSROADS E. The 2d platoon of tanks will initially support the attack by indirect fire from positions in rear of the creek line. The left building at D will be the base point."

**f. Action.** (1) The platoon leader of the 2d tank platoon radios the platoon sergeant to bring the platoon forward to the rear of HILL F. He selects positions for the tanks and when they come up directs them into position and issues his order. He posts his tank on the flank of HILL F where he can get observation and use the tank radio for communication. He lays the platoon parallel and adjusts fire on the base point.

(2) The platoon leader fires the platoon at each of the farm buildings at D.

(3) The infantry company commander requests fire on a machine gun position in the vicinity of a clump of bushes 200 yards left and 200 yards short of the base point. The platoon fires at this target.

(4) The platoon leader of the 1st tank platoon reports antitank fire from an unlocated gun in the wood patch 1000 yards left of the base point and requests fire. The platoon is fired at this target.

(5) The platoon leader sees a group of enemy at the right edge of the orchard beyond D and fires the platoon at them.

(6) The infantry company with the 1st tank platoon reaches the farm buildings at D, and the 2d tank platoon is ordered to come forward to give close support in the attack on the CROSSROADS E.

**g. Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the platoon leader by the umpire, and covered in the critique following the problem. These points include choice of firing position, speed and technique of laying the platoon parallel and opening fire, technique of ad-

justing fire, fire orders, and gunnery practice of the tank crewman. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## **20. TANK PLATOON IN NIGHT FIRING.** An illustrative problem.

a. **Purpose.** This problem brings out the actions of a tank platoon employing direct fire at night in support of a limited objective attack. The actions of the platoon leader in getting his platoon into position and controlling the fire are emphasized.

b. **Time.** Two hours during daylight and two hours during darkness.

c. **Equipment.** (1) *Range.* A rolling piece of terrain. The minimum size must be 500 yards wide and 2000 yards in length from HILL A to the targets. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* Two wooden frames, simulating pillboxes.

d. **References.** FM 17-32, The Tank Company; FM 17-30, The Tank Platoon; FM 17-12, Tank Gunnery.

e. **Situation.** (1) (Figure 8.) In a semi-stabilized position enemy pillboxes numbers 1 and 2 form a salient into our lines. Fire of automatic weapons from these pillboxes has prevented organization of the open ground to the south. Previous attacks with artillery support have been unable to reduce these enemy positions.

(2) Plans have been made to make a night attack against this position supported by artillery and tank fire. The 1st platoon, Company B, --- Tank Battalion, attached to an infantry battalion, has been ordered to support the infantry attack by direct fire to destroy the pillboxes.

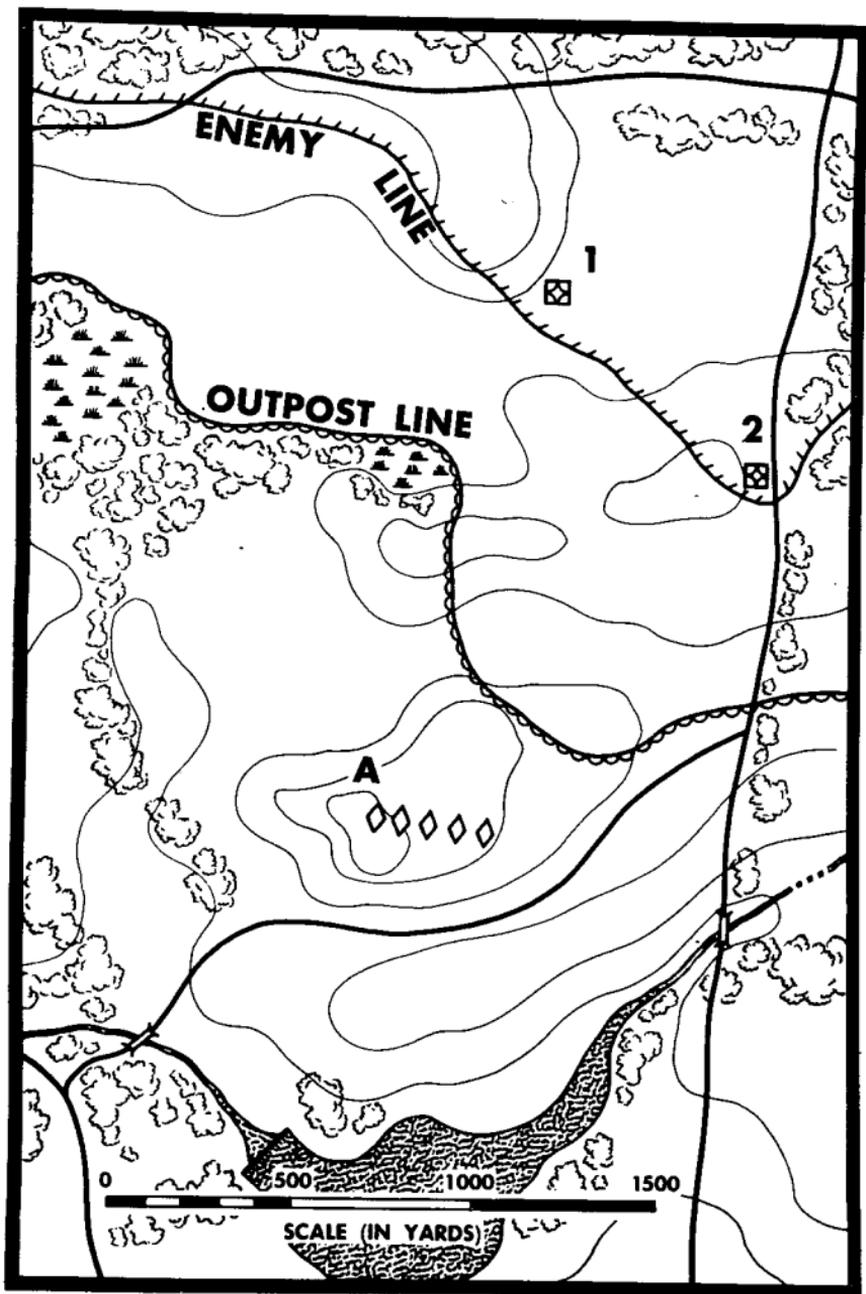


Figure 8. Tank platoon in direct fire support at night.

**f. Action.** (1) The platoon leader of the tank platoon reports to the infantry commander and discusses the details of the infantry plan of attack and arranges coordination of the tank supporting fire.

(2) The tank platoon leader goes during daylight to HILL A with his aiming circle to reconnoiter the platoon firing position and the route thereto. Positions are selected and staked out for the individual tanks and firing data calculated according to the procedure described in FM 17-12.

(3) After dark, at the time arranged with the infantry commander, the tanks are brought forward to the selected positions. Firing is conducted on the pill-boxes according to the procedure described in the above references.

(4) The tank fire is successful in neutralizing the pill-boxes and the infantry attack reduces the enemy position. The tanks return to their assembly area prior to daylight.

**g. Critique.** In this problem the chief points to be critiqued following the problem are the selection of the position by the platoon leader, the decisions, actions, and orders of the platoon leader, and the technique of gunnery and fire control exhibited by the tank gunners and tank commanders. The officer conducting the critique indicates whether the unit would have accomplished its mission.

### Section III

## TANK COMPANY

**21. TANK COMPANY ATTACK.** An illustrative problem.—Where the terrain is available, and the range is

large enough for employment of all units, combat firing problems for a tank company should be conducted.

**a. Purpose.** This problem illustrates the actions of a tank company with an attached infantry platoon in a rapidly executed attack against enemy rear guard elements. The coordination of the actions of the platoons is emphasized.

**b. Time.** Three hours.

**c. Equipment.** (1) *Range.* The range for this problem should be rolling, fairly open terrain suitable for tank action. The minimum size is 2000 yards in width and 3000 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* (a) Two model antitank guns.

(b) Explosives and electrical equipment for detonation to simulate the fire of enemy guns.

**d. References.** FM 17-32, Tank Company; FM 17-33, The Tank Battalion; FM 17-12, Tank Gunnery.

**e. Situation.** (1) (Figure 9.) Company A, --- Tank Battalion with one platoon of armored infantry attached is the leading company of a task force which is moving northeast on HIGHWAY 10.

(2) The enemy has been withdrawing rapidly and for the past few days the fighting has consisted of sharp clashes with enemy rear guard and delaying detachments. Contact with the enemy had been lost the evening before.

**f. Action.** (1) The 1st platoon is acting as advance party and point. As captain, Company A, at the head of the support, approaches RIDGE 2-3 he receives information that reconnaissance units have reported two antitank guns with enemy infantry and automatic weapons in position on RIDGE 5-6. This information is reported to lieutenant, 1st platoon.

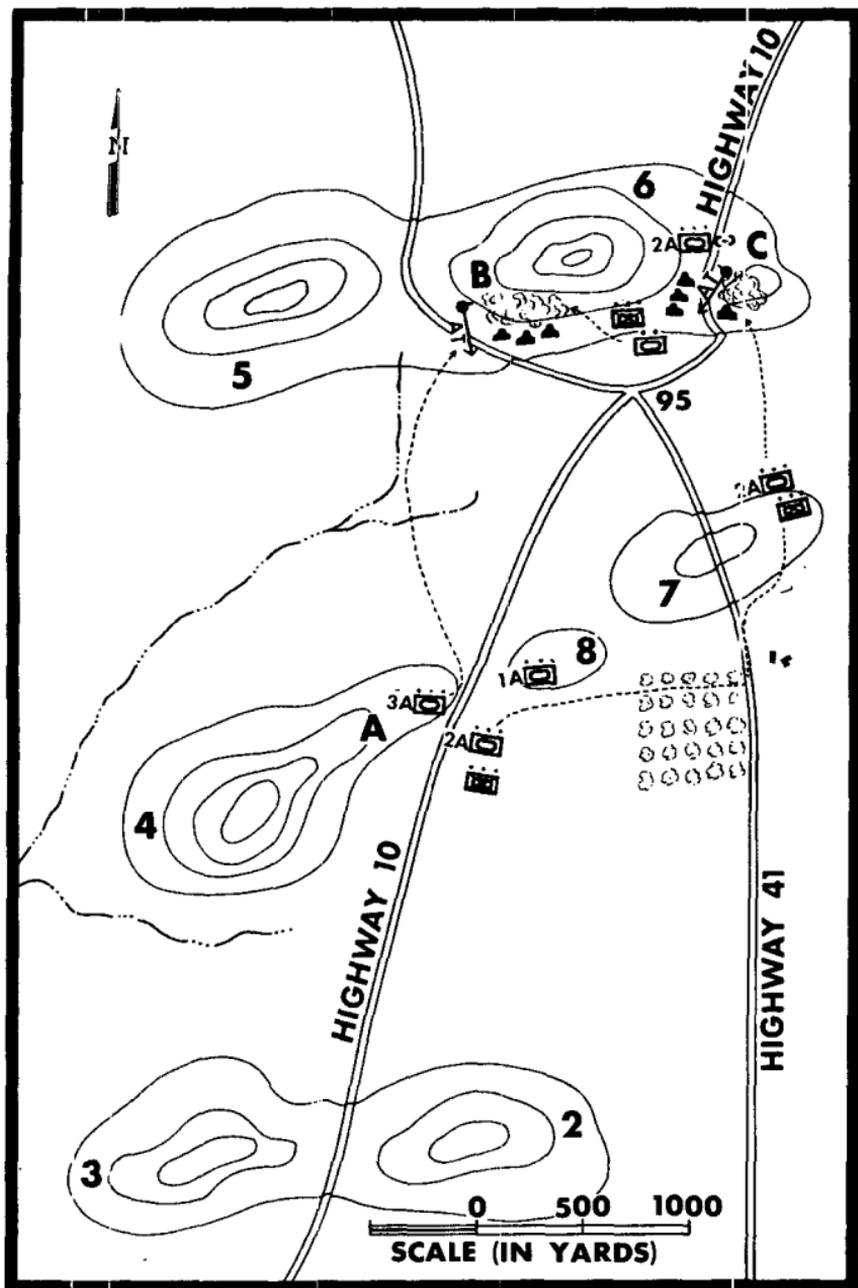


Figure 9. Tank company in attack.

(2) As the 1st platoon moves past the end of HILL 4 along HIGHWAY 10, fire is received from an anti-tank gun at B. The 1st platoon takes up firing positions on HILL 8 east of HIGHWAY 10. Captain, Company A, goes forward to the 1st platoon when he hears the firing.

(3) Captain, Company A, at the position of the 1st platoon, which is firing at the enemy position at B, orders the 2d platoon with the infantry platoon to attack the enemy left flank by moving across south and east of HILL 7 to the east end of RIDGE 5-6. The 1st and 3d tank platoons and the assault gun are ordered to give supporting fire from HILL 8 and POSITION A. The artillery forward observer is requested to place fire on the enemy at B. If no forward observer is present, the request is made over the command net.

(4) The 2d Tank platoon and the infantry platoon move to the south side of HILL 7 where the infantry half-tracks are left. As the tank platoon with the dismounted infantry move over the eastern slope of HILL 7 they are fired on by an antitank gun at C.

(5) Captain, Company A, orders the 1st platoon to switch its fire to C; he orders the 2d platoon and the infantry platoon to attack the enemy position at C. The artillery forward observer is requested to place artillery fire on C and to smoke the position at B. The 3d platoon and the assault gun continue to fire at B.

(6) The tank-infantry attack on C is successful. The infantry platoon with a section of tanks is ordered to attack the position at B. The 2d platoon, less one section, is ordered to cover HIGHWAY 10 to the northeast. The 3d platoon is ordered to attack B from the south. The 1st platoon with the assault gun and the artillery fire on B.

(7) This attack is successful and captain, Company

A, reports this result via radio to the battalion. The task force puts out another advance guard and moves past his position.

g. Critique. The main points to be emphasized in the critique of this problem include the decisions and orders of the company commander in the employment and control of the infantry and tank platoons and the supporting fires, the orders and actions of the platoon leaders, the use of cover and concealment in maneuver of the platoons and individual tanks, the choice of weapons and ammunition for use against the various targets, and the technique of gunnery and fire control exhibited in the firing. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## **22. TANK COMPANY INDIRECT FIRE PROBLEM.**

The indirect fire problem illustrated in paragraph 19 for a tank platoon may be used for a tank company by placing each platoon in position independently and registering them on a common base point. The observer of each platoon will be at the company observation post and fire missions will be assigned by platoons. If it is desired to fire the company as a whole it will be necessary to establish a fire direction center and employ the tank company as artillery. (See FM 17-12, Tank Gunnery.)

## Chapter 3

### INFANTRY UNITS

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#### Section I

#### RIFLE PLATOON

**23. FIRE POWER.** a. Personnel of the armored infantry rifle platoon must be taught to make the maximum use of the available fire power of the platoon. Combat firing problems should be prepared to illustrate and permit the employment of all available weapons, including the vehicular-mounted machine guns and the coordination with supporting weapons.

b. To teach the coordination of fire power within a platoon during the later stages of training, a problem can be drawn for the platoon through which the squads are first run individually and then the platoon as a whole fires the course. Such a problem is illustrated in paragraph 27.

**24. RIFLE SQUAD IN ATTACK.** An illustrative problem.—The following is an illustrative combat firing problem for the armored infantry rifle squad.

a. **Purpose.** The purpose of this problem is to give the rifle squad training in maneuvering against an enemy

position under the cover of a base of fire, and also to show a method of using the vehicular machine gun.

**b. Time.** One hour.

**c. Equipment.** (1) *Range.* The range for this problem should provide commanding ground for the targets to represent enemy covering routes of approach to their position. Varied terrain suitable for the deployment of a rifle squad should be selected. The minimum size must be 400 yards in width. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special Equipment.* None.

**d. References.** FM-7-10, Rifle Company, Infantry Regiment; FM 17-40, The Armored Infantry Rifle Company.

**e. Situation.** (Figure 10.) A rifle platoon is in position on HILL A. The platoon leader has ordered a rifle squad to attack an enemy outpost at E using the cover of the trees along stream at B to approach the position. The remainder of the platoon is to support the squad by setting up a base of fire at A. The half-tracks of the platoon are to remain in full defilade in rear of their respective squads.

**f. Action.** (1) Before moving out from the platoon's position at A, the squad leader issues his order under cover informing his squad of the following:

(a) Knowledge of enemy and own troops.

(b) Squad mission.

(c) Support to be given by the squad half-track and the remainder of the platoon and any other weapons in support.

(d) Route of advance.

(e) What each man is to do.

(f) Special signals.

(2) When squad arrives at B surprise targets appear

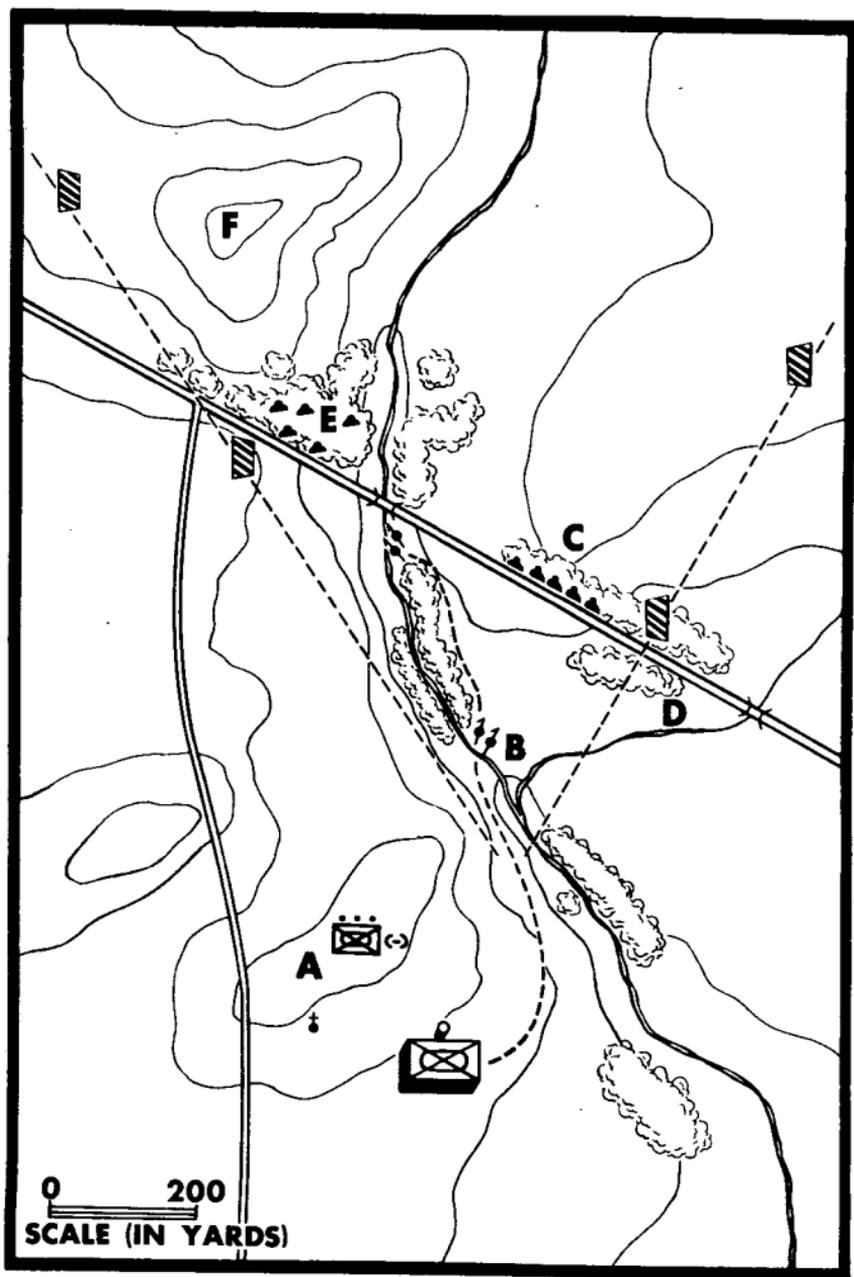


Figure 10. Rifle squad in attack.

at C. The squad leader sends 2-4 men of his squad along a branch of the stream and through woods at D to outflank the enemy position.

(3) After driving back the enemy at C the squad continues to advance through the trees along the stream towards E and is fired upon by a machine gun at E. The squad leader brings forward his half-track and has it and the squad fire at the machine gun. The enemy is forced to withdraw, and the squad leader consolidates the objective.

g. **Critique.** In the critique of the problem by the umpire, the foregoing actions of the squad leader and the following points should be covered. After receiving his orders the squad leader should study the ground around his objective to determine the best route to use and means of controlling the movement of his squad. He must also locate a position from which the half-track may support the squad if needed. The squad leader must make certain that every man knows the squad mission, the squad plan of attack, the supporting weapons, and what his own personal action will be. The principles of fire and maneuver will be observed. The squad is permitted to fire only when fire action is necessary to cover a further advance. Riflemen must make rushes across open areas selecting their next covered position before moving. When the targets appear, the squad leader should immediately decide how they are to be taken under fire and issue necessary orders. After completion of the assault, the squad reorganizes and prepares for further action. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## 25. LIGHT MACHINE GUN SQUAD IN ATTACK AND DEFENSE. Illustrative problems.

a. **Attack.** (1) *Purpose.* To give the light machine gun

squad a combat firing problem involving the mechanics of going into position, firing on targets, and displacing forward by bounds, all as a part of the rifle platoon with an attack mission.

(2) *Time.* One hour.

(3) *Equipment.* (a) *Range.* Terrain should be selected which will permit the guns to lay down a base of fire on the objective while the rifle squads are maneuvering to the objective. There should be suitable positions for displacement forward in support of the attack. Some of the positions should make it possible for the machine guns to deliver overhead fire. The safety zones will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(b) *Special equipment.* None.

(4) *References.* FM 7-10, Rifle Company, Infantry Regiment; FM 17-40, The Armored Infantry Rifle Company; FM 23-55, Browning Machine Gun Caliber .30.

(5) *Situation.* (Figure 11.) A rifle platoon of an armored infantry company is given the mission of seizing the high ground at B and continuing the attack. A small group of enemy infantry with an automatic weapon is on HILL B. The platoon leader decides to employ the light machine gun squad so as to give supporting fire from HILL A while the dismounted rifle squads move up the ravine on the right of A to attack B. Machine gun fire will be lifted upon pre-arranged signal.

(6) *Action.* The light machine gun squad leader selects positions for his machine guns and also a position from which the machine gun on his half-track can fire from HILL A. He then has the guns give supporting fire as the rifle squads attack through the ravine. When the leading riflemen reach the bridge, they are fired on by an enemy machine gun at C. The squad

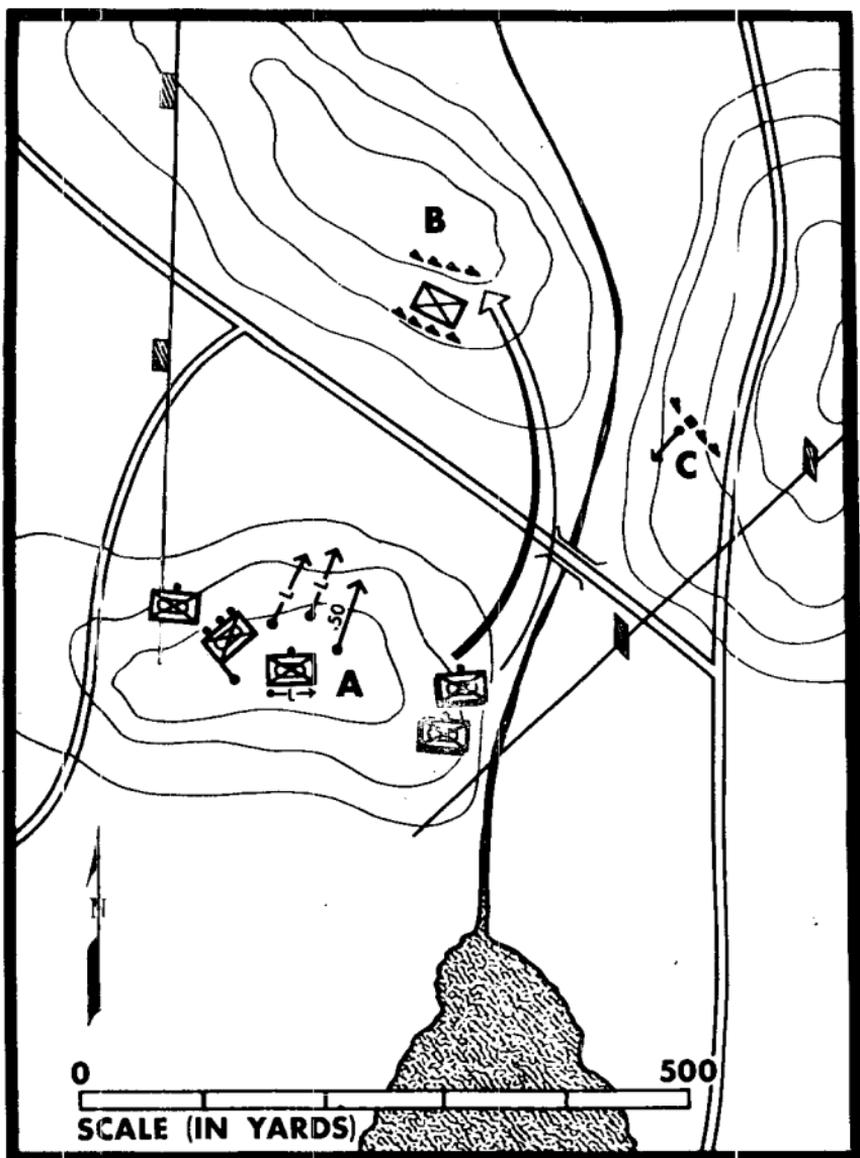


Figure 11. Light machine gun squad in attack.

leader has one of his machine guns switch its fire to this new target. The objective B is taken by the platoon. The squad leader displaces his machine guns to positions on B from which he can support the continuation of the attack by the platoon.

(7) *Critique.* The machine gun squad should fire initially on targets which will most likely endanger the main attack. As the attack progresses part of the fire is shifted from the original targets to any new targets. As soon as the objective is taken the machine gun squad should displace forward to support the rifle squads in defending the objective or continuing the attack. The officer conducting the critique emphasizes the preceding points and indicates whether the unit would have accomplished its mission.

**b. Defense.** (1) *Purpose.* To give the light machine gun squad a combat firing problem involving the preparation of range cards, OP's, and primary and alternate machine gun positions as a part of the defensive organization of the platoon; to allow it to fire on surprise enemy targets, and to have it move from their primary to their alternate positions.

(2) *Time.* One hour.

(3) *Equipment.* (a) *Range.* Terrain should be selected which offers a good field of fire. There should be a concealed route for displacement from the primary to the alternate position. The minimum size must be 400 yards in width and 800 yards in depth. The safety area will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(b) *Special equipment.* Six to eight E targets controlled to appear and disappear.

(4) *References.* FM 7-10, Rifle Company, Infantry Regiment; FM 17-40, The Armored Infantry Rifle Company; FM 23-55, Browning Machine Gun Caliber .30.

(5) *Situation.* (Figure 12.) A rifle platoon, as part

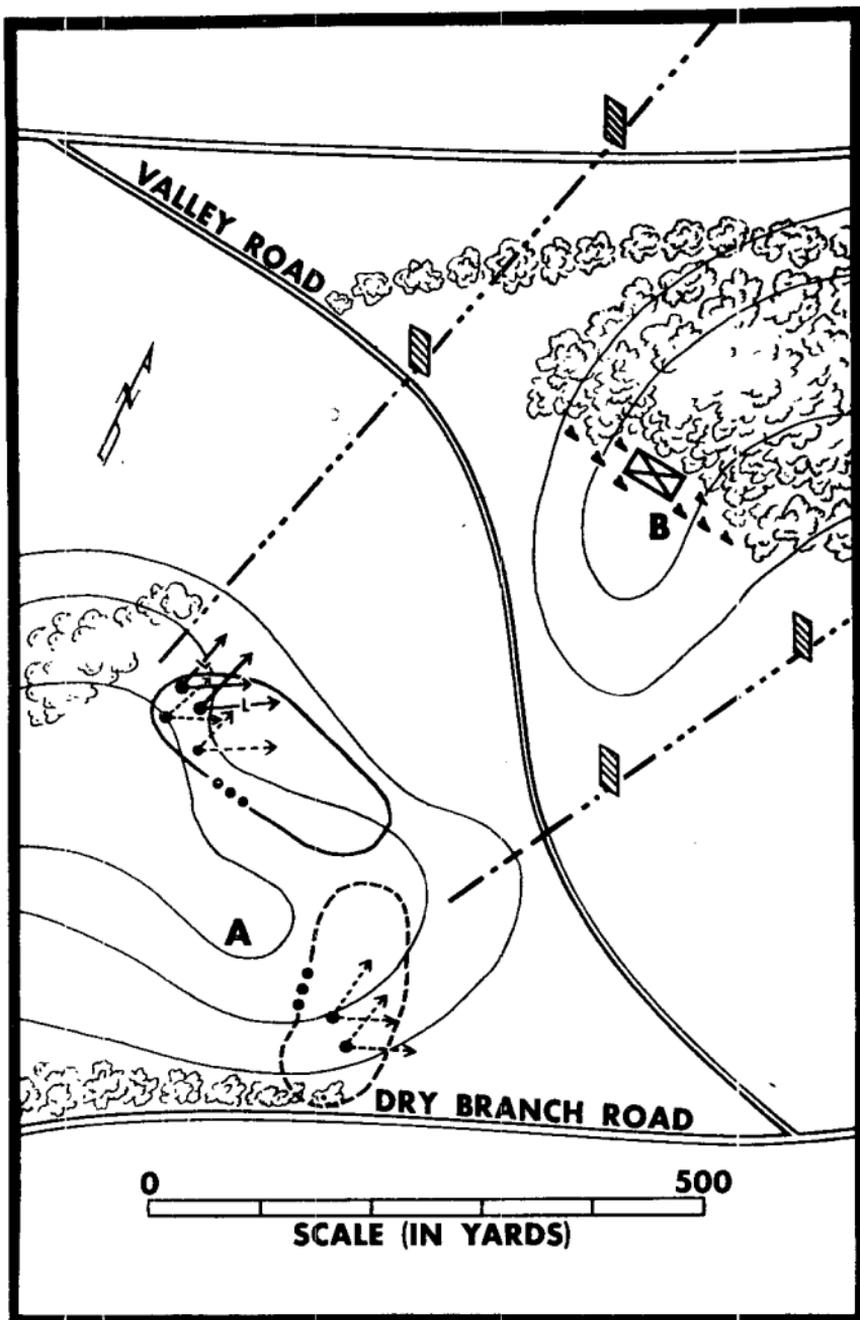


Figure 12. Light machine gun squad in defense.

of an armored infantry company, is organizing a defensive position at A. The platoon leader selects an OP and primary and alternate gun positions from which he can best give defensive fires to protect the position of his own platoon and best coordinate his fire with the machine guns of adjacent units. The platoon leader orders the squad leader of the light machine gun squad to prepare these positions. A range card also will be prepared.

(6) *Action.* The squad leader directs and supervises the preparation of range cards, an OP, and primary and alternate positions for the machine guns. When the defensive preparations are completed, enemy surprise targets appear in the edge of the woods at B. The squad leader directs the fire of the machine guns on these targets. At this time he is notified by the instructor that enemy mortar fire is being concentrated on the machine gun positions. He orders the guns to move to their alternate positions and from there to continue their fire against the enemy targets.

(7) *Critique.* The squad leader must make certain that every man knows the defensive plan and how the machine guns will be employed in the general plan. He checks to see that every man knows how to prepare an OP and the MG positions, and how to prepare and use range cards. He must inform the squad where he will be and what action will be taken in case the position is attacked. When the targets appear, the squad leader immediately estimates the situation and issues the necessary fire orders. The officer conducting the critique emphasizes the above points and indicates whether the unit would have accomplished its mission.

**26. 60MM MORTAR SQUAD IN SUPPORT.** An illustrative problem.—The following problem illustrates com-

bat firing practice for the 60mm mortar squad. Targets for 60mm mortar firing should be natural features of the terrain and not artificial targets. Silhouettes may be used to show the effectiveness of the firing.

**a. Purpose.** The purpose of this problem is to give the 60mm mortar squad practical training in the employment of their weapon to support the advance of the rest of the platoon.

**b. Time.** One hour.

**c. Equipment.** (1) *Range.* Varied ground suitable for the employment of mortar fire should be used. The minimum size must be 500 yards in width and 800 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* None.

**d. References.** FM 7-10, Rifle Company, Infantry Regiment; FM 17-40, The Armored Infantry Rifle Company; FM 23-85, The 60mm Mortar, M2.

**e. Situation.** The squad is part of a rifle platoon making an attack, with the mission of clearing enemy machine guns from HILLS A and B. The stream is given as the line of departure for the platoon.

**f. Action.** (1) The squad leader has the mortar set up in POSITION 1 as shown in figure 13 and then observes the fire from the high ground to the rear. Smoke is fired in front of the machine gun on HILL B while the rifle platoon assaults the position of the machine gun on HILL A.

(2) After the rifle platoon has taken HILL A, the mortar squad continues to fire on HILL B with HE until the rifle platoon is in position ready to assault.

(3) When the platoon has taken HILL B the mortar squad leader moves the squad to POSITION 2. On

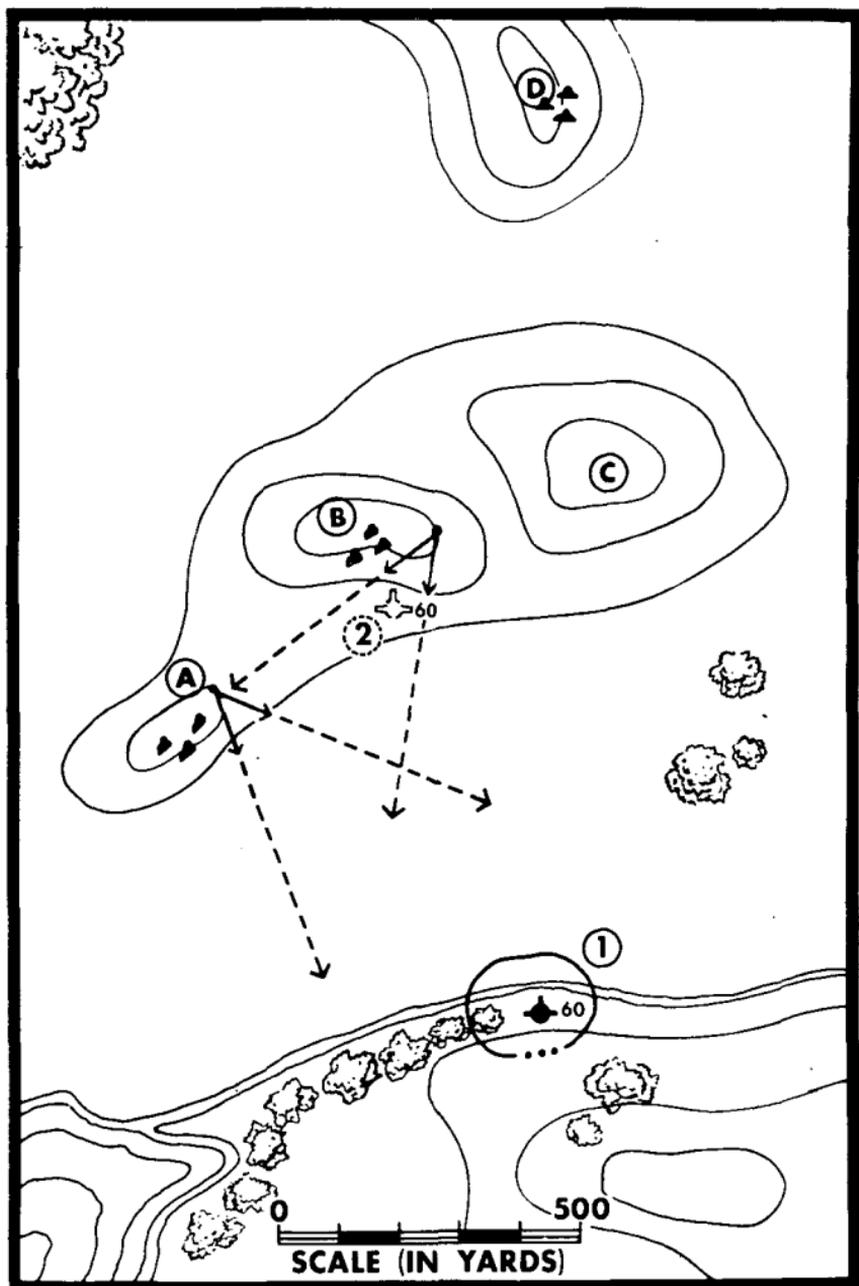


Figure 13. 60mm mortar squad in support.

approaching HILL C the rifle platoon receives fire from a machine gun on HILL D. The mortar squad leader immediately places fire on the machine gun on HILL D.

**g. Critique.** The umpire should emphasize procedure of combat firing with regard to the following points: the orders issued to the squad, including the friendly and enemy situations; the selection of the mortar positions and observation posts; the use of cover and concealment; and the speed in getting into action and out of action during firing. If possible, a rifle squad should be used in the problem. This would give both squads practical training and would add realism to the problem. The officer conducting the critique indicates whether the unit would have accomplished its mission.

**27. RIFLE PLATOON IN ATTACK.** An illustrative problem.—The rifle platoon should not execute problems as a unit until all squads have satisfactorily completed individual squad combat firing problems. The following problem illustrates a combat firing problem for a rifle platoon.

**a. Purpose.** The purpose of this problem is to give the platoon leader practice in the control and coordination of the squads of the platoon and to train the members of the platoon in the employment of their weapons.

**b. Time.** Two hours.

**c. Equipment.** (1) *Range.* The range for this problem should be rolling terrain suitable for infantry employment, and with positions for supporting weapons and routes to the target area. The minimum size must be 500 yards in width and 1000 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* None.

**d. References.** FM 7-10, Rifle Company, Infantry Regiment; FM 17-40, The Armored Infantry Rifle Company.

**e. Situation.** (Figure 14.) A rifle platoon is acting as an interior platoon of a combat team making an attack. The platoon has been given a frontage of 400 yards, with its right boundary the highway. Small groups of enemy infantry with automatic weapons are known to be on HILLS A and B. The mission of the platoon is to seize the two machine gun positions on HILLS A and B, and to continue the attack, taking HILL D. The hedgerow is the line of departure for the attack.

**f. Action.** (1) The platoon leader makes a reconnaissance, plans his attack, and issues the necessary orders.

(2) The platoon leader has the mortar squad fire smoke on the enemy machine gun position on HILL B. The vehicular machine guns are to support from positions as shown in the sketch. Their fire is controlled and lifted by the headquarters' squad leader. The rifle squads move two abreast as shown, followed by the machine gun squad, and attack HILL A.

(3) On taking HILL A, the platoon leader orders the mortar to continue to fire on HILL B using HE. The headquarters' squad leader has the vehicles fire on HILL B. The machine gun squad sets up near HILL A and gives close fire support to the rifle squads in their attack on HILL B.

(4) When HILL B has been taken, the rifle squads continue on to HILL C with the mortar and machine gun squads following. An enemy machine gun which has stopped the advance of the platoon is located on HILL D to the left; the platoon leader places fire on the target with his mortar and one machine gun before he is able to continue his advance.

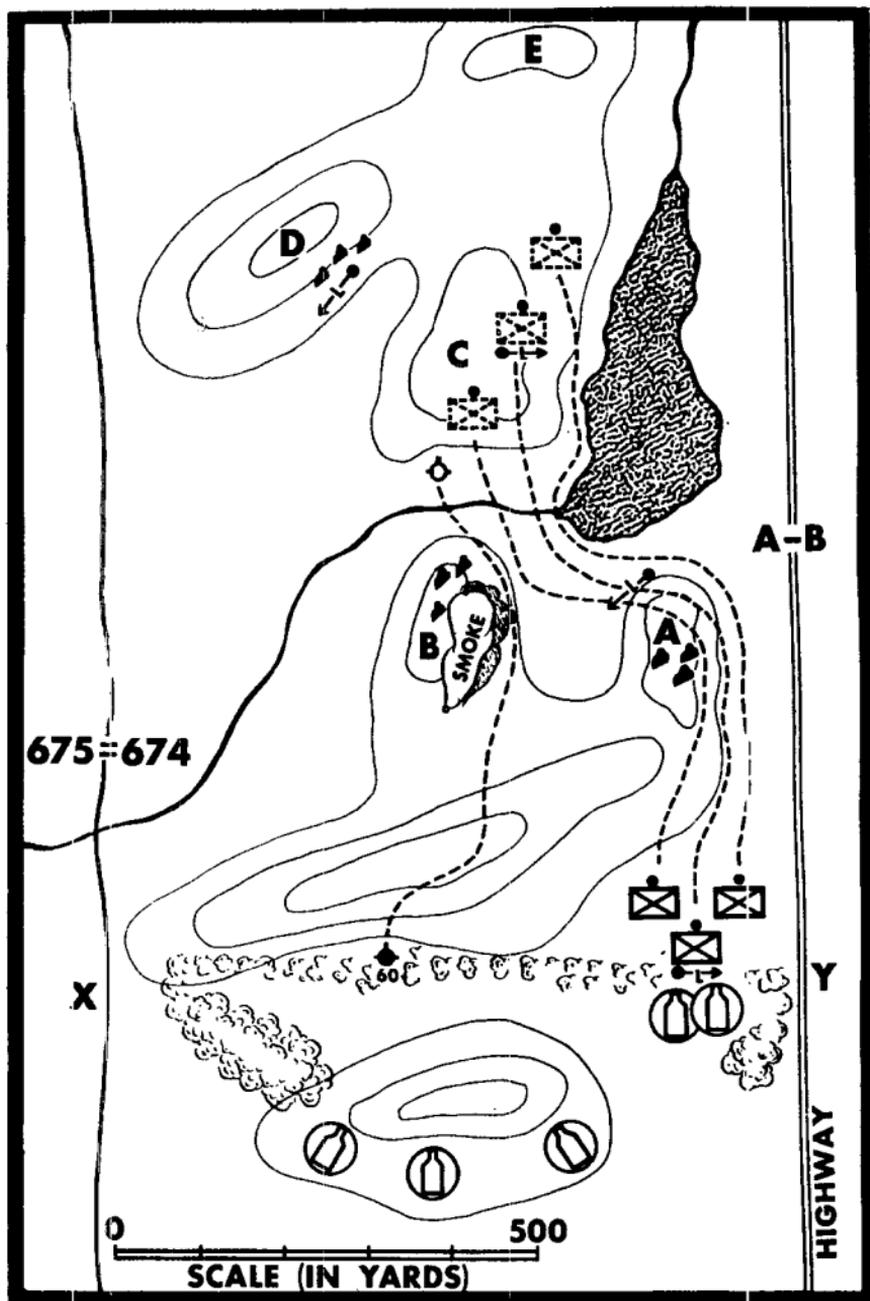


Figure 14. Rifle platoon in attack.

(5) The platoon captures HILL D and the platoon leader immediately organizes to defend it.

**g. Critique.** In the critique of the problem by the umpire, the chief points to be emphasized should be brought out after the situation is discussed. These points include choice of weapons to destroy the enemy targets, method of maneuver of the squads of the platoon, clearness and conciseness of orders, actions of the squad leaders, and use of cover and concealment by the members of the platoon. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Section II

### MACHINE GUN PLATOON

**28. MACHINE GUN PLATOON IN SUPPORT.** An illustrative problem.—Paragraph 25, illustrating a combat firing problem for the light machine gun squad, can be used for the sections of the machine gun platoon.

**a. Purpose.** This problem illustrates the actions of a machine gun platoon in going into positions from which it can initially give fire support to an attacking rifle company to support the attack by fire on enemy positions and then to displace forward to positions from which it can again give supporting fire in the continuation of the attack.

**b. Time.** One hour.

**c. Equipment.** (1) *Range.* The range for this problem should be open rolling terrain with suitable areas for firing positions. The minimum size should be 400 yards in width and 800 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* None.

d. *References.* FM 7-15, The Heavy Weapons Company, Rifle Regiment; FM 17-42, The Armored Infantry Battalion; FM 23-55, Browning Machine Gun, Caliber .30.

e. *Situation.* (Figure 15.) An armored infantry rifle company, with the machine gun platoon from headquarters and headquarters company of the battalion attached, is given the mission of attacking and seizing the enemy position at B, the one at C, and then continuing the attack along the road in a northwest direction. The company commander orders the platoon leader of the machine gun platoon to select positions at A, to give supporting fire initially from there and then move to other positions from which it can continue to give support to the attack.

f. *Action.* The platoon leader reconnoiters the ground around A, directs and supervises the occupation of the positions and the fire of his platoon on enemy targets located on B and C. As the attack progresses the rifle company seizes the enemy positions B and C. The platoon leader then displaces his machine guns forward by sections to positions on C from which he can give supporting fire to the rifle company as it continues its attack.

g. *Critique.* In the critique of the problem by the umpire the following points should be discussed: the orders of the platoon leader, the selection and occupation of initial and subsequent positions, the fire orders of the section and squad leaders, the gunnery technique of the gun crews, and the use of cover and concealment in advancing by sections. The officer conducting the critique indicates whether the unit would have accomplished its mission.

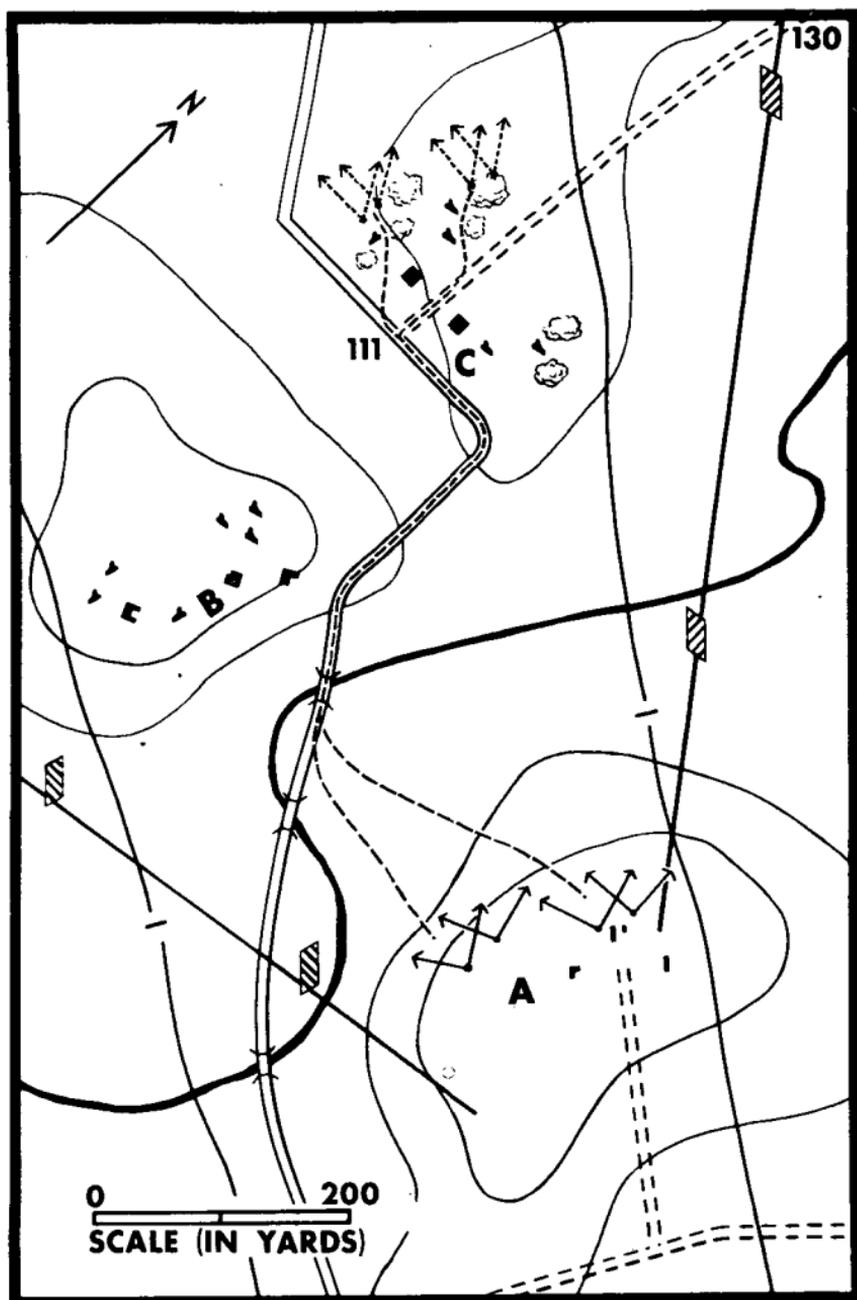


Figure 15. Machine gun platoon in support.

## Section III

### ANTITANK PLATOON

**29. ANTITANK GUN AS FLANK PROTECTION.** An illustrative problem.—Combat firing problems for the antitank gun crew may include firing at moving targets or subcaliber firing at stripped tanks. The accompanying sketch (Figure 16) illustrates a combat firing problem for the antitank gun crew.

a. **Purpose.** The purpose of this problem is to give the gun crew practice in firing at moving targets and practice in firing at enemy emplacements. The problem is designed to require the crew to hold their fire until the target has entered the crew's assigned sector of fire, and is within the proper range.

b. **Time.** One hour.

c. **Equipment.** (1) *Range.* The range selected for this problem should be rolling, open terrain with suitable positions for antitank guns and fields of fire of at least 1000 yards. The minimum size should be 800 yards in width and 1200 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* Two moving tank targets and one simulated pillbox target.

d. **References.** FM 7-35, Antitank Company, Infantry Regiment and Antitank Platoon, Infantry Battalion; FM 17-42, The Armored Infantry Battalion; FM 23-75, 57mm Gun, M1.

e. **Situation.** In this problem the antitank gun is one of an antitank platoon that has been assigned the mission of protecting the left flank of a rifle company advancing as shown on the sketch. Enemy tanks have been reported to be in the area.

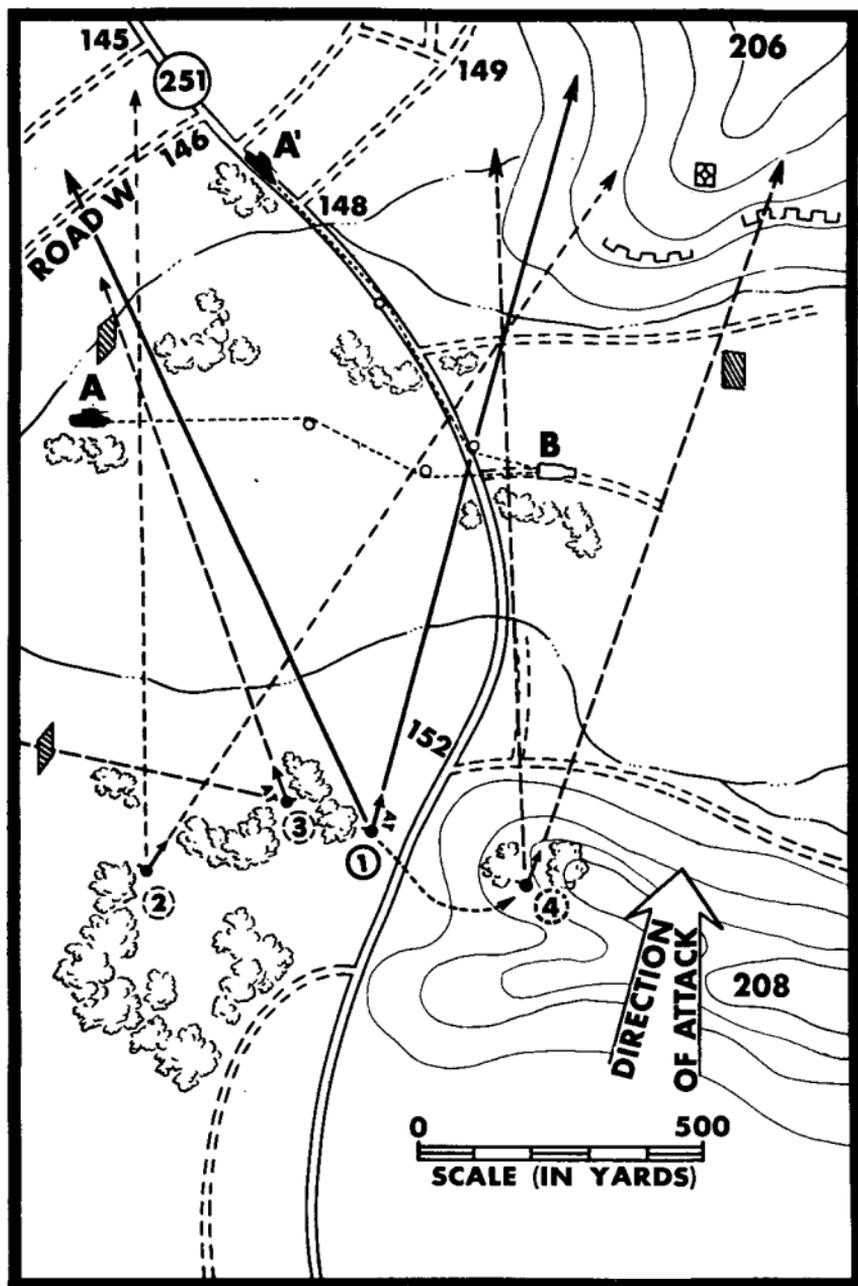


Figure 16. Antitank gun as flank protection.

f. **Action.** (1) The squad leader places his gun in POSITION 1, shows the crew their sector of fire and the simulated positions and sectors of fire (at 2 and 3) of the other two guns of the platoon. He selects an alternate position for his gun.

(2) He then checks the location of the half-track and prepares a range card for the position. He makes certain that the crew boresights the gun and checks the ammunition for fit in the breech of the gun.

(3) The squad leader orders the crew to open fire on tank targets moving from POINTS A and A' to POINT B (targets are pulled from a point near B).

(4) The squad leader receives orders to move his gun to POSITION 4 and fire on a pillbox on HILL 206. He immediately reconnoiters the route and position and moves the gun to the new position.

(5) The squad leader has the crew open fire on the enemy pillbox on HILL 206.

g. **Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the squad leader by the umpire, and covered in the critique following the problem. These points include the selection and occupation of the firing positions, the preparation and camouflage of the positions, the reconnaissance of a route for movement to the new position, the orders and fire control of the squad leader, and the gunnery technique of the crew with particular emphasis on not opening fire until the target is within range and within the assigned sector of fire. The officer conducting the critique indicates whether the unit would have accomplished its mission.

**30. ANTITANK PLATOON COVERING A DEFENSIVE POSITION.** An illustrative problem.—(See figure 17.) All crews having satisfactorily fired individual com-

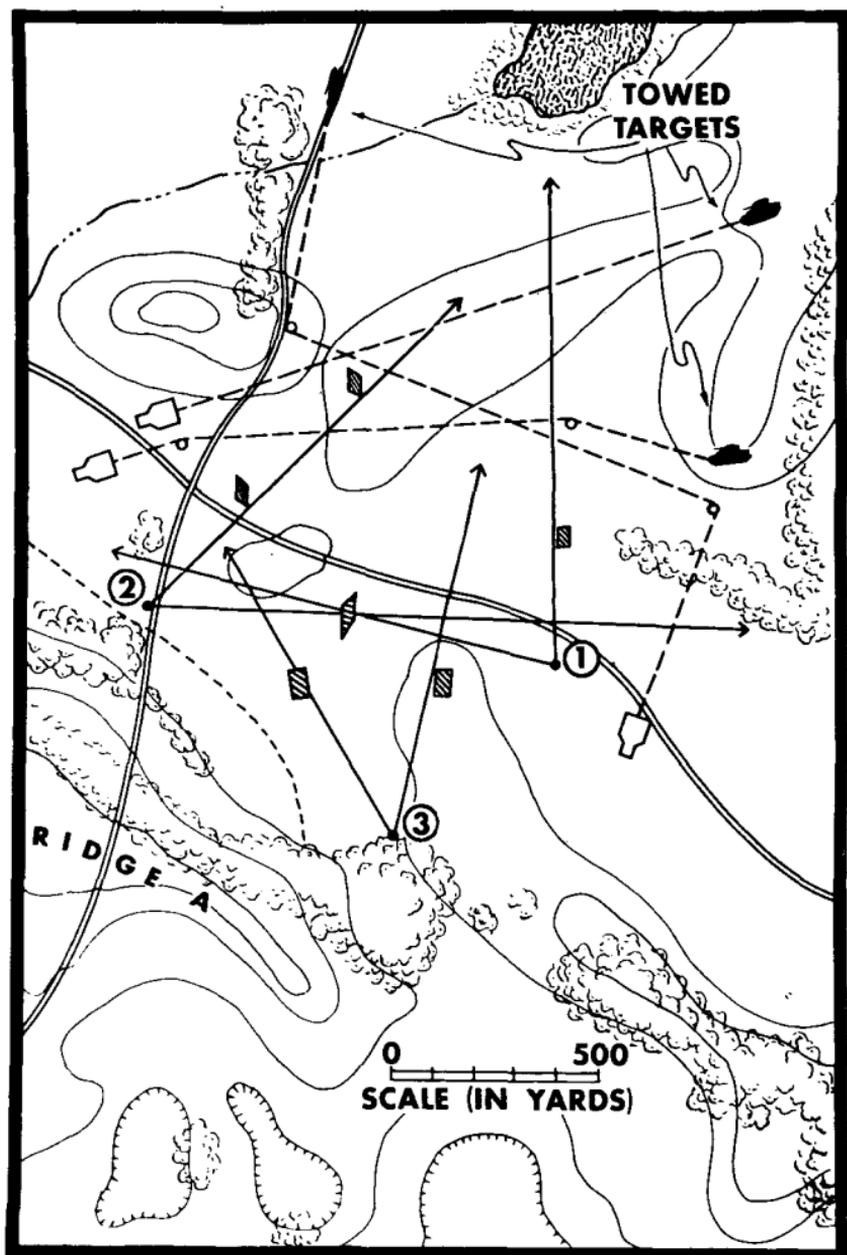


Figure 17. Antitank platoon covering a defensive position.

bat problems, the platoon is then ready to fire combat courses as a unit. Problems for the antitank platoon should be designed to give the platoon practice in coordination of guns within the platoon and with the guns of other platoons.

a. **Purpose.** The problem is designed to give the gun crews practice in holding their fire until tanks have entered their sector of fire.

b. **Time.** One hour.

c. **Equipment.** (1) *Range.* The range for this problem should be open rolling terrain with suitable positions for an antitank platoon and a field of fire of not less than 1000 yards. The minimum size must be 1500 yards in depth and 1000 yards in width. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

d. **References.** FM 7-35, Antitank Company, Infantry Regiment and Antitank Platoons, Infantry Battalion; FM 17-42, The Armored Infantry Battalion; FM 23-75, 57mm Gun, M1.

e. **Situation.** An armored infantry rifle company has been ordered to organize a defensive position along the road in front of RIDGE A. The antitank platoon is ordered to occupy positions to cover the company position. An enemy attack is expected, and enemy tanks have been reported in this area.

f. **Action.** (1) The platoon leader makes a reconnaissance of the area, selects primary gun positions and alternate positions, places his antitank guns in POSITIONS 1, 2, and 3, and assigns each gun a primary sector of fire to be covered. (The sector of fire may fall outside the safety limits of the range; panels should be placed indicating the limits of the range, and the gun crews cautioned not to fire outside of those limits.) The platoon leader indicates to each gun the position of the

other guns of the platoon and their sector of fire and the simulated positions of the guns of the adjacent platoons.

(2) Next the platoon leader checks each gun, and in the case of a gun having an exposed flank or rear not covered by another gun causes the crew to lay a hasty mine field to protect that sector.

(3) The platoon leader instructs the guns in POSITIONS 1 and 3 not to fire on the first target until the gun in POSITION 2 opens fire on his order. He then stations himself at gun POSITION 2. The guns are instructed to fire on all other targets as each target appears in each gun sector and within range.

**g. Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the squad leader by the umpire, and covered in the critique following the problem. These points include the reconnaissance for and selection of firing positions by the platoon leader, the designation of sectors of fire to the separate guns, the orders of the platoon leader, the arrangement for fire control, and the gunnery technique of the gun crews. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Chapter 4

### SUPPORT WEAPONS

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#### Section I

#### MORTAR PLATOON

**31. 81MM MORTAR PLATOON IN SUPPORT.** An illustrative problem.

**a. Purpose.** This problem illustrates the actions of the mortar platoon of a tank battalion in supporting a tank attack. The problem covers the selection and occupation of initial firing position, the displacement forward to previously reconnoitered positions to better accomplish the mission of direct support and technique of fire.

**b. Time.** Two hours.

**c. Equipment.** (1) *Range.* The range for this problem should be fairly open terrain suitable for tank action with suitable positions for mortar fire from the vehicular mounts. The minimum size must be 1500 yards in width and 3500 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* None.

**d. References.** FM 17-33, Tank Battalion; FM 23-91, 81mm Mortar Mounted in Half-track Carrier.

**e. Situation.** (1) (See Figure 18.) A tank battalion is advancing north, with two companies in assault and one

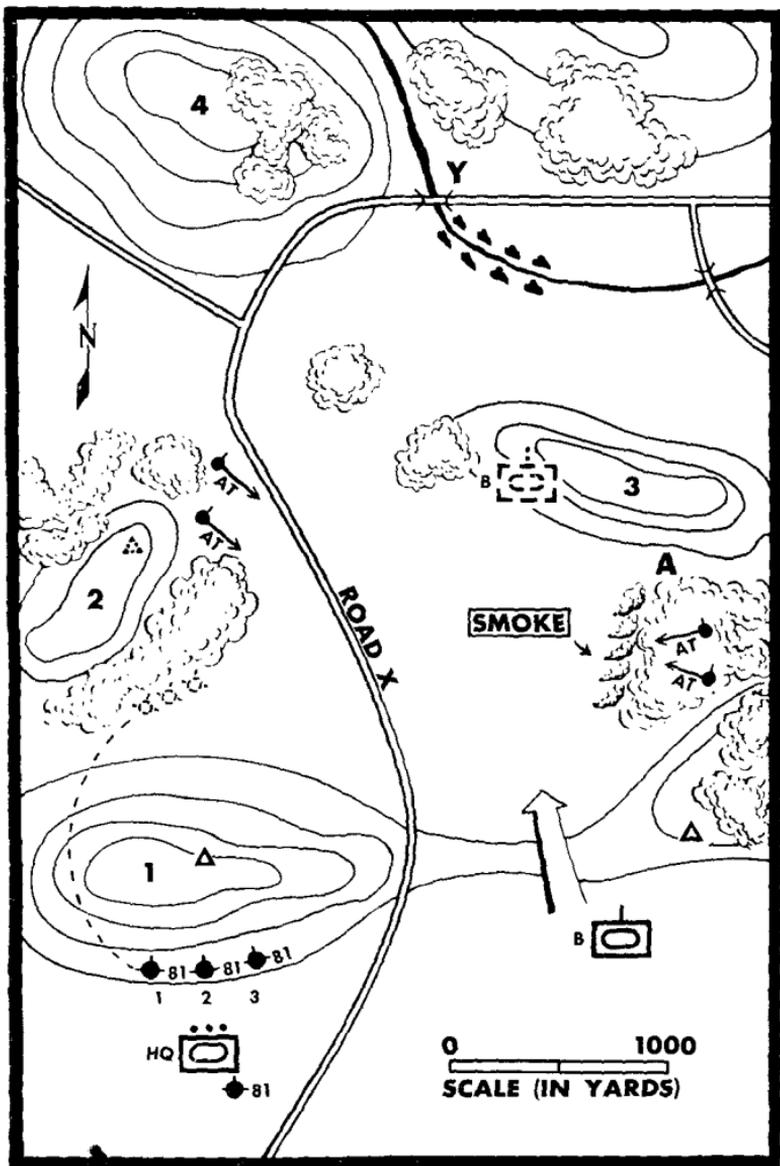


Figure 18. 81mm mortar platoon in support.

in support. The mortar platoon is in direct support of Company B, which is the right assault company, and is attacking astride ROAD X. Enemy AT weapons are reported in RAVINE A.

(2) Battalion CO orders lieutenant, mortar platoon, to select a position from which he can screen RAVINE A with WP to protect the advance of Company B in its zone.

f. Action. (1) Lieutenant, mortar platoon, selects and occupies a position at RIDGE 1 and selects on OP on the forward slope from which he has observation of RAVINE A. Lieutenant, mortar platoon, then has the guns laid in the center of sector of fire, adjusts fire with the 1st squad, and then lays the smoke screen with platoon fire.

(2) Lieutenant, mortar platoon, from his OP on HILL 1, sees two tanks of Company B knocked out and the remainder of the company stationary in defilade. He can see two enemy guns firing from west of Road X and near the bend in that road.

(3) Lieutenant, mortar platoon, gives the platoon the proper deflection shift and adjusts fire with the 1st squad. The AT gun crews are then neutralized by platoon fire using high explosive ammunition.

(4) Company B has advanced to the north slope of RIDGE 3 and has engaged infantry on RIDGE 4. Battalion CO advises lieutenant, mortar platoon, that enemy demolition squads are approaching BRIDGE Y from the north along the creek and orders him to take them under fire.

(5) Lieutenant, mortar platoon, checks the distance from platoon position to the target and finds that it is greater than the maximum range of the mortars. He therefore moves the platoon to the reverse slope of RIDGE 2 which has been occupied by A Company.

From this position guns are laid parallel. The mortar platoon leader adjusts fire with the 1st squad and sweeps up and down the creek with traversing fire using HE ammunition.

**g. Critique.** The chief points to be emphasized in the critique of this problem include the decisions and orders of the platoon leader in controlling the platoon, the selection and occupation of positions, and moving to advanced positions, the technique of gunnery and fire control by the platoon and section leader, and the ability of the platoon to render close, continuous, and effective support. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Section II

### ASSAULT GUN PLATOON

**32. ASSAULT GUN PLATOON IN SUPPORT.** An illustrative problem.

**a. Purpose.** This problem illustrates the action of the assault gun platoon of a tank battalion in support of an attack by the battalion. The selection and occupation of positions and the conduct of indirect and direct fire are covered in this problem.

**b. Time.** Two hours.

**c. Equipment.** (1) *Range.* The range for this problem should be an artillery range with an advanced firing point at midrange. The minimum size is 6000 yards in depth and 2500 yards in width. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* Two towed tank targets, three model AT guns.

d. **References.** FM 17-25, Assault Gun, Section and Platoon; FM 17-33, Tank Battalion.

e. **Situation.** (Figure 19.) A tank battalion has the mission of conducting an attack in a semi-stabilized situation. The battalion CO issues his attack order to the tank company commanders and orders the assault gun platoon commander to move his platoon from the assembly area (WOODS X) to a previously reconnoitered position at POINT Y, prior to the battalion's movement from the assembly area. The battalion CO gives the assault gun platoon leader the location of six check points on which the platoon will adjust prior to the attack. These points are made known to all companies in order that any officer may call for fire when necessary.

f. **Action.** (1) The assault gun platoon moves from WOODS X to the previously reconnoitered position at POINT Y using a concealed route behind LONG MOUNTAIN. Upon arrival at the position, the platoon leader orders the platoon sergeant to have the vehicles camouflaged, the guns laid parallel on an azimuth of 110 mils, and the ammunition section unloaded and returned for an additional supply of ammunition. The platoon leader then takes the radio, with operator, to the OP, locates the six check points on the ground, receives a radio message from the gun position that the guns are prepared to fire and proceeds to adjust the platoon on each of the six points.

(2) As the attack begins, the battalion CO informs the assault gun platoon leader of an enemy AT gun located 100 yards right of CHECK POINT 1, which is firing on the leading tank company, and orders fire from the assault guns to be placed on the enemy target.

(3) The assault gun platoon leader, with the aid of field glasses, spots the target near POINT 1. The platoon leader adjusts one gun on this target, orders the

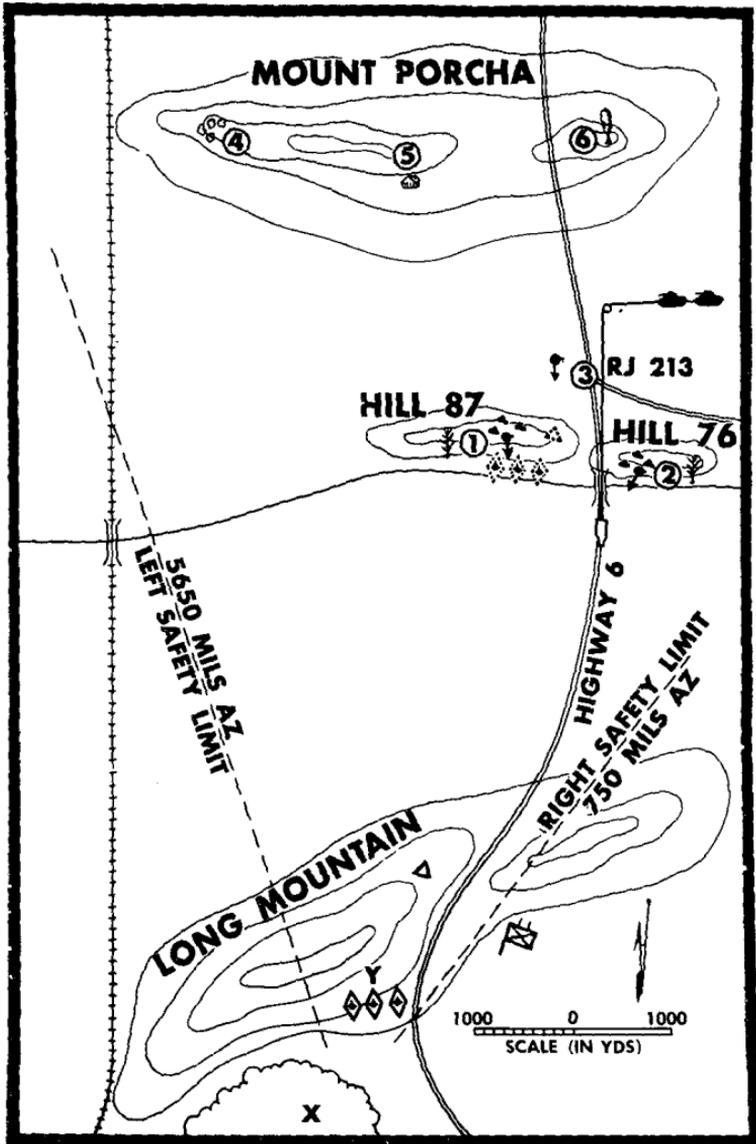


Figure 19. Assault gun platoon in support.

sheaf closed for mass fire effect, and fires a concentration on the AT gun.

(4) The battalion CO is advised by the assault gun platoon leader that the mission is completed. The battalion CO acknowledges this and gives the assault gun platoon leader the location of another AT gun located 50 yards left of CHECK POINT 2 and requests that the assault gun platoon fire a concentration upon it.

(5) The AT gun near CHECK POINT 2 is taken under fire in the same manner as the previous mission.

(6) Upon completion of the fire mission near CHECK POINT 2, the assault gun platoon leader informs the battalion CO that the mission is completed. Again the battalion CO acknowledges the message and informs the assault gun platoon leader that he desires that a probable gun emplacement in the vicinity of RJ 213 be taken under fire. The assault gun platoon leader informs the battalion CO that it is impossible to see any target at that location and requests that one of the tank platoon leaders adjust the fire.

(7) The lieutenant of the 1st platoon of A Company can see the emplacement and by radio adjusts the fire upon the probable emplacement near CHECK POINT 3.

(8) The battalion CO advises the assault gun platoon leader that he now has troops on HILLS 87 and 76, and is prepared to continue the advance. The battalion is receiving some fire from MT. PORCHA and the assault gun platoon is ordered to shell intermittently the ridges between POINTS 4 and 5 and to smoke an OP in the vicinity of POINT 6. At the same time the platoon is ordered to displace forward to a new position in the rear of HILL 87.

(9) The assault gun platoon leader orders the platoon sergeant to take No. 1 gun, together with the command

half-track, forward into the new position behind HILL 87. As soon as the sergeant reaches that position, he is to set up a new OP and adjust fire upon the ridge between POINTS 4 and 5. Upon receiving a radio message from the platoon sergeant that No. 1 gun has adjusted on the ridge, the platoon leader orders No. 2 gun forward, and upon arrival, it commences to fire using the data from No. 1 gun. As soon as the No. 1 and the No. 2 guns are firing, the platoon leader leaves the old OP, moves forward with his radio on No. 3 gun.

(10) The platoon leader observes from his new OP on HILL 87 that two enemy tanks have moved into the battalion zone, beyond RJ 213.

(11) The platoon leader immediately orders the gun sections to advance to the crest of HILL 87 and to take the enemy tanks under fire by direct fire. The platoon leader informs the battalion CO that the assault gun platoon is occupied in firing on enemy tanks on the battalion's right flank.

(12) The assault gun platoon destroys the enemy tanks. When the battalion CO is informed that the emergency mission is accomplished the assault gun platoon leader is ordered forward to MOUNT PORCHA, which is now occupied, to prepare fire plans to cover the objective.

**g. Critique.** The chief points to be emphasized in the critique of this problem include the decisions and orders of the platoon leader in controlling the action of the platoon, the selection and occupation of the firing positions and the method of advancing to the forward position, the technique of gunnery and fire control by the platoon and section leaders, and the technique of employing the platoon against the emergency target. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Chapter 5

### RECONNAISSANCE PLATOONS OF ARMORED INFANTRY AND TANK BATTALIONS

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#### 33. OPERATION OF A RECONNAISSANCE PLATOON. An illustrative problem.

a. **Purpose.** This combat firing problem shows the actions taken by the platoon when on a reconnaissance mission and they are fired upon by enemy troops.

b. **Time.** Three hours.

c. **Equipment.** (1) *Range.* The range for this problem should contain a fordable stream and a flat plain that rises toward a series of hills, one of which is quite prominent. The minimum size must be 1800 yards in width and 2500 yards in length from POINT C to POINT A. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* (a) One towed vehicle target.

(b) Explosives and electrical detonation equipment to simulate enemy gun fire.

d. **References.** FM 17-33, Tank Battalion; FM 2-20 Cavalry Reconnaissance Troop, Mechanized.

e. **Situation.** (1) (Figure 20.) The Tank Battalion is bivouacked in WOODS Z. Orders have been received to plan for a movement to the north. It is known that the enemy is in position astride the road between HILLS A and B with some antitank guns.

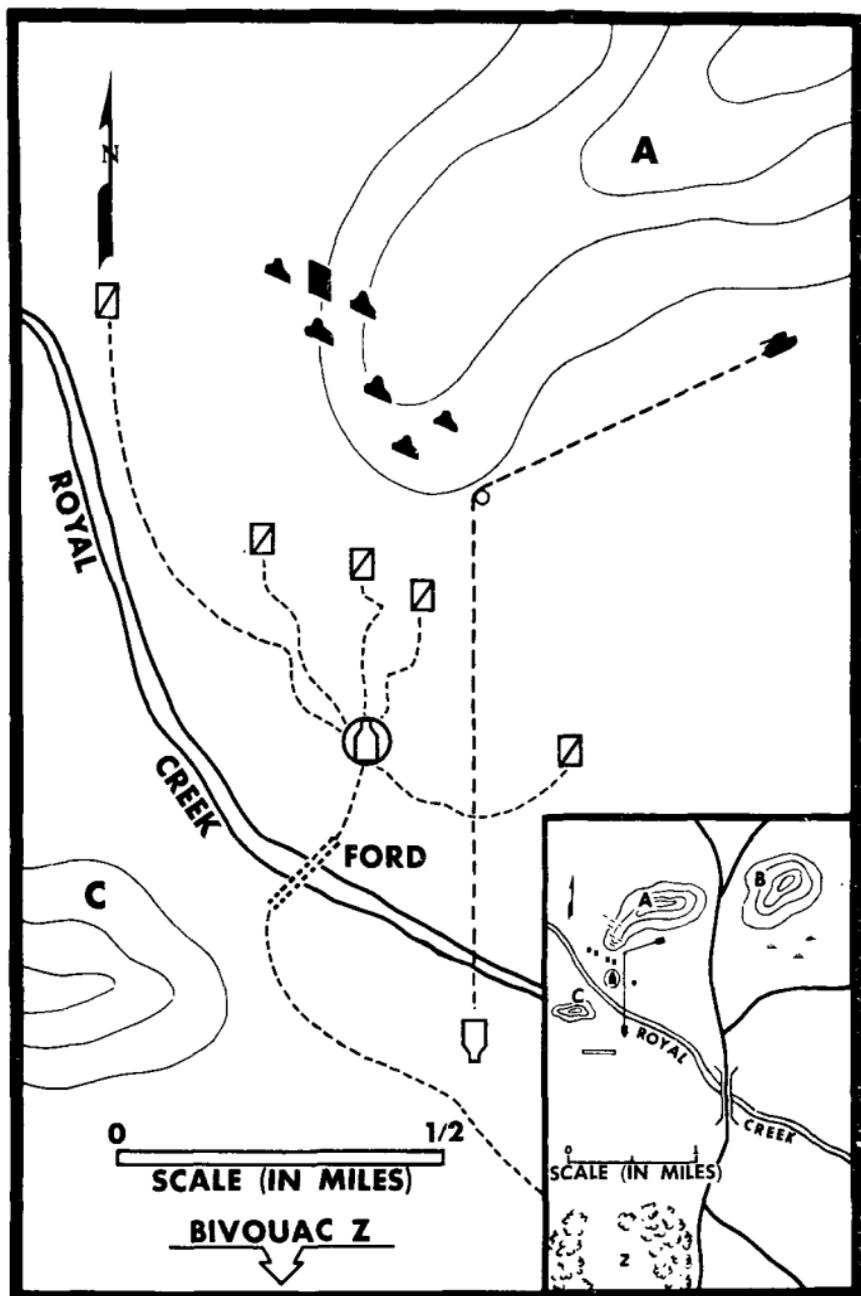


Figure 20. Operation of a reconnaissance platoon.

(2) The battalion reconnaissance platoon is ordered to reconnoiter for a ford over ROYAL CREEK west of the bridge, the suitability of the terrain west of HILL A for tanks, and the location of enemy units in the area west of HILL A.

f. Action. (1) Upon receiving his orders the platoon leader of the reconnaissance platoon checks the area from his map, formulates his plan, orients his noncommissioned officers, and issues his order to the platoon.

(2) A suitable ford is located just east of HILL C and the platoon crosses ROYAL CREEK at that point.

(3) After crossing the ford and moving a short way toward HILL A the platoon leader halts the half-track in a defiladed position from which he can overwatch the further advance of the  $\frac{1}{4}$ -ton truck patrols, consisting of two flank patrols of one vehicle each and a center patrol of three vehicles. The two flank patrols are sent to observe to their respective flanks. The center patrol moves forward in its vehicles to within 300 yards of HILL A where the  $\frac{1}{4}$ -ton trucks are halted under cover.

(4) Leaving the drivers with the  $\frac{1}{4}$ -ton trucks the balance of the center patrol continues on foot toward the west flank of HILL A. As the dismounted patrol approaches HILL A it receives rifle fire from the south edge of the hill. The supporting element of the patrol returns the fire and the enemy fire ceases.

(5) The patrol continues its advance and shortly receives rifle and machine gun fire from a position just beyond the west flank of HILL A. The patrol returns the fire but is unable to advance or to drive the enemy back. The patrol falls back to its vehicles and reports the situation to the platoon leader who orders it to return to the position of the half-track.

(6) As the  $\frac{1}{4}$ -ton trucks are returning to the half-track an enemy light reconnaissance car is seen ap-

proaching along the south edge of HILL A. It is fired on by the caliber .50 machine gunner and is stopped.

(7) The platoon leader returns with his platoon to the south side of ROYAL CREEK, reports the situation and his actions to the battalion commander, and prepares to continue reconnaissance farther to the northwest on the south side of the creek.

**g. Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the platoon leader by the umpire, and covered in the critique following the problem. These points include the actions and use of cover and concealment of the mounted and dismounted patrols, the employment of the limited fire power of the platoons, and the decisions and orders of the platoon leader. The officer conducting the critique indicates whether the unit would have accomplished its mission.

## Chapter 6

### INFANTRY-TANK

### TEAM

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**34. INFANTRY-TANK ATTACK.** An illustrative problem.—In preparing combat firing problems for combined infantry-tank training, care must be taken in setting up the mission and situation so that the restrictions imposed by the safety regulations of AR 750-10 regarding overhead machine gun fire and the firing of large caliber weapons do not cause artificial conditions in the problem. Infantry and tank units that are to fire together in combat firing problems should conduct combined tactical training together prior to participation in combat firing.

a. **Purpose.** This problem illustrates the coordination and cooperation that is necessary between the infantry and tanks for a successful infantry-tank attack. Decisions and orders of the unit commanders and the communication between the infantry and the tanks are emphasized.

b. **Time.** Four hours.

c. **Equipment.** (1) *Range.* The range for this problem should have rolling, partially covered terrain with suitable features for emplacing enemy antitank guns, surprise enemy infantry targets, and moving tank targets. The minimum size must be 1500 yards in width and 4000 yards from POINT A to POINT Z. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

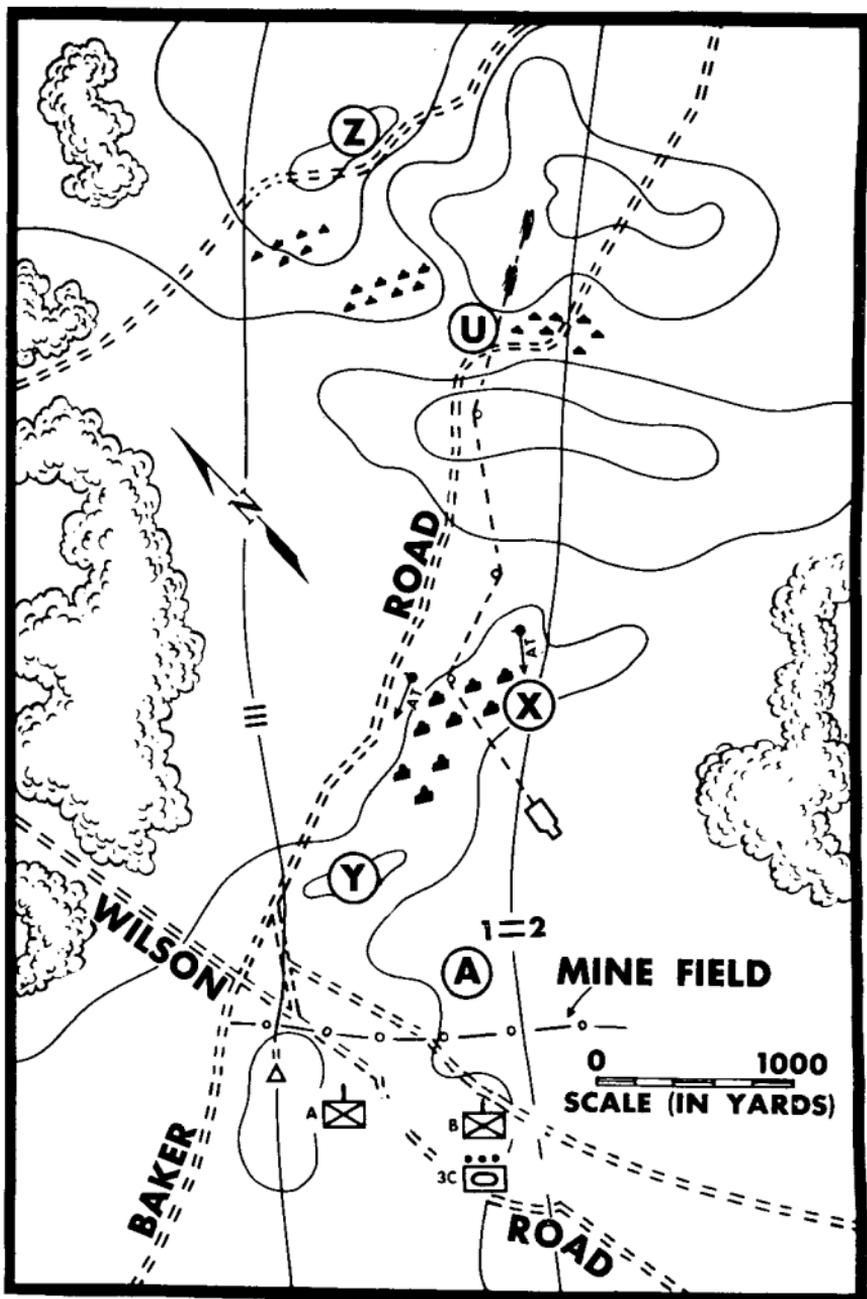


Figure 21. Infantry-tank attack.

(2) *Special equipment.* (a) Two model enemy anti-tank guns, two towed tank targets.

(b) Explosives and electrical detonation equipment to simulate enemy antitank gun fire.

d. *References.* FM 17-30, Tank Platoon; FM 17-36, Employment of Tanks with Infantry; FM 17-12, Tank Gunnery.

e. *Situation.* (1) (Figure 21.) Company B, ---- Infantry with the 3d platoon, Company C, ---- Tank Battalion attached, which is part of a larger force that has been attacking generally east against a withdrawing enemy, has reached the high ground in the vicinity of WILSON ROAD, by 1400, 12 August, and is consolidating its position.

(2) At a meeting of company commanders at the infantry battalion OP, located 200 yards southwest of the WILSON and BAKER CROSSROADS, the battalion commander issues his plan for continuing the attack. Company B is assigned the mission of seizing HILL X and continuing the attack to HILL U. Company B is the base company of the ---- Battalion.

(3) S-2, of the infantry battalion, estimates that the enemy is holding HILL X with one infantry company, reinforced with some antitank guns, positions not known. A mine field has been located across the front of the position.

f. *Action.* (1) The rifle company commander makes a reconnaissance accompanied by the leader of the attached tank platoon. Draws up a plan of attack and issues attack order to the assembled platoon leaders from a vantage point in his zone of action.

(2) At the prescribed time the assault infantry platoons lead the attack, breach the mine field under cover of smoke, and mark the lane by white tape. (Actual breaching is simulated, but lane will be marked). The

3d platoon of Company B and the tank platoon are in positions to render supporting fire.

(3) When the 1st and 2d infantry platoons reach the rise at A beyond the mine field they receive heavy machine gun and rifle fire from HILL X, stopping their advance.

(4) The weapons platoon in position on the high ground in the vicinity of WILSON ROAD fires on HILL X with machine guns and 60mm mortars.

(5) The combined fire of the leading assault platoons and the weapons platoon is insufficient to gain fire superiority which would permit the leading infantry platoons to continue the advance.

(6) The company commander, Company B, ordered the attached tank platoon to move through the breach in the mine field and advance to support the attack of the leading infantry platoons.

(7) Tanks and infantry continue the attack, firing on targets on HILL X. The additional fire power of the tanks enables the attack to continue forward for approximately 300 yards.

(8) One section of two enemy antitank guns opens fire on advancing tanks from HILL X and temporarily halts the attack by forcing the tanks of the 3d platoon, Company C, ——— Tank Battalion to seek hull down positions from which to return the fire of the AT guns.

(9) Antitank guns are neutralized or crews destroyed by accurate fire of infantry small arms and tank weapons.

(10) Tanks and infantry continue to advance, neutralizing and destroying enemy automatic weapons and personnel.

(11) The remaining enemy on HILL X effect a withdrawal to the east, having suffered a considerable

number of casualties. The leading infantry platoons occupy HILL X and consolidate their position within their zone. The attached tanks move to defilade positions which will enable them to render effective support to the infantry during consolidation.

(12) Shortly after the leading infantrymen reach the objective and begin consolidating their newly won position, the enemy launches a counterattack with a platoon of tanks and a company of infantry. The attack is launched from the draw south of HILL Z and is moving along the high ground in a southwesterly direction toward HILL X.

(13) The leading infantry platoons of Company B, --- Infantry and attached tanks of 3d platoon, Company C, --- Tank Battalion open fire on the enemy counterattacking force with all available weapons.

(14) The enemy counterattacking force is repulsed with some losses and withdraws to the northeast beyond HILL Z.

(15) Company commander of Company B, ---- Infantry orders his weapons platoon and reserve rifle platoon to take positions on HILL X. When they are in position to render supporting fires on HILL U, he issues orders for the continuation of the attack by the tanks and infantry with the mission of seizing the high ground in vicinity of HILL U.

(16) Tanks and infantry advance by fire and maneuver, firing all weapons whenever enemy targets are presented.

(17) Enemy resistance is scattered and weak and Company B is successful in seizing HILL U. Upon reaching the objective, the position is consolidated by the infantry and the tanks take defiladed positions from which they can effectively support the infantry during

consolidation. Plans are made for repelling any enemy counterattack.

g. **Critique.** The chief points to be emphasized in this problem should be brought out in the orientation of the platoon leader by the umpire, and covered in the critique following the problem. These points should include the coordination between the tanks and infantry in the planning stage, means of communication, choice of weapons and ammunition used to destroy the enemy targets, speed and correctness of orders resulting from decisions of platoon leaders, tactical control by platoon leaders, movement of infantry platoons and tanks from one position to another by proper use of cover and concealment, use of fire and movement, designation of targets by the infantry to the tanks, and fire control and accuracy of fire. The officer conducting the critique indicates whether the mission would have been accomplished.

## Chapter 7

### TANK FLAME THROWER

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**35. TANK FLAME THROWER IN ATTACK.** An illustrative problem.

a. **Purpose.** This problem illustrates the employment of the tank flame thrower as part of a tank platoon in an attack with infantry on a defensive position.

b. **Time.** One hour.

c. **Equipment.** (1) *Range.* The range for this problem should be rolling terrain suitable for tank action and with location for an enemy defensive position. The minimum size is 300 yards in width and 500 yards in depth. The safety zone will be as prescribed by AR 750-10 for the weapons and ammunition to be used.

(2) *Special equipment.* Two model pillboxes with trenches prepared in the vicinity of the pillboxes.

d. **References.** FM 17-30, The Tank Platoon; FM 17-12, Tank Gunnery; FM 17-36, The Employment of Tanks with Infantry.

e. **Situation.** (1) (Figure 22.) Friendly forces in a general advance have been stopped along RIDGE C-D by an enemy fortified position running generally east and west along RIDGE B. The enemy has organized HILL A as an advanced position of his general line. Plans have been made for an attack on the enemy position in the area shown. Initial artillery and air bombardment preparation has been completed.

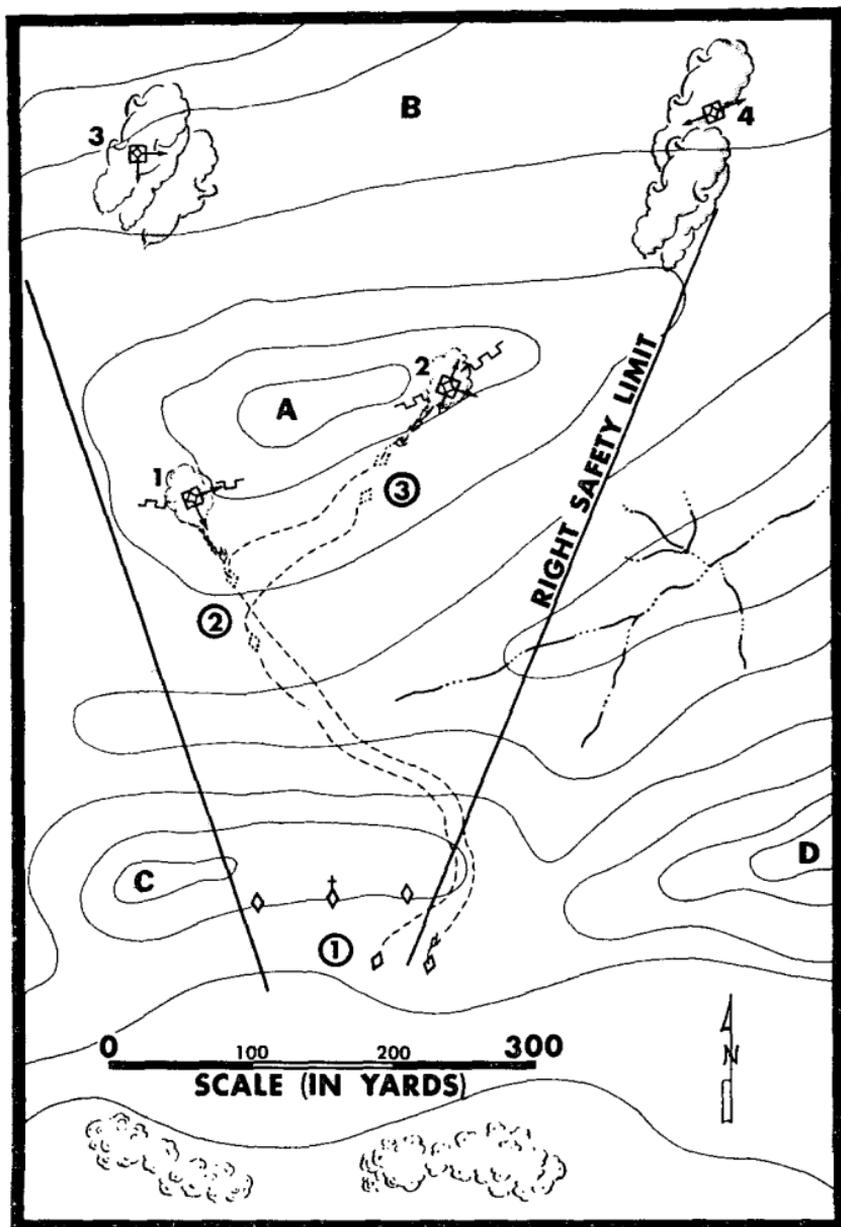


Figure 22. Tank flame thrower in attack.

(2) An assault team composed of the 1st platoon, Company A, --- Tank Battalion, and the 3d platoon, Company G, --- Infantry, has been organized, under the command of Captain X, to attack the enemy position on HILL A. The tank platoon contains one tank flame thrower.

(3) Plans have been made to isolate the enemy position on HILL A from the supporting positions on RIDGE B by smoke from the infantry 81mm mortar platoon, and the concurrent use of artillery from the supporting artillery units. Captain X orders lieutenant, tank platoon, to attack the enemy positions on HILL A. The infantry assault units are ordered to follow the leading tanks closely and protect them against antitank measures by enemy individuals and to occupy HILL A when the enemy positions are reduced.

(4) This situation is presented to lieutenant, tank platoon, by the umpire, who acts as Captain X, at a dismounted position south of RIDGE C. Lieutenant, tank platoon, and the tank commanders are permitted to make the reconnaissance and selection of routes that could be made from RIDGE C-D in combat.

**f. Action.** (1) Lieutenant, tank platoon, moves his tanks to defiladed positions in rear of RIDGE C-D and makes a final coordination with Captain X and lieutenant, infantry platoon. Enemy PILLBOXES 3 and 4 on RIDGE B are smoked by the infantry mortars.

(2) The tank platoon moves to hull defilade positions on the crest of RIDGE C and fire is opened on PILLBOXES 1 and 2 and on the infantry positions on HILL A, using machine guns and cannon HE fire. The tank fire forces the pillboxes to close up and cease firing and lieutenant, tank platoon, orders the second section (containing the flame thrower tank) forward to HILL A.

(3) The second section of the tank platoon moves out with the flame thrower in rear and advances toward PILLBOX 1. Their advance is covered by the rest of the platoon on RIDGE C. As the second section approaches the pillbox, the lead tank stops in a position in which it can cover the flame thrower tank as it closes in on the pillbox. The flame thrower tank fires the flame gun at the trenches around the pillbox, and when it is within range, burns out the pillbox. The supporting tanks and the infantry fire at enemy attempting to abandon the pillbox and continue to fire at PILLBOX 2, in order to keep it closed up. The infantry completes the process of mopping up the position.

(4) The flame thrower tank and its accompanying tank, with the infantry following, move to PILLBOX 2 and reduce it in a similar manner.

(5) Lieutenant, tank platoon, with the first section and the rest of the infantry platoon, moves forward to HILL A and consolidates the position.

**g. Critique.** (1) The chief points to be emphasized in this problem include the necessity of prior planning and coordination between units of this type of operation; the planning, reconnaissance, and issuance of orders by the platoon leader; the selection of routes and the use of cover and concealment; the technique of gunnery and fire control shown; and the technique of employment and operation of the tank flame thrower. The officer conducting the critique emphasizes the above points and indicates whether the mission would have been accomplished.

(2) This problem may be conducted by a tank platoon alone or with a supporting infantry unit. The inclusion of infantry in the problem will add to the realism and increase the difficulties of control and coordination of safety requirements.

## Appendix I

### SUGGESTED PHASES OF COMBAT TO BE USED IN COMBAT FIRING PROBLEMS

---

#### 1. Tank Units.

- a. The use of tank cannon against:
  - (1) Armored vehicles.
  - (2) Unarmored vehicles.
  - (3) Fortifications.
  - (4) Antitank positions.
  - (5) Mortar and artillery positions.
  - (6) Machine gun positions.
  - (7) Personnel.
- b. The use of secondary tank armament (machine guns, grenades, pistols, flame throwers, mortars) against:
  - (1) Personnel.
  - (2) Vehicles.
  - (3) Fortifications.
- c. The action of tank units in:
  - (1) Advance guard.
  - (2) Flank guard.
  - (3) Rear guard.
  - (4) Meeting engagement.
  - (5) Attack of a defended position.
  - (6) Tank-against-tank combat.
  - (7) Indirect fire.
  - (8) Night firing.
  - (9) Defensive situations.
  - (10) Marching fire.
  - (11) Smoke missions.
  - (12) Reconnaissance by fire.

## **2. Infantry Units.**

### **a. The use of infantry weapons against:**

- (1) Personnel.
- (2) Unarmored vehicles.
- (3) Armored vehicles.
- (4) Antitank weapons.
- (5) Fortifications.

### **b. The action in infantry units in:**

- (1) Advance guards.
- (2) Flank guards.
- (3) Rear guards.
- (4) Meeting engagement.
- (5) Attack of defended position.
- (6) River crossings.
- (7) Night firing.
- (8) Defensive situations.
- (9) Marching fire.
- (10) Designating tank targets.

## **3. Infantry-Tank-Artillery Team.**

### **a. The action of infantry-tank-artillery in various combinations in the situations listed in 1c and 2b.**

These problems should be developed for:

- (1) Open terrain.
- (2) Close terrain.
- (3) Village fighting.

### **b. These problems should emphasize value of:**

- (1) Fire and movement.
- (2) Surprise fire.
- (3) Mass of fire.
- (4) Observed fire.
- (5) Effective gunnery.
- (6) Other requirements to be stressed.

## **4. Supporting Weapons and Reconnaissance Units.**

The actions of supporting weapons and reconnaissance units in the situations listed in 1c, 2b, and 3a and 3b.

## Appendix II

### SAMPLE OF A COMBAT FIRING PROBLEM

---

Headquarters 29th Armored Group  
Fort Knox, Kentucky

1 December 1944.

TM: 54

Combat Firing Problem No. 3.

Maps: For participating units  
Photo map, Fort Knox and vicinity 1/25000  
For Umpires and Control Officers  
Hays School Range 1/10000

#### TANK PLATOON IN ATTACK

##### *Part I*

**1. Units to Fire.** All tank platoons of the following organizations:

631st Tank Battalion  
632d Tank Battalion  
633d Tank Battalion

**2. Schedule of Participation.** See TM 53, this Headquarters.

**3. Uniform and Equipment.** a. Full T/E as available. Each tank will have all weapons mounted.

b. Ammunition:

(1) Cal .45 - 20 per submachine gun  
(2) Cal .30 - 100 per machine gun  
(3) 75mm APC-M61 - 5 per gun  
(4) 75mm Shell M48 - 10 per gun

**4. Situation.** The platoon is assigned as the point of an advanced guard of a column moving along the road north from RJ 723. Contact with the enemy has been lost but isolated groups of resistance are expected to be met.

**5. Requirement.** Actions and orders of the platoon leader, movement and subsequent actions by the platoon as the situation develops.

**6. Restrictions.** a. All firing will be restricted to within safety limits designated by red flags. Safety limits will be designated for each target or group of targets.

b. If at any time a doubt arises as to safety limitations, firing will be stopped and an umpire called for a decision.

## *Part II*

(For umpires only. Not to be distributed to participating units.)

**7. Object.** a. To teach the combat principles of a tank platoon acting as the point of an advanced guard.

b. To stress necessity of fire and maneuver including the use of dismounted tank crews.

**8. Preparation of Range.** See overlay 1 Hays School range.

a. Range C will be used.

b. Range guards — five privates.

c. Range detail—one NCO and four privates.

Uniforms: Fatigues.

d. Materials:

4 — 4' x 5' frames.

12 — F silhouette targets.

16 — 6' stakes.

12 — 3' stakes.

4 — Orange colored flags with staffs.

12 — Large red flags to outline safety limits.

Paste and pasters.

Several logs or old RR ties for road block.

1 — Truck.

**9. Special Situation.** a. The following order is issued verbally to the platoon leaders: "There has been some enemy activity to our front for the past several days. Isolated enemy groups can be expected to harass our advance.

"Our battalion has the mission of seizing and holding the town of T, 20 miles north of here. This Company will be the advance guard for the battalion; --- platoon will be the point."

b. The platoon leaders are oriented in detail on the umpire's map.

**10. Points to be Emphasized.** a. Platoon leader's initial and subsequent orders.

b. Use of cover.

c. Promptness in execution of maneuvers.

d. Rapidity of opening fires.

e. Control.

**11. Remarks** a. Every latitude should be allowed each platoon leader in the development of the situation with the least amount of interference.

b. Umpires will go through this problem themselves prior to presentation to the platoons.

J. J. DOE

Colonel, 29th Armd Gp  
Commanding.

OFFICIAL:

R. R. ROE

*Captain, 29th Armd Gp*

*Adjutant*

## Appendix III

### SUGGESTED COMBAT FIRING SCORE SHEET\*

	Place	Date
Participating Unit	-----	-----
Weather Conditions	-----	-----
<b>A. Inspection of platoon (6)</b>	<b>Weight</b>	<b>Score</b>
1. Complete equipment	<u>2</u>	_____
2. Condition of equipment	<u>4</u>	_____
	6	
<b>B. Tactics (24)</b>		
1. Troop leading (12)		
a. Reconnaissance (plan and execution)	<u>3</u>	_____
b. Decision and control	<u>3</u>	_____
c. Time required to make decisions, formulate plans, and issue orders	<u>3</u>	_____
d. Brevity, clearness, and practicability of orders	<u>3</u>	_____
	12	
2. Execution by unit as a whole (12)		
a. Speed of execution of orders	<u>3</u>	_____
b. General character of execution	<u>3</u>	_____
c. Prompt engagement of targets	<u>3</u>	_____
d. Timing of forward movements by bounds	<u>3</u>	_____
	12	
<b>C. Knowledge of the situation (3)</b>		
1. Was the situation explained to the troops?	<u>3</u>	_____
	3	

(\*NOTE: This score sheet should be modified to meet the specific weapons and combinations of units involved in combat firing problems.)

D. Technique (32)	Weight	Score
1. Use of cover and defilade	6	_____
2. Selection of firing positions	5	_____
3. Technique of movements	4	_____
4. Fire orders	5	_____
5. Fire control	4	_____
6. Distribution of fire	5	_____
7. Driver technique	3	_____
	32	_____

E. Effectiveness of fire (35)

1. % of targets hit (25)

(a) Antitank and machine gun targets:

$$\frac{\text{No. of targets hit}}{\text{No. of targets}} = \text{_____}$$

(b) Personnel targets:

$$\frac{\text{No. of targets hit}}{\text{No. of targets}} \times 3 = \text{_____}$$

(Maximum % is 100, therefore, any % greater than 100, will be recorded as 100.)

(c) Score = average of percentages in (a) and (b)  $\times$  25

2. The remaining 10 points will be awarded the platoon on the basis of total number of hits on all targets taking into consideration number and type of rounds fired, effectiveness of various types of projectiles on different types of targets. Hits should not be estimated. Targets should be marked and scored when possible.

Total Score for Tests:

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
- D. \_\_\_\_\_
- E. \_\_\_\_\_

Total \_\_\_\_\_

Satisfactory rating:

70% and above

---

Signature of Scoring Officer

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