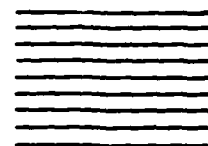


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STUDENT RESEARCH REPORT

SOVIET FIRING BATTERY OPERATIONS
IN THE OFFENSIVE

1981
CPT PHILIP P. SCIANNA

GARMISCH, GERMANY

APO NEW YORK 09055

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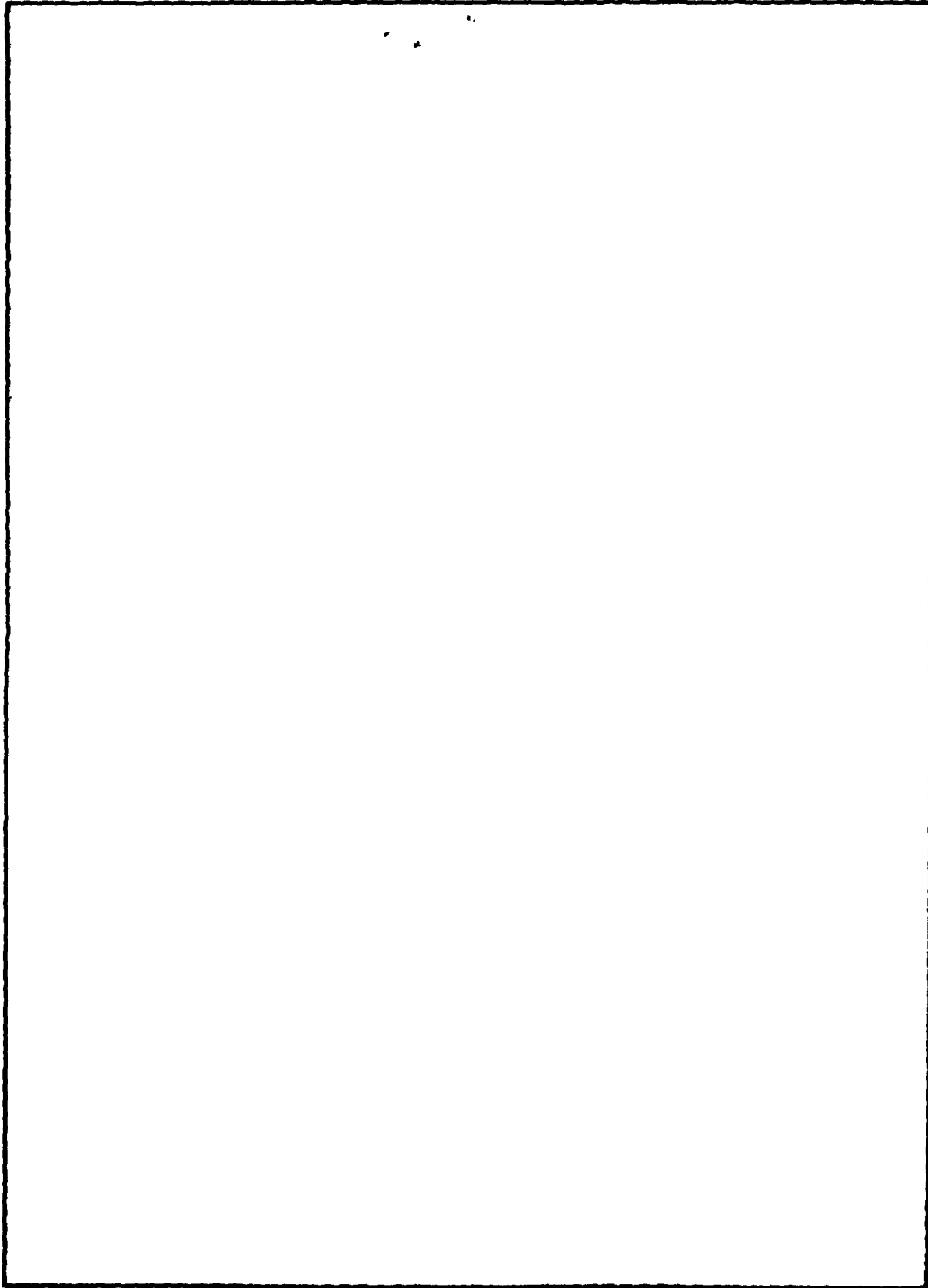
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Captain Philip P. Scianna

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FOREWORD

This research project represents fulfillment of a student requirement for successful completion of the overseas phase of training of the Department of the Army's Foreign Area Officer Program (Russian).

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SUMMARY

In this paper, the author presents an analysis of the operational techniques employed by a Soviet field artillery battery during the offensive. It analyzes the principal operational techniques of a firing battery -- moving, shooting, and communicating -- as well as the manner in which coordination is implemented by the battery within the Soviet tactical concept of the combined-arms team. If its operational techniques do not mesh with that of maneuver, the firing battery becomes a liability rather than an asset. The author concludes that the operational techniques of the firing battery do coincide with the overall Soviet tactical doctrine for a fast moving offensive.

The firing battery's task for continuous fire support of advancing maneuver elements can only be accomplished if its operational techniques for moving, shooting, and communicating are able to coincide and mesh with that of the supported maneuver unit. In discussing those operational techniques of the Soviet firing battery, this paper is divided into two main sections: (1) Principles of Employment for the Soviet Firing Battery; and (2) Battery Preparations for the Offensive. The first section discusses battery organization, battery movements, fire control, the sequence of offensive fires, and battery communications. The second section includes the sequence of coordination, the battery commander's briefing, and displacements in the course of the attack.

Principles of Employment for the Soviet Firing Battery

Battery Organization

The basic tactical firing element in the Soviet artillery is the battalion.¹ It is composed of a headquarters element for the commander and his staff and several batteries. The firing battery includes a headquarters platoon and two firing platoons, each with three howitzers.² A senior lieutenant usually commands a firing battery. He is assisted, primarily, by the senior battery officer, a lieutenant who commands the first firing platoon and also functions as the battery executive officer. The second firing platoon is commanded by a junior lieutenant or praporshchik.³ The battery's headquarters platoon includes a scout reconnaissance section, a communications section, and a fire direction

section. It is usually commanded by a junior lieutenant, praporshchik, or sergeant.

Artillery battalions and batteries can be "attached to" maneuver units -- usually to motorized rifle or tank battalions and companies -- or be assigned a "supporting" mission. In addition to these missions, anti-tank artillery can be "assigned" to the anti-tank reserve. Attached artillery units are subordinated to the maneuver commander and are completely dedicated to fulfill missions assigned by him. Supporting artillery units are retained under the command of the senior artillery commander, and execute those missions received from the supported maneuver unit, as well as missions received from the senior artillery commander.⁴ These two tactical missions for the basic artillery firing elements are somewhat equivalent to the US concepts of direct support and general support, respectively.

Depending on the situation and the nature of the target, the artillery executes destruction, neutralization, and harassing fire missions. All artillery assets -- to include howitzers, guns, gun-howitzers, mortars, and rocket artillery -- are designated for the defeat of the enemy's nuclear assets, his artillery, tanks, other fire power assets, combat equipment, troop concentrations, command and control points, and the destruction of strong points.

In order to fulfill its assigned tasks and combat missions, the battery deploys into combat formations. These combat formations are made up of the firing platoons deployed in the battery firing position, a command observation post, and whenever necessary, forward and flank observation posts.⁵

Firing positions are sections of terrain, occupied or prepared for the occupation of weapons, and intended for the conduct of fire. There are the main, temporary, and reserve positions, all of which can be open or concealed. Additionally, "dummy" positions are prepared for deception of the enemy. Command observation posts are for surveillance of the enemy and the terrain, battery supervision, and fire direction. The battery commander is located here, along with personnel from the headquarters platoon. The forward observation post is designated for the observation of friendly units into the forward areas, the provision of suitable communications with the supported maneuver unit, and the adjustment of fires not visible from the command observation post. The headquarters platoon leader is usually located here.⁶

Flank observation posts, when necessary, are for surveillance of the enemy and the terrain not visible from the other observation posts, for the location of targets by the intersection technique, for damage assessments, and for the adjustment of fire. The reconnaissance section leader or one of the reconnaissance scouts could be located here with the necessary observation and communication assets. Additionally, whenever required, reserve observation posts can be prepared in fixed positions or moving vehicles.⁷ All battery firing positions and observation posts must emplace engineer equipment and be thoroughly camouflaged.

Battery Movements

The basic method of movement for the artillery battery is the road march. Besides this, the battery can move by rail, water, and air transport. Regardless of the method of movement, the battery must arrive at the designated location on time and be prepared to fulfill its combat mission.

As a rule, the battery executes a road march as part of a column of artillery or combined-arms units. The road march usually occurs at night or during other periods of limited visibility, in a strictly determined order, with established vehicle intervals, along the right side of the road, and at a specific rate of speed.⁸ To depart from the column is specifically forbidden.

The distance travelled during a day-long movement for a battery might be 150-250 kilometers at an average speed of 15-30 kilometers per hour (night) or 20-40 kilometers per hour (day).⁹ It depends on the mission, personnel readiness, driver training, type of equipment and its condition, prime movers, road conditions, weather, season, and time of the day. In any event, the rate of speed during a road march is given as the maximum speed for the given conditions. In swampy terrain, mountains, and deserts the distance of the movement and average speed are reduced.

The distance between vehicles is specified at 25-50 meters, depending on the terrain and tactical situation.¹⁰ This presents a tight formation which could be relatively vulnerable to an enemy air attack or artillery strike. During a road march on terrain with steep upgrades, downgrades, and turns, the vehicle interval is increased. Likewise, during periods of limited visibility due to road dust, rain, or snowfall, the vehicle interval is decreased. When stops are necessary during a road march, the distance between vehicles is maintained.

Short and long halts are designated for the well-being of personnel, checks on the condition of the equipment, and any necessary repairs. Short halts are taken for 20-30 minutes after every two to three hours of travel.¹¹ During a road march in the mountains, short halts are designated not by time, but by the conditions along the route and the

presence of facilities and safe areas suitable for stopping. The better the battery personnel are trained in executing road marches, and the better the route, the less frequent that short halts are made. At a short halt, the formation and organization of a column are not altered, and established distances between vehicles are preserved. The column stops on the right side of the road, and the personnel dismount and disperse to the right of the roadway.

Long halts continue from two to four hours and usually occur at the beginning of the second half of a day-long movement. Day (night) rest stops are designated after the completion of the day-long move. During long halts or rests, the battery moves off the road and disperses in a designated area which should have suitable conditions for nuclear defense, support efforts for camouflage discipline and combat readiness, and allow for a quick and orderly regrouping of the column.¹² The battery personnel also receive a hot meal during the long halt. During winter nights in severe frost conditions, long halts are not taken.

When the battery executes a road march independently, a group is dispatched for reconnaissance of the route and areas for halts.¹³ For efficient and timely progress during the march and for control of speed, start points and control points are established with specific times for their passage.

While organizing the march, the battery commander gives instructions which indicate: (1) information about the enemy and friendly troops; (2) the mission and location of the battery within the march column and the column's order of march; (3) the route of march, location of the start point, control points, and times for their passage; (4) the times and locations for halts; (5) the time and location for

marshalling the unit upon completion of the march; (6) combat security measures; (7) the allocation of ammunition, rations, fuel, and lubricants; (8) the procedures for communications, control signals, and warning signals used enroute; and (9) the location of the battery commander during the move. An example of a battery commander's instructions for a road march follows:

1. The enemy is withdrawing from battle to new defensive areas on the western bank of the Green river. His assault aviation is hitting our advancing troops.
2. The battery is to execute a road march with the battalion to a new marshalling area for the future support of operations of the 5th Motorized Rifle Regiment. The order of march is headquarters platoon, 1st firing platoon, 2nd firing platoon.
3. The route of march: Koltovo, Korobovo, Bystroye, Berezki, Luzhki. Start point is the bridge across the river on the northern outskirts of Kotovo. The lead element of the column will pass there at 2000 hours, 15 August. Control points and corresponding passage times for the lead element of the column:
No. 1, at the northern outskirts of Bystroye at 2050 hours;
No. 2, at the railroad crossing right before Luzhki at 2210 hours.
4. At 2240 hours, consolidate on the southern edge of the forest which is three kilometers to the north of Luzhki.
5. Refuel vehicles and prime movers completely, and have one-fourth of the basic load with the weapons.
6. Control and warning signals are as before.
7. Report ready for the move by 1900 hours.
8. I will follow with the headquarters platoon at the head of the column.

While instructions in this example are quite comprehensive, there are too many generalities about locations, especially in view of the fact that times are so precisely specified. Additionally, vehicle interval and speed -- items so strongly emphasized in Soviet training literature -- are not mentioned. It is possible that these items are common knowledge to all drivers as a matter of standing operating procedure, but given the usual Soviet attention for such details and the range of variables in road conditions, the battery commander probably forgot these critical items.

In the course of the road march, the battery commander must: (1) maintain the established order of movement; (2) maintain surveillance with patrols; (3) immediately deploy the battery in the event of an enemy attack; (4) be concerned about the care and well-being of the battery's personnel and equipment; and (5) report to the battalion commander when any changes in the situation occur, or when crossing established control points. Contaminated areas along the route are by-passed, however, when a detour is not possible, the obstacle is crossed at maximum speed after employing contamination protection measures.¹⁵

For greater distances, artillery units can be moved by rail, water, and air transport. Before embarking, the unit arrives at a staging area; after disembarking, it regroups in an assembly area. Having received orders to move by one of the above means of transport, the battery commander organizes for the move and checks the preparation of personnel and equipment both for the move itself, as well as for all following operations. The battery commander specifies a loading plan for all personnel and equipment, and determines the sequence of loading, start time, and completion time. He then supervises the proper procedure for loading, securing, and unloading equipment with proper safeguards and precautions to prevent any damage to the equipment.

The battery must always be prepared for an unscheduled disembarkment and subsequent road march to the originally designated location. Having arrived at its destination, the battery quickly off-loads and regroups under cover in an assembly area where it prepares for its new tactical mission. Dispersed in the assembly area, the battery abides by strict camouflage discipline, organizes surveillance and takes measures for the immediate defense of the battery.¹⁶

Fire Control

The battery commander controls the fires and displacements of his unit, insures continuous preparedness for the conduct of fire, and executes continuous coordination with the maneuver elements. He accomplishes all this from the command observation post. Whenever the battery commander is displacing to another command observation post, the command and control of the unit is given to the headquarters platoon leader. As a rule, the battery commander displaces his command observation post simultaneously with the supported maneuver commander.¹⁷

In order to effectively control the fires of his unit, the artillery commander utilizes several references and documents. At the command observation post of the artillery battalion there exists: (1) an operations map posted with the unit's locations, as well as the activities of the supported maneuver unit; (2) an artillery tasking chart;¹⁸ (3) a table of computed firing data; (4) a schematic of reference points; (5) an intelligence journal; (6) a schematic for reconnaissance; (7) a journal of reconnaissance and service of fire; and (8) a communications net diagram.

At the battery command observation post there is: (1) a schematic of reference points; (2) a journal of reconnaissance and service of fire; (3) a working map; (4) a table of computed firing data; (5) a schematic for reconnaissance; (6) wire and radio net diagrams; and (7) a record for the distribution of communication assets.

The battery firing position is equipped with: (1) a record log of firing for the senior battery officer; (2) a table of computed firing data; (3) and a schematic showing the defensive measures for the position.

Additionally, at each weapon, there is: (1) a table of individual piece corrections; (2) a book of computed firing data; (3) a weapon firing card; and (4) a firing book for the crew chief.¹⁹

Calls for fire include the more familiar methods of target location. Given their wide use of reference points, the battery commander can be expected to use a shift from a known point quite frequently. Assuming his observation posts are located and plotted on the firing charts, he will also use the polar plot technique.²⁰ Use of the grid coordinate method is not widely used probably because of the lack of topographical maps; however, there are occasions for its use.²¹

There are several types of artillery fires which are utilized by batteries, battalions, and higher echelons. Batteries are able to conduct fire on targets of opportunity by piece, by platoon, or by the entire battery.²² Concentrated fires are delivered simultaneously by several batteries or the entire battalion on a single target or group of targets located within a specified and limited area. The object of this fire is the neutralization or destruction of the target. Artillery battalions can engage area targets of 500 x 100 meters.²³

Successive fire concentrations are delivered simultaneously on one target or a group of targets. These fires are prearranged, numbered, and delivered on call. A prescribed number of rounds and duration are planned for each target. Depending on the speed of the attack, the distances between successive fire concentrations are 300-500 meters if the attack is on foot, and 400-500 meters if mounted.²⁴

The rolling barrage is conducted during an attack on fixed enemy defenses or when the defenses are not sufficiently reconnoitered to determine the precise locations. Conducted up to four kilometers in

depth, it is a continuous curtain of fire shifted from one line to another. Fires are controlled using a system of primary and intermediate phase lines. The distance between primary lines is between 400 and 800 meters; intermediate phase lines are 100-200 meters apart. Fire on a primary barrage line lasts for two minutes at the maximum rate of fire, then continues at a sustained rate of fire until a signal to shift is received. Fire on intermediate phase lines is conducted for one to two minutes at the maximum rate and shifted automatically to the next phase line.²⁵

In a double rolling barrage, two artillery groups open fire simultaneously: the first group fires at the first primary line, and the second group at the second primary line. The first group shifts its fires as in a single rolling barrage. The second group shifts its fires to the next primary line simultaneously with the shift of fire by the first group to the closest intermediate or primary line at which the second group was firing. Such a procedure is maintained throughout the entire depth of the rolling barrage.²⁶

A creeping barrage fire is high density fire delivered on several successive lines in order to destroy attacking enemy tanks, armored infantry vehicles, or amphibious assault vehicles. The creeping barrage fire lines for destroying armor are designated by sectors of terrain visible from ground observation posts. The distance between lines is 400-600 meters and sometimes more, and the range of the closest line from the forward edge is 300-400 meters. On each line, battalion (battery) sectors are assigned by calculating 25 meters per weapon. A general designation is assigned to the creeping barrage fire lines in each sector (starting from the farthest line), followed by numbers in

sequential order, for example, "Lion-1," "Lion-2," or "Shark-1," "Shark-2." Fire is opened at the moment the lead tanks approach the fire line and is maintained until the main enemy force has withdrawn from the impact zone, after which fire is shifted to the next line.²⁷

In recent years, a new type of artillery fire has been discussed, most notably by General Lieutenant of the Artillery E. V. Stroganov. Out of respect for the electronic target acquisition capability of US and NATO artillery units, he recommended to employ a quicker but limited method of fire on those targets usually engaged by concentrated fires.²⁸ A "fire strike" is the highest density fire in the shortest possible time on open targets engaged by units no smaller than a battalion. The fires last three to five minutes as opposed to the 15-20 minutes usually required for effective concentrated fires.²⁹

The Sequence of Offensive Fires

The first period of offensive fires is the artillery preparation. Preparation fires, critically planned and executed, are 30-40 minutes in duration and immediately precede the attack by maneuver forces. The artillery preparation normally is initiated with a powerful, surprise-fire onslaught of all the artillery and mortars against strong points along the forward edge of the enemy's defense, and simultaneously against artillery, mortars, dug-in tanks, anti-tank weapons, command posts, radars, and reserve forces in the immediate defensive positions. A subsequent powerful onslaught, with the main mass of fire concentrated on artillery and mortar batteries, command posts, and strong points, is timed to coincide with the attack of the maneuver forces. In firing a preparation, one group of artillery units opens fire upon the forward-most

targets; a second group concurrently fires upon a second line. The first group then lifts its fire to take the second line under fire, as the second group shifts fires to the third line. This procedure is continued until the preparation has covered the depth of the enemy position. All known targets are struck at least twice, and all suspected targets at least once.³⁰

The second period of offensive fires is fire in support of the attack. It consists of concentrated and barrage fires, as well as calls for fire against targets of opportunity. As the attacking forces approach the enemy's positions, the preparation fires are halted, and fires in support of the attack commence. Soviet artillery doctrine requires continuous support of the attacking forces with artillery until the current combat mission is completed. During this period, the battery commander observes the activities of the supported maneuver units. When the maneuver commander signals, the battery commander gives the order to shift the fires.³¹

The third period of offensive fires is fire throughout the depth of the enemy's defense. Targets are planned to give uninterrupted fire support during the neutralization of successive and final objectives. Displacement of artillery units is normally required during this period and is made so that not more than one-third of the supporting artillery is out of action at any given time.³²

Battery Communications

The central nervous system of any firing battery is its communications system. The Soviet artillery battery utilizes five means of communication: radio, wire, messengers, visual, and sound. Radio is the

most important means of communication, and in many cases the only means. It is used especially for the rapid simultaneous transmission of combat orders, instructions, reports, and signals to a large number of commanders and staffs. As a defense against enemy jamming, secondary frequencies, directional antennas, and radio relay stations are used, as well as detection and destruction of the jamming source.³³

Wire communication is described mainly in terms of its disadvantages, among which are: (1) the time and assets it requires and (2) the difficulty of laying lines along unfamiliar and probably contaminated areas. Wire is used after the occupation of position by a battery, in assembly or staging areas, and in the defense. Special considerations given to wire include its vulnerability to air strikes, artillery fires, and vehicular traffic.

At the command observation post, the battery commander establishes communications with the artillery battalion commander, the supported maneuver commander, the battery firing position, and the battery auxiliary observation posts. The battery commander has two R-108 radio sets: the first is set on the battalion commander's net; the second is placed on the battery command/fire net which includes one radio with the first firing platoon at the firing position and one radio at the forward observation post. Another radio set is with the second firing platoon for reception of concentrated fires and other massed fire missions from the artillery group headquarters. In all, five R-108 radio sets are utilized by the firing battery.³⁴

The battery's wire assets are distributed as follows: (1) three telephone sets and four kilometers of wire between the command observation post and the firing position; (2) two telephone sets and one

kilometer of wire between the command observation post and the forward observation post; and (3) one telephone set and three kilometers of wire in reserve. Reserve communication assets are located: (1) at the command observation post during the offensive; or (2) at the command observation post and firing position during the defensive.³⁵

It is apparent that there are no organic assets available for communications between the battery commander and the supported maneuver commander. Therefore, to insure the necessary continuous coordination in the course of the battle, the command posts have to be co-located, or additional radio assets have to be provided from the battalion communications reserve.

Battery Preparations for the Offensive

The Sequence of Coordination

The battery commander directs his unit by combat orders, combat instructions, and combat missions. Having received a combat mission, the battery commander clarifies it and evaluates the situation during which he has to: (1) understand the combat mission and decision of the supported maneuver commander; (2) know the enemy situation; (3) evaluate the composition and condition of his own unit in terms of equipment and personnel readiness; (4) know the character of the terrain; and (5) consider the weather conditions, the season, and the time of day.³⁶

The combat mission is received during a joint reconnaissance by senior and subordinate artillery (battalion and battery) and maneuver (battalion and company) commanders. At this time, the artillery battalion commander will specify missions to his battery commanders and give instructions regarding combat security, communications, survey, the

sequence of coordination with maneuver units, the direction of fire, and ammunition supplies. Following this, the battalion and battery commanders clarify on the terrain: (1) the designations of local terrain features and reference points; (2) the missions of the maneuver units and the missions of the batteries; (3) the locations of the command observation posts and the order of movement for displacement; (4) the method of target designation; and (5) the systems of communications and signals for fire control.

Having completed the joint reconnaissance with his battalion commander and supported maneuver commander, the battery commander supervises a reconnaissance with his subordinate battery leaders. The reconnaissance is usually conducted on the site of the future command observation post. During the battery reconnaissance, the battery commander: (1) explains the friendly situation and the enemy's disposition; (2) clarifies the combat missions, the sequence of their execution, and the scheme of maneuver for the combined-arms units; (3) specifies the battery's fire missions and the method of target location to be used; (4) prepares firing charts for ballistic and meteorological corrections; (5) selects the locations of the auxiliary observation posts and the firing position; (6) prescribes a sequence of work for construction of the battery position; (7) establishes priorities for survey; and (8) allocates specific tasks for each platoon.³⁷

Once the battery reconnaissance is completed, the battery commander reports to the supported maneuver commander to receive from him the specific battery missions and tasks required for continuous support. While completing coordination with the supported maneuver commander, the battery commander advises him of the battery's locations, capabilities,

ammunition status, and time at which the battery is to be ready to fire. He also informs the maneuver commander of those firing tasks imposed upon the battery by the artillery battalion commander.³⁸

The Battery Commander's Briefing

Following the conclusion of preparatory matters with the supported maneuver commander, the battery commander reports to his battalion commander on what has occurred. After receiving his combat orders from the artillery battalion commander, as well as additional missions and instructions for coordination received from the supported maneuver commander, the battery commander assigns missions to his battery elements in the form of a briefing, an example of which follows:

To the headquarters platoon leader:

1. The enemy with elements of the 3rd Infantry Regiment, 25th Infantry Division is defending the area of hills to the west of the village of Borki, with the forward edges along the western shore of the Green river. His defensive positions are in Borki and on hill 117.5. In the forward edges, reinforced concrete positions were discovered (he points these out on the terrain).
2. The battery is supporting the 1st Motorized Rifle Battalion which has the mission to breakthrough the defense of the enemy and advance in the direction of the "Distant" woods.
3. Battery missions:
 - during the period of the artillery preparation, to suppress troops and fire power assets of the enemy -- targets 45 and 48 (he points these out on the terrain);
 - to support the attack of the infantry by means of successive fire concentrations on targets 51, 54, and 57.
4. The firing position is to the northeast of the edge of the "Yellow" woods; the observation post is here; the direction of fire is 5200.³⁹
5. Prepare the battery to open fire at 0500 hours, 15 August.
6. Upon occupying the observation posts, organize reconnaissance of the enemy in the strip between the highway and the railroad tracks. Reconnaissance tasks:
 - to specify the outline of the forward edge of the enemy's defense;
 - to scout the enemy's fire power assets which have night vision devices, launchers for anti-tank munitions, mortar and artillery batteries in the vicinity of hill 112.3, hill 115.6, and woods "Distant";

- to determine the coordinates of targets 45, 48, 51, 54, and 57;
 - to determine the presence of defensive fortifications in the vicinity of hill 117.5;
 - numbering of targets is from 40-60.
7. Preparation of firing charts is complete. Met data will be received every four hours beginning at 0000 hours, 15 August on radio net number 3.
 8. Organize wire and radio communications between the command observation post and the firing position, and when the attack starts, radio communications with the forward observation post. Have one radio set, one telephone set, and three kilometers of wire in the commo reserve; put these 200 meters from the command observation post. Have communications ready by 0300 hours, 15 August.
 9. Begin to emplace the engineer equipment at the command observation post at 1900 hours, 14 August, and complete it at 0400 hours, 15 August.
 10. Former warning signals are in effect.
 11. The nearest medical point is on the outskirts of Choshnikovo.

To the senior battery officer:

Points one through five are the same as those to the headquarters platoon leader.

6. Compute ballistic corrections and prepare for firing in accordance with previously given instructions.

Minimum elevation is 28. There is a danger of tanks along the highway. Put out an observation post in the vicinity of the burial mound to the right-front.

8. Begin to emplace the engineer equipment at 1900 hours, 14 August, and complete it by 0400 hours, 15 August. The sequence of work: dig slit trenches for the personnel, build up the weapon positions, and then conceal the prime movers.

9. Organize for salvo rifle fires against low flying aircraft.

10. Warning signals are as before.

11. The nearest ⁴⁰ medical point is on the northern outskirts of Choshnikovo.

Despite the meticulous attention to detail in the above briefing, it is interesting to note several shortcomings. First, there is no mention of any advance party to prepare the initial or subsequent positions for the battery as it displaces in the course of the battle. Second, there is no mention of the use of surveyed coordinates for battery centers, nor is there any reference to the conduct of registrations. Apparently the battery fires "cold stick," which might be acceptable for adjust fire missions. However, for the massed, fire-for-

effect results required by their fire control techniques and methods of engagement, first round effectiveness on the target might be less than the desired or necessary results.

Displacements in the Course of the Attack

During the period of support for the attack, the battery must provide continuous fire support for the maneuver elements while conducting battery displacements in a timely manner, and in step with the advance of friendly troops. In the briefing for a battery displacement, the battery commander indicates the order of march, location of the new firing position(s) and observation posts, special communications instructions for the displacement, as well as the times at which to march order and to be prepared to fire from the new position. An example of a battery commander's briefing for a displacement follows:

To the headquarters platoon leader:

Change the command observation post to the vicinity of hill 116.0. Commence the displacement at 1600 hours. Establish radio communications with the artillery battalion commander and with the firing platoons during the displacement. Conduct reconnaissance at the new command observation post in the direction of the railroad station.

To the senior battery officer:

Change the firing position to the vicinity of the hollow 1.5 kilometers to the south of the hill with the benchmark. Direction of fire is 5300. Commence the displacement at 1600 hours. Maintain radio communications with me during the move. Be prepared to open fire from the new position at 1700 hours.

Once again several shortcomings are apparent either with the briefing itself or with the doctrine. There is, again, no mention of an advance party for the firing position. This, in conjunction with a similar omission in the first battery commander's briefing, might indicate that the Soviets occupy their firing positions without any preparation

of the position -- in other words, as a "hip shoot." This seems even more plausible when one considers the second apparent shortcoming, the lack of a registration and surveyed coordinates for battery center. The effects these problems of battery location have on the overall accuracy of the battery's fires might be somewhat ballistically correctable. If targets are located to a sufficient degree of accuracy, the battery commander might be able to apply corrections to the computation of gunnery data. In any event, the Soviet battery appears more concerned with speed of firing than with its accuracy.

Given the demands of Soviet tactical doctrine for fast-moving operations, the Soviet firing battery appears to be well suited operationally for its designated task of providing continuous fire support for the advancing maneuver unit. It becomes apparent that the battery commander coordinates more directly with the supported maneuver commander than does his US counterpart. In effect, the battery commander is the unit commander, fire support officer, forward observer, and assistant battalion S-2. He is much more involved in the tactical operations of the maneuver unit. Indeed, he must be within earshot of the maneuver commander.

The methods with which the Soviet firing battery moves, shoots, and communicates coincide with the overall Soviet tactical doctrine for a fast-moving offensive operation. The thoroughness with which fire support coordination is executed at the battery level might seem somewhat cumbersome and overdone, but given the Soviet view of the vast complexities on the modern battlefield, it is an essential process. Additionally, the shortcomings discussed are not of the magnitude which might be considered a serious disadvantage of Soviet firing battery operations. On

the contrary, they are of a magnitude which can be easily overcome by the battery's proper training which emphasizes and refines those very procedures.

FOOTNOTES

- ¹The actual Soviet term is divizion.
- ²The number of weapons in a battery or firing platoon will depend on the type, size, and caliber of the weapon. For example, the six-gun battery is divided into two three-gun platoons, while the six-tube mortar battery is divided into three two-tube platoons.
- ³A senior enlisted rank which approximates that of the US warrant officer.
- ⁴V. Ya. Lebedev, Spravochnik ofitsera nazemnoy artillerii (The Field Artillery Officer's Handbook) (Moskva: Voennoye izdatel'stvo ministerstva oborony, SSSR, 1977), pp. 7-8.
- ⁵Gen. Lt. of the Artillery A. M. Sapozhnikov, "Deystviya diviziona pri proryve sil'noy protivotankovoy oborony" (Actions of the Artillery Battalion during the Breakthrough of a Strong Anti-tank Defense), Voyenny Vestnik, No. 8 (1980), p. 60.
- ⁶Lebedev, p. 9.
- ⁷Sapozhnikov, p. 59.
- ⁸Maj. G. Pischikov, "S marsha-v boy" (From the March - Into Battle), Voyenny Vestnik, No. 8 (1979), p. 37.
- ⁹Lebedev, p. 32.
- ¹⁰Col. I. Khandok, "Marsh diviziona na bol'shoye rasstoyaniye" (The Artillery Battalion's Road March over Great Distances), Voyenny Vestnik, No. 4 (1977), p. 81.
- ¹¹Col. V. Sapozhinskiy, "K planirovaniyu marsha diviziona v gorakh" (For the Planning of the Artillery Battalion's Road March in the Mountains), Voyenny Vestnik, No. 7 (1976), p. 71.
- ¹²Khandok, p. 81.
- ¹³Ibid., p. 82.
- ¹⁴Lebedev, p. 34.
- ¹⁵Khandok, p. 81.
- ¹⁶Lebedev, p. 38.
- ¹⁷Ibid., p. 16.

- ¹⁸Sapozhnikov, p. 59.
- ¹⁹Lebedev, pp. 16-17.
- ²⁰Col. A. Shulakov, "V tesnom vzaimodeystvii - zalog uspekha" (In Close Coordination - the Insurance of Success), Voyenny Vestnik, No. 8 (1979), p. 63.
- ²¹Col. E. Khorol'skiy and Lt. Col. B. Tsarenko, "Povyshaya zhvychest' batarei" (Increasing the Survivability of the Battery), Voyenny Vestnik, No. 9 (1979), p. 30.
- ²²Sapozhnikov, p. 59.
- ²³M. Andrew Hulse, "Soviet Field Artillery Tactics and Techniques," Washington, D.C., 1978 (Typewritten), p. 50.
- ²⁴Ibid., p. 54.
- ²⁵Ibid., pp. 50-51.
- ²⁶Directorate of Soviet Affairs, Air Force Intelligence Service, Soviet Military Concepts, No. 2-80 (1980), p. 382.
- ²⁷Ibid., pp. 388-389.
- ²⁸Gen. Lt. of the Artillery E. Stroganov, "Osnovoye ognevoye podrazdeleniye artillerii" (The Basic Firing Element of the Artillery), Voyenny Vestnik, No. 8 (1980), p. 58.
- ²⁹Gen. Lt. of the Artillery E. V. Stroganov, "Ognevoye udar" (Fire Strike), Voyenny Vestnik, No. 11 (1980), p. 71.
- ³⁰U.S. Army Command and General Staff College Reference Book 30-3: Soviet Artillery Doctrine (Fort Leavenworth, KS: May 1976), p. 5-2.
- ³¹Col. V. Ivanov and Col. M. Pankov, "Strogo soglasovyvat' ogon' s dvizheniem" (Strictly Conforming Fire with Movement) Voyenny Vestnik, No. 3 (1979), p. 38.
- ³²Soviet Artillery Doctrine, p. 5-2.
- ³³Lebedev, pp. 17-18.
- ³⁴Ibid., p. 20.
- ³⁵Ibid., p. 21.
- ³⁶Gen. Maj. of the Artillery V. Lutsenko and Lt. Col. M. Teselenko, "Resheniye artilleriyskogo komandira" (The Artillery Commander's Decision), Voyenny Vestnik, No. 10 (1978), p. 33.
- ³⁷Lebedev, p. 42.

³⁸Ivanov and Pankov, p. 40.

³⁹The Soviets use a 6000-mil circle, as opposed to the 6400-mil circle used in the US.

⁴⁰Lebedev, pp. 43-44.

⁴¹Ibid., pp. 45-46.

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