Tactical Reconnaissance

A Soviet View

SOVIET MILITARY THOUGHT

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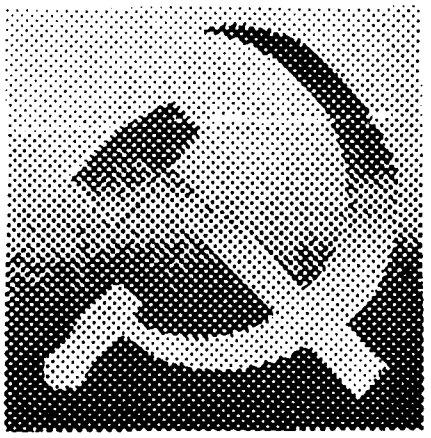

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American Editor's Comments

The very title of this work is troubling to the English-speaking translator and reader. The Russian noun *razvedka* and adjective *razvedyvatel'nyy* are based on a root *-ved* meaning "know." The same is true of the English "reconnaissance," which is related to the French verb *connaitre*, "to know." Thus, the most obvious translation of Russian *razvedka* is "reconnaissance." There is a problem, however, in that forms of *razvedka* are also used in contexts where one would expect the English "intelligence." (There is simply no one Russian word that equates exclusively to "intelligence.") Some of these do not present very great difficulties in the present work. Others, however, are in lists of various activities where translating *razvedka* sometimes as "reconnaissance" and sometimes as "intelligence" would make for rather awkward-sounding passages. Although this causes some discomfort when one reads "electronic reconnaissance" or "military reconnaissance," the editor has made the judgment that to have done otherwise would have had even more awkward results. The word "intelligence" will be used only in the following contexts:

nachal'nik razvedki	intelligence officer
razvedyvatel'nyye dannyye	intelligence
razvedyvatel'nyye svedeniya	intelligence information
razvedka after "gather, obtain, collect"	intelligence
kontrrazvedka	counterintelligence

It is probably only certain linguists who will be disturbed by one other choice made by this translator. Because of its extremely frequent occurrence in the very same sentence with *tsel'* "target," the Russian *ob''yekt* simply cannot be treated as "target," but will be translated as "objective."

The following indicates treatment of some other Soviet terms in this translation:

boyevoy poryadok	battle formation
vyshestoyashchaya instantsiya	higher echelon
vyshestoyashchiy komandir	next-higher commander

vyshestoyashchiy shtab	higher headquarters
podslushivaniye	monitoring
poisk	raid

For the convenience of the reader who finds it useful to compare the translation with the Russian original, the place where each page of the Russian text begins is marked with that page number in boldface and enclosed in brackets.

The translation and publication of **Tactical Reconnaissance** *does not constitute approval by any U.S. Government organization of the inferences, findings, and conclusions contained therein. Publication is solely for the exchange and stimulation of ideas.*

Abstract

[2] The book sets forth the role and place of reconnaissance in modern combat; its division into constituent parts; the demands made of it; the goal, missions, and objectives of reconnaissance; and the components of reconnaissance, the men and equipment, and the methods of reconnaissance.

The fundamentals of organizing and conducting reconnaissance in the main types of combat are explained.

The problems of assembling and processing intelligence information are considered.

The book is intended for NCOs and officers of the Soviet Army.

Introduction

[3] Reconnaissance is a highly important form of support. It is required to furnish the command element and staff at all levels with the information about the enemy, the terrain, and the area of impending actions that is needed for successfully preparing and conducting combat actions.

The history of wars over many centuries, especially the experience of World War II, testifies to the fact that wherever proper attention has been paid to reconnaissance, troops have forestalled the enemy's attacks and have imposed their will on him and beaten him decisively. Conversely, the reason for many unsuccessful engagements and even operations has lain primarily in poor organization of reconnaissance.

The conditions of modern combat, characterized by great maneuverability and by rapid and drastic situation changes, have even further enhanced the role and importance of reconnaissance. Moreover, a modern confrontation of adversaries roughly equal in quantity and quality of weapons constitutes a struggle primarily to attain superiority in battlefield reconnaissance, since victory will be gained by the side that can first locate and hence destroy the most important enemy objectives. In other words, in order to defeat the enemy it is necessary not only to have the weapons needed for his destruction, but also to know exactly where he is, what he is doing, what is the nature of his fieldworks, and what he intends to do. Only under these conditions is it possible to decide correctly where, with what, and how he should be hit. Without reliable information about the enemy, one cannot count on victory either offensively or defensively.

All this information is accumulated as a result of carefully organized, actively pursued reconnaissance and by the painstaking study of what are sometimes the most trivial facts (or information obtained). This, in turn, gives rise to the necessity to continuously perfect the means and methods of reconnaissance. [4]

At the present stage, the Soviet Army and Navy have modern, highly effective reconnaissance equipment with which it is possible to

locate enemy objectives (targets) quickly, to identify them correctly, and to determine their location (coordinates) with great accuracy.

However, reconnaissance equipment alone does not solve the problem of obtaining the necessary information. In order to perform the complex and manifold missions confronting reconnaissance, we also need commanders and staffs at all levels skilled in correctly and promptly organizing it and continuously and actively pursuing it in all situations and also in skillfully and quickly assembling and processing intelligence information and delivering it promptly to the authorities concerned.

This book expounds theoretical premises and practical recommendations on organizing and conducting reconnaissance in the principal types of combat.

Chapter 1. General Considerations

The Role and Place of Tactical Reconnaissance

[5] Reconnaissance to support combat on the ground, in the air, or at sea is conducted by the resources of subunits, units, and formations directly involved in this combat and also makes extensive use of information obtained by the reconnaissance elements of adjacent, cooperating, and especially higher levels of command. In other words, all forms of military reconnaissance take part to one degree or another in preparing to successfully conduct combat. Thus, in order to understand correctly the role and place of tactical reconnaissance, we must first of all describe its system as a whole and become acquainted with its components and their spheres of action as well as the way in which they interact and are interdependent.

Military reconnaissance is the sum total of the measures taken by military command elements at all levels to obtain and study information about an actual or probable enemy. It is also concerned with collecting and studying information of a political, economic, and scientific-technical nature.

Military reconnaissance is divided into three components, depending in the scale of its activity and the nature of the missions performed: strategic, operational, and tactical. Each of these is required to support a distinct area of the art of war (strategy, operational art, and tactics).

Strategic reconnaissance is carried out to secure the defense of the socialist state and to prepare and conduct strategic operations and the war as a whole, should one be unleashed by the imperialists. This purpose derives from strategy's sphere of action, which, as we know, is concerned with the theory and practice of preparing and conducting strategic operations and waging war as a whole.

Operational reconnaissance supports operational art, which is concerned with developing the theory and [6] practice of preparing and conducting modern operations of the operational field forces of the var-

ious armed services, separately as well as in concert. The purpose of operational reconnaissance is to obtain intelligence to support the preparation and conduct of operations.

Tactical reconnaissance supports the combat actions of troops at the tactical level. The information it obtains is used to prepare and successfully conduct engagements.

All components of military reconnaissance— strategic, operational, and tactical—are closely connected and interdependent. They obtain and study, on their respective scales, data on an actual or probable enemy and on the terrain and region where combat actions are being or are expected to be conducted. The information they obtain is mutually complementary and aids in the performance of the overall mission facing military reconnaissance as a whole. Thus, the intelligence obtained for operational and even strategic purposes is used widely in the interests of an engagement, and the data of tactical reconnaissance are very important for operational and strategic reconnaissance elements. Some of them, for example the numerical designations of opposing enemy units and formations, and technical specifications of new models of enemy weapons, are equally important to tactical, operational, and strategic reconnaissance. A certain portion of the data may be only of negligible interest to tactical reconnaissance, whereas, for operational and especially strategic reconnaissance elements, it can be extremely important. Such data may include, for example, information of a political and economic nature obtained by interrogating prisoners or questioning local inhabitants.

The Requirements of Reconnaissance

Reconnaissance must meet the following basic requirements: it must be purposeful, continuous, aggressive, timely, and secure and it must be reliable and accurate in the acquisition of intelligence and in the determination of the coordinates of reconnoitered objectives.

Purposefulness. The essence of this most important requirement consists in the strict subordination of all reconnaissance measures to the purposes of supporting the preparation and successful waging of combat and the accomplishment of the specific missions confronting the troops at one stage or another of the engagement and also [7] in concentrating the reconnaissance efforts on the main axis and on the discovery of the most important objectives. The intelligence obtained must first of all meet the needs of the commander organizing the engagement. Only then will it be of practical value. For example, if a subunit or unit is preparing to overcome an enemy support zone, it will need information

about this area—the enemy resources deployed there, their grouping, fire plan, and engineer preparation—for the successful accomplishment of the mission. When a subunit or unit is being prepared for an airborne assault landing, intelligence is needed regarding the enemy and the terrain in the designated landing area and its approaches. In the latter case, the enemy support zone is of no interest.

The Great Patriotic War is full of examples of thoroughly conceived and purposeful work by commanders and staffs in organizing reconnaissance, ensuring a high level of efficiency on the part of its men and equipment. We know, for example, that the overall zone of advance of the 1st Belorussian Front in the Vistula-Oder Operation was 230 kilometers. A breach of the German fascist defenses was achieved in three sectors whose total front came to 34 kilometers. Ninety percent of all artillery reconnaissance resources were concentrated in the breached sectors. This made it possible, in cooperation with troop and engineer reconnaissance, to determine with great accuracy that the enemy here had 130 artillery and mortar batteries, 57 antiaircraft batteries, 1,480 direct fire positions, 245 fire positions under cover (pillbox type), 406 covered shelters, and 154 observation posts. The effectiveness of the actions by reconnaissance made it possible to fully accomplish all its missions.

Experience in the Great Patriotic War also testifies to the fact that the attempt of some commanders and staffs to shed light equally completely on all aspects of enemy activity, on all objectives on all axes, led to fragmentation of reconnaissance resources and failure to accomplish their assigned missions.

Under modern conditions of conducting combat actions in dispersed formations, when the number of objectives subject to reconnaissance increases sharply, adherence to the principle of purposefulness becomes even more important. Purposefulness is achieved by correctly defining the missions, objectives, and areas of reconnaissance; by conducting reconnaissance according to a uniform plan; by concentrating efforts on [8] accomplishing the main missions; and also by assembling all intelligence information at a single center—the staff. Purposefulness in reconnaissance also depends greatly on its flexibility, i.e., on the ability of the reconnaissance elements to react promptly to changes in the situation and to transfer their efforts quickly to objectives that are of greatest interest to the commander at the given moment.

Continuity. Reconnaissance must be conducted not only purposefully, but also continuously: at all seasons of the year, around the clock, in any weather, in all situations, and in all forms of troop combat activity, until the enemy is wholly defeated.

Wherever this requirement is not observed, victory will be difficult to attain. Here is an example from experience in exercises. At dawn, after hitting the "enemy" with a fire strike, subunits of one of the sides, firing on the move, stormed forward. The attack was swift and concerted. Success in the engagement, was apparently assured. But what was this Nobody was found in either the first or the second fighting trench. The "enemy" had withdrawn earlier. The fire strike had hit a vacant area.

"Where is the 'enemy'?" the exercise director asked the subunit leader. However, this turn of affairs was completely unexpected for the subunit leader. He had known from the reconnaissance that the "enemy" was dug in on the side of the hill being attacked. He had known his strength, composition, and grouping. On the evening before the offensive he had personally observed the defenses and had seen nothing suspicious in the behavior of the "enemy."

The unexpectedly vanished "enemy" opened a heavy fire on the attackers, forcing them to go to ground. The attack was broken up because the attackers had forgotten the necessity of conducting continuous reconnaissance with all possible means. Instead, they had confined themselves to periodic observations which, incidentally, were greatly weakened at night, so that the defenders were able to remove their troops and weapons unnoticed, protect them against the fire strike, and take actions against the other side that led to the breakup of the offensive.

Experience shows that reconnaissance arrangements must not be restricted just to some period of preparation or conduct of an engagement. Commanders and staffs must conduct continuous reconnaissance to the entire depth of the enemy's position and throughout the engagement, combining the efforts of all reconnaissance resources for this purpose, and coordinating these efforts in terms of time and objectives so that one form of reconnaissance is complemented by the others. [9]

Aggressiveness. The experience of past wars shows quite clearly that, all other things being equal, success in reconnaissance is achieved by the one who operates the more aggressively and decisively. The process of obtaining intelligence on the battlefield is always accompanied by a struggle with an enemy who is trying in every way to place various obstacles in the way of our reconnaissance activity, so as to deny it the chance to accomplish its mission and, at the same time, to create a false picture of the position, state, actions, and intentions of his own troops.

In conflicts between two belligerents pursuing opposite interests, reconnaissance can accomplish its mission only if it displays great aggressiveness and overcomes the enemy's opposition.

Aggressiveness in reconnaissance is achieved by the skillful exploitation of its various resources, and by the extensive manifestation of initiative, quick-wittedness, resourcefulness, decisiveness, and daring on the part of the subunits conducting reconnaissance.

Timeliness. One of the important demands made on reconnaissance is that it must be timely. The necessary intelligence information must be known to the commander by a set time, so that he will be able to foresee the nature of the actions the enemy is about to undertake, make (or update) decisions promptly, and make effective use of his nuclear and fire weapons and of his electronic jamming equipment. The most valuable information will be useless if the commander gets it too late.

Today the time factor in reconnaissance has become crucial. This is because the combat situation will change extremely rapidly, and data obtained a few hours and even a few dozen minutes before will be obsolete and will not correspond to the situation that has actually taken shape at the moment the decision is made.

In one exercise a reconnaissance party led by Senior Lt. Khalikov discovered a concentration of tanks in an "enemy" position. The officer reported this to his superior. But when the artillery opened fire on this area, there were no tanks there. Nevertheless, there was no error. The target coordinates had been determined correctly and the fire strike had been accurately placed. It turned out that too much time had elapsed in transmitting, evaluating, and reporting the intelligence to the commander. During this time the "enemy" **[10]** had succeeded in moving the tanks to another area. As a result, the artillery wasted ammunition and the "enemy" suffered no losses. Thus, under the conditions of modern combat it is not enough to organize and carry out continuous, aggressive, and purposeful reconnaissance. It is also necessary to reduce the time taken to carry out reconnaissance missions and to transmit and process the information obtained.

Security. Security consists in keeping strictly secret everything done toward organizing and conducting reconnaissance and the concentration of its main efforts. This is because the nature of reconnaissance activities is one of the important factors enabling an enemy to discover the concept of action of the forces on whose behalf it is conducted. Therefore, the enemy regards our troops' reconnaissance resources as one of the primary objectives against which a struggle must be waged unceasingly. This principle is reflected in the manuals and regulations of the armies of all the leading NATO countries.

Consequently, so that an enemy cannot exploit our reconnaissance activity as a sign revealing the concept of action of our forces and also to guard these reconnaissance resources against unwarranted losses, strict observation of the principle of security is needed. This consists in maintaining secrecy, when reconnaissance is being organized, on such matters as movement of reconnaissance resources into their areas of deployment, action in the area of the reconnaissance objective, and communication at the time of reception of information from the reconnaissance resources. It is important to conceal, not the fact itself that reconnaissance is being conducted, which is virtually impossible to attain, but its scale, its specific missions, objectives, and methods of conducting it, the axis of concentration of the main efforts, and the areas of deployment (actions).

Reliability of intelligence and accuracy in determining the coordinates of objectives (targets). The quality factor of reconnaissance, its reliability, is extremely important. Poor reliability of the information obtained has always resulted either in the loss of the engagement or, at best, in unwarranted losses and delays in achieving the enemy's complete defeat. A correct decision leading to success in combat can only be based on reliable information.

Today the enemy, in order to mislead our reconnaissance with regard to the true position of his resources and his concept of action, will carry out a number of quite varied counterintelligence and camouflaging measures whose meaning we will have to discover.

Reliability of intelligence is achieved by careful study, comparison, and cross-checking [11] of data obtained from various sources and, where necessary, by conducting a final reconnaissance in order to discover in time any steps taken by the enemy to mislead and conceal.

For the effective employment of available weapons it is necessary to have accurate information on the coordinates of enemy objectives at all depths within the range of these weapons. Without such data, fire strikes will either be made on unoccupied places, or the targets will be hit only if a great amount of ammunition is expended.

Accuracy in determining coordinates of objectives depends on the level of training of reconnaissance subunit personnel and also on the use of the most sophisticated reconnaissance means and methods.

The appearance of new means of armed conflict and the associated changes in the nature of combat actions places increased demands on reconnaissance, complicates the conditions for conducting it, and makes

it necessary to call on many different reconnaissance resources to carry out the missions confronting it.

The Goal, Missions, and Objectives of Reconnaissance

The goal of reconnaissance is the final result that it must achieve as a result of the actions taken by the resources to accomplish their assigned missions. The goal of reconnaissance depends on the nature of the engagement, the content of the combat missions to be carried out by the troops and the conditions under which they are conducted, and the extent of knowledge about the composition and grouping of the enemy's resources and his probable concept of impending actions. The gathering of information by reconnaissance makes it possible, on the one hand, to eliminate the surprise factor in enemy actions and, on the other, to ensure the timely and effective employment of friendly resources to quickly carry out the combat mission.

In the course of achieving this goal, reconnaissance must perform a number of difficult and varied missions and obtain reliable information about numerous enemy objectives. First of all, it must establish the location and nature of the enemy's actions, his forces and their composition, the numerical designations of units and subunits, their fighting efficiency and intentions.

Among modern means of armed conflict the most powerful weapons, of course, are nuclear weapons. Their effective use on the battlefield permits infliction of heavy losses in personnel and combat equipment on the enemy within a short time, suppression of strongpoints, [12] and demolition of fieldworks and other objectives, and at the same time has a strong effect on troops' morale.

This circumstance has posed two equally important problems for the belligerents: first, the problem of not allowing the enemy to employ his nuclear weapons effectively and, secondly, using one's own nuclear weapons in order to strike the most important objectives, whose destruction will result in quick defeat of the enemy. The solution to the first problem and, in part, to the second as well depends primarily on timely location and destruction of the enemy's nuclear weapons.

Therefore, the most important and primary mission of reconnaissance in modern combat is the timely location of the enemy's nuclear weapons and the maintenance of continuous observation of them right up to the time they are destroyed. The main efforts of the reconnaissance resources of all types are concentrated on performing this mission. Nuclear weapons reconnaissance includes location of nuclear delivery means,

missile and nuclear artillery guidance and control systems (equipment), as well as nuclear ammunition dumps and assembly points. Nuclear weapons must be located and destroyed before they are put into action.

However, enemy offensive nuclear weapons [*sredstva yadernogo napadeniya*—U.S. Ed.], despite their major importance, are not the only objectives against which fire strikes are to be made. In order to neutralize the effectiveness of the enemy's fire, it is also necessary to discover the locations of all other fire weapons: field and antiaircraft artillery, mortars, antitank guided missiles, antitank artillery, dug-in tanks, and, at the subunit level, even machine guns, grenade launchers, and small arms.

A characteristic feature of the modern battlefield is the extensive amount of electronic equipment. For example, a German fascist army division in World War II had about 150 radios of all kinds, while a modern West German motorized infantry division has more than 3,500, which are found as troop control equipment in every military echelon, without exception, from the squad (or crew) upward. Timely observation and destruction (or suppression) of this equipment can deny the enemy the chance to use his nuclear and other weapons, and [13] can also aid in gaining a more complete picture of the disposition of enemy resources on the battlefield and in establishing the systems of control of units (or subunits) and their weapons.

In the past it was mainly operational and strategic reconnaissance that was concerned with locating the base airfields of enemy aviation, determining the number and types of his aircraft, and also with continuously observing the activity of his air force. The participation of tactical reconnaissance in this mission was limited to conducting visual observation of flights of enemy aircraft over our troop dispositions as well as carrying out certain missions of the operational command element to do with discovering and destroying the enemy's aircraft on his nearest airfields.

Today, because of the widespread introduction of army aviation by foreign armies into all combined arms formations and even units, the situation has changed radically. The location of air force bases and determination of the numbers and types of aircraft and helicopters has become one of the most important missions of tactical reconnaissance.

In the attempt to preserve their units and subunits, both sides will take various steps to protect their troops against nuclear weapons. Hence discovery of the details of these measures, and the time and place of their execution, is one of the primary missions of all forms of reconnaissance.

Extensive use by both sides of nuclear weapons radically changes the entire situation on the battlefield. Besides hitting troop groupings and other objectives, the infliction of nuclear strikes inevitably results in enormous destruction, large fires and flooding, as well as the creation of broad zones of radioactive contamination—all of which will have a great effect on the nature and methods of the actions of units and subunits.

These circumstances impose on reconnaissance the additional missions that provide for obtaining information on the radiation situation and on the basic parameters of the nuclear blasts as well as information about the zones of destruction and contamination. Without such information, it is impossible to make a correct decision about bypassing and negotiating these zones.

Reconnaissance must also bring to light any new weapons and new procedures and methods by which the enemy conducts combat actions. It will thus be carrying out its missions under highly dynamic conditions of combat actions, frequent and abrupt changes in the situation, and the dispersal of enemy battle formations over a wide area and also when [14] he employs modern means of camouflage and deception extensively.

The commander will make the above reconnaissance missions specific in each separate case on the basis of the situation at hand, the nature of the missions to be carried out by the subunit (unit), the enemy's actions and the amount of information available about him. In the course of an engagement, entirely new missions may arise whose accomplishment requires not only the allocation of additional reconnaissance resources, but also the redirection of its main efforts to a new sector.

While the assigned missions are being carried out on the battlefield, data are obtained on specific enemy objectives and their coordinates are determined with the necessary accuracy to provide for making fire strikes against them.

The term "reconnaissance objectives" usually means the enemy's resources, his fieldworks, and terrain features presenting a danger to our troops or having some military significance. An objective may consist of one or more important elements, whose destruction will put it completely or partially out of action. An artillery battalion, for example, has four elements—three fire batteries and a fire control post—whereas a dug-in tank or a radar has only one element.

Depending on the size and nature of their disposition on the terrain, objectives may be classified as pinpoint, diffuse, and linear.

Pinpoint objectives are those that consist of one or more elements concentrated at a single point (an artillery system in the fire position, a radar site, a dug-in tank, a ship, a bridge across a medium-size water obstacle, etc.). In order to destroy these objectives, reconnaissance must determine their exact coordinates.

Diffuse objectives usually consist of several elements situated within a certain area at appropriate distances from each other. For the destruction of diffuse objectives, reconnaissance determines the configuration and size of the objective, its composition, the principal elements and their coordinates, the nature of the disposition of the elements of the objective on the terrain, and the extent of their concealment and cover.

Linear objectives are columns of troops on the march or columns of troops spread along routes of advance and also pipelines, communications lines, bridges across [15] large water obstacles, etc. For their effective destruction, reconnaissance is required to establish the position of the most important elements of these objectives and their vulnerable points.

Depending on their mobility, objectives are divided into three groups: mobile, semimobile, and stationary.

The first group includes objectives capable of changing their location within hours or minutes (subunits and units of missile, tank and mechanized troops, artillery, etc.). Continuous observation of such objectives is required, and before fire strikes are made against them, a final reconnaissance must be carried out.

The second and third categories include objectives whose positions remain the same over a considerable period or do not change at all. Examples are storehouses, airfields, fixed radar and navigation posts, communications centers, bridges, etc. Objectives of this type are reconnoitered in advance and may be subjected to fire strikes without final reconnaissance.

If the above objectives are to be attacked effectively, they must be detected and identified and their locations must be determined. Detecting means establishing the fact that there is such an objective (target), and identifying means determining its nature and size, while locating means determining the coordinates of the objective or its orientation in relation to a known point.

The Components and Resources of Reconnaissance

A component of reconnaissance is a constituent of military reconnaissance that has basically its own sphere of actions and its own resources.

The resources of reconnaissance consist of the organic reconnaissance subunits, the subunits of the combat arms, combat service support troops, and support services allocated for reconnaissance work as well as the reconnaissance and combat equipment and the means of transport with which these subunits carry out their missions.

At present, military reconnaissance is made up of the following components: ground, air, naval, and special. The U.S. military also lists space reconnaissance.

GROUND RECONNAISSANCE

Ground reconnaissance is the principal component of reconnaissance of the Ground Forces and is divided, in turn, into troop, communications, electronic, radar, artillery, engineer, radiological, and chemical reconnaissance. **[16]**

Troop Reconnaissance

Troop reconnaissance is carried out by organic or temporary subunits (parties), designated to gather intelligence information on the battlefield. They include, for example, observers, observation points and posts, subunits (parties) for carrying out probing patrols and raids and setting up ambushes, patrol squads (patrol crews), combat reconnaissance patrols, independent reconnaissance patrols, reconnaissance detachments, officer reconnaissance patrols, and reconnaissance parties. A unit or subunit may be given the mission of conducting reconnaissance in force.

Communications and Electronic Reconnaissance*

Communications and electronic reconnaissance are carried out with electronic equipment. Depending on the equipment used and the sources from which the intelligence information is obtained, it is subdivided into communications reconnaissance and electronic reconnaissance.

*[The first of these two terms is *radiorazvedka*, literally 'radio reconnaissance,' which is approximately equivalent to western COMINT or communications intelligence. The second term, *radiotekhnicheskaya razvedka*, 'electronic reconnaissance,' approximates western ELINT or electronic intelligence—U.S. Ed.]

Communications reconnaissance obtains information about the enemy by intercepting the transmissions and finding the position of his operating radios with radio-receiving equipment and other electronic equipment. Sources of information for communications reconnaissance are operating enemy radio and radio relay sets.

By analyzing intercept data and by discovering the typical features in the operation of transmitting radio and radio relay sets and their location and subordination, communications reconnaissance—in cooperation with other reconnaissance resources—can locate the enemy's offensive nuclear weapons and his control system, can determine his composition, grouping, and the nature of his actions and intentions and can prepare the data needed to disrupt the operation of enemy electronic equipment.

Communications reconnaissance was used widely in World War II. The information thereby obtained was exploited in developing new fighting equipment, planning and conducting combat actions, and organizing countermeasures against enemy radio equipment.

At present, the functions of communications reconnaissance have been expanded and its role and importance enhanced.

Reconnaissance is carried out by a radio intercept site. It gathers intelligence information by detecting the enemy's operating [17] radio and radio relay sets, intercepting their transmissions, and training radio direction-finders on them.

A radio intercept site has one or two ultrashortwave radio receivers, a tape recorder, and operating personnel. Interception means the accurate recording (copying) of enemy conversations and communications. A radio intercept site can keep watch on enemy radio nets.

Every radio direction-finding site has an ultrashortwave radio direction-finder and operating personnel for it. Direction-finding consists in detecting radios in operation and determining their bearings. From the intersection of the bearings from two or three direction-finding sites, the area where an operating radio is situated can be determined. Angles of intersection of radios of between 30° and 150° are considered to be the most favorable ones (figure 1).

In the ultrashortwave band, reception range is confined to line of sight, the magnitude of which depends on the altitude of the station to be reconnoitered and the height of the antennas of the communications reconnaissance system. Within line of sight, the range of communications reconnaissance depends mainly on the type and parameters of the

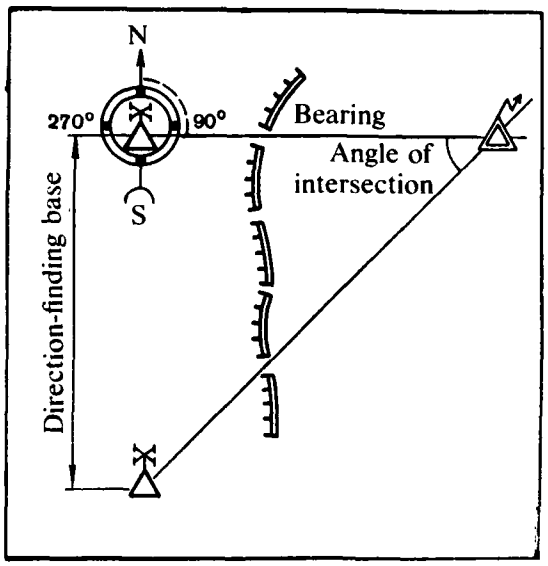

Figure 1. Diagram Illustrating the Principle of Direction-Finding.

electronic [18] equipment of the communications reconnaissance system. In the shortwave band, communications reconnaissance detects the operation of radios hundreds of kilometers away.

To carry out reconnaissance, subunits deploy in a battle formation appropriate to the combat mission assigned and terrain conditions. Radio intercept positions and radio direction-finders in the ultrashortwave band are moved as close as possible to the enemy's forward edge, but in such a way as to avoid being hit by small-arms fire and being directly observed by the enemy from his ground observation points.

Terrain relief, terrain features, vegetation cover, and meteorological conditions all have an important effect on the propagation of ultrashort waves. Consequently, the choice of sites to set up radio intercept and radio direction-finding posts, together with the most effective types of antennas, is crucial.

Obstructions in the immediate vicinity of communications reconnaissance equipment have a particularly strong effect on its operation. Therefore, locating the posts near steep slopes, embankments, metal structures, or communications or power transmission lines is not recommended.

During a march, radio intercept posts, as a rule, carry out reconnaissance on the move. As they approach the enemy, they can detect

and intercept the operation of the radios of his reconnaissance elements, his march security, and then his columns of advancing troops.

To deploy communications reconnaissance posts (or subunits) as quickly as possible in the initial stages of a meeting engagement, it is recommended that they be operated directly behind the forward subunits.

On the offensive, communications reconnaissance may determine the presence and location of enemy nuclear weapons and preparations for their use; the enemy's grouping, composition, and fighting efficiency and the nature of his actions; the extent to which his defenses have been suppressed; the lines and strongpoints at which the enemy may put up resistance; the areas of concentration of the nearest reserves, the time of their forward movement, and their purpose; control posts, radio and electronic equipment.

On the defensive, communications reconnaissance determines the grouping of enemy troops, establishes the areas of deployment of his missile units and artillery, the location of control posts, the location of reserves and the nature of their actions, the movement of offensive nuclear weapons and artillery, [19] and the location of communications centers and electronic equipment.

The introduction of radar and the importance of the missions it performs have made it necessary to develop electronic reconnaissance. Electronic reconnaissance gathers intelligence about the enemy with special electronic equipment by detecting the operation of radar equipment, by receiving and analyzing transmissions, and also by taking bearings on radar equipment in operation.

Today, the role of electronic reconnaissance has increased considerably and will become even more important in the future. This is because troops are now equipped with a large number of radars, guided missile vectoring systems, and radio navigation systems.

In order to carry out electronic reconnaissance, electronic intercept posts are deployed as close as possible to the enemy's forward edge.

When positions (areas) are selected for the deployment of electronic reconnaissance sites (subunits), it should be kept in mind that the effective range of ground-based electronic equipment depends on the radiation intensity of the radars monitored, on the clearance angle of the set, and on the position (direction) of the beam from the radar in relation to the electronic [intelligence] sites. Consequently, the sites will be situated, wherever possible, on high ground, so as to ensure line of sight

of as much of the area of reconnaissance as possible and to avoid their being screened by terrain irregularities and by terrain features in the immediate vicinity of the sites.

When a mission is assigned, the commander of an electronic reconnaissance subunit is given information about the enemy and the way in which he uses his radar equipment, on the reconnaissance mission, on the allocation of resources to objectives, on the places (positions) of deployment of resources, and on the direction of movement, cooperation and communication procedure, the times and procedure for giving reports, and the readiness time for reconnaissance.

The following are some electronic reconnaissance missions: the discovery of enemy radar dispositions and the determination of their purpose and subordination, their zones of operation and their combat characteristics. On the basis of the information obtained, the locations of enemy battalion defense areas, field artillery battalions, and aircraft landing fields [20] are determined and the areas and axes of action of reconnaissance subunits, formations, and units are discovered.

Success in electronic reconnaissance and the completeness and reliability of the information it obtains are achieved by aggressive, purposeful reconnaissance, by concentrating resources on the main axes and on the most important objectives, and by the effective employment of all electronic reconnaissance equipment, by a high level of training of the personnel operating the equipment, by the correct choice of locations for their deployment, and by the rapid, high-quality processing of the information obtained and its timely delivery to the command element and also by the skillful organization of cooperation within the electronic reconnaissance subunits (units) and with other reconnaissance resources.

Radar Reconnaissance

Radar reconnaissance is conducted with radars to obtain information about the most important enemy objectives. It can determine the composition, location, and nature of actions of targets on land, at sea, and in the air. In addition, radar can establish the areas of enemy missile and artillery fire positions, as well as their coordinates, and can reveal the locations of many other targets.

Radar reconnaissance action is based on exploiting the phenomenon of electromagnetic reflection from an object that is irradiated by the radar transmitter and on fixing the reflected signal on a display. The angular coordinates of an object can be determined by the direction that

the reflected signal comes from, and its distance is judged by the time the signal takes to go from the radar to the object and back again.

Radar reconnaissance is carried out by radar sites and radar operating crews. A radar site in the air defense system may include two or three radars.

The principal radar reconnaissance procedures are radar scanning (searching) and radar observation (target tracking).

Some advantages of radar reconnaissance are its great operational range and its high accuracy in the determination of the current coordinates of objects in real time at all times of the day or night and in any kind of [21] weather. Disadvantages in the operation of radar reconnaissance may be poor resolution in terms of direction, the possibility of its operation being discovered by enemy electronic reconnaissance, and its susceptibility to jamming.

During World War II, the use by the armies of the principal belligerents of a relatively small amount of radar equipment had a fundamental effect on the way in which combat was pursued, especially by such armed services as air defense, air forces, and navies. Radar equipment was used to detect and obtain the coordinates of targets in the air and at sea, to direct fighter aircraft and aim antiaircraft guns, and for the gun-laying of shore and ship artillery. Because of intensive overall progress in electronics after World War II, the radar equipment of the armies of many countries developed rapidly.

Radar reconnaissance quickly earned general recognition because of its considerable effective range and the possibility of determining the coordinates of targets with great accuracy and of operating around the clock and in rain, fog, and under heavy overcast, i.e., when optical instruments could not be used. Moreover, information is obtained on the enemy almost instantly and is picked up at ranges that are inaccessible to optical and other instruments. It is just this circumstance that has determined the extensive introduction of radar reconnaissance equipment into service. It is sufficient to note that in an American division as presently organized there are more than 60 radars of all types.

In terms of purpose, radars are divided into the following main groups: radars for detecting air targets, radars for detecting ground targets, radars for fixing the fire positions of firing mortars, artillery guns, and missile launching equipment, radars for radar mapping, and so on.

Air target reconnaissance radars may have various operating ranges. These radars, issued to the air defense forces, assure detection of air

targets in flight; their identification; [22] determination of their direction, altitude, and flight speed; numbers and types of aircraft; and their coordinates at the time of detection.

Radars for detecting targets on the ground permit one to determine the polar coordinates of moving targets and the direction of the motion when there is radar line of sight of the targets from the position of the radars and also to determine the general nature (type) of target. Depending on their technical specifications, radars are of two main types, namely short and intermediate range.

According to the foreign press, short-range radars are designed to scan, detect, and identify moving targets at the following distances: a crawling soldier at 1,300 meters, a walking soldier (or group of walking soldiers) at about 5,000 meters, a moving motor vehicle (or tank) at about 10,000 meters. An intermediate-range radar is designed to scan, detect, and identify moving targets at a range of about 18,000 meters. Specifically, a crawling soldier is detected at distances of about 6,500 meters; armored infantry personnel carriers, tanks, and trucks, at about 18,000 meters.

The latter category also includes radars for acquiring a fix on the fire positions of mortars and artillery guns. They can determine several position points of a mortar bomb (shell, rocket) on the ascending part of its trajectory and thereby establish the location of the fire positions of mortars and artillery batteries as well as the launching positions of unguided missiles. These radars are also used to adjust the fire of mortars, artillery guns, and unguided missiles.

Radars for detecting moving targets on the ground and those for acquiring a fix on the fire positions of mortars and guns are included in the armament of units and subunits. In the U.S. Army, for example, every motorized infantry battalion has four radars and every artillery battalion has one. These radars enable them to carry out observations on the battlefield to a depth of 18–20 kilometers.

Moving target reconnaissance radars are used mainly to conduct reconnaissance at night or under conditions of poor visibility (haze, fog). They can also be used effectively in the daytime.

An important factor in the effective use of radar is the correct selection of its deployment position. The position is chosen on the basis [23] of the mission assigned, the enemy's position, the nature of the terrain, and the weather. However, in all cases it must satisfy the following requirements as fully as possible: it must provide a maximum field of radar observation of the designated zone (area) of reconnais-

sance; there must be cover for the radar and its crew and other equipment; and it must allow for rapid establishment of communications with the immediate superior.

As a rule, radars occupy positions on commanding heights within the position boundaries of the formation, unit, or subunit to which they belong, in areas comparatively free of such terrain features as trees, bushes, or buildings, which distort a radar beam and reduce the accuracy of determination of target range and azimuth. However, since the enemy may detect and open fire on them, placing them near important objectives (structures) is not advisable.

In order to fully exploit the range of every radar, it should be placed as close as possible to the forward edge in an emplacement and should be camouflaged in accordance with the conditions of operation. At the same time, the position and operation of every radar must be closely adapted to the location and to the activity of other radar equipment and observation elements.

After its deployment, the radar is immediately lined up and put into operation. Lining up is done in terms of azimuth and range. The radar's location is entered on a map. The lining up of the radar and the assigning of objectives (areas) for its observation must be carried out, as far as possible, in daylight.

A sector for observation is assigned to each radar. This takes into account the nature of the terrain, the opposing enemy forces, and especially objectives to be reconnoitered, the capabilities of the system, and the necessary or desirable degree of overlap of sectors. The following points are given to the crew of the radar (radar site): brief information about the enemy and about friendly forces within the scope of the missions to be carried out by the crew; main reconnaissance missions (what objectives to observe, in what sector or axis, and for what purpose); sector (or zone) of reconnaissance and areas for special attention; locations of main and alternate positions and procedure for occupying and leaving them; procedure for cooperation with adjacent radars; [24] procedures for engineer preparation, topographic survey, and communications with the command observation post; readiness time and time for conducting reconnaissance; procedure and deadlines for reporting data on targets discovered.

The sector (or zone) of reconnaissance for each crew (or post) is determined by the distinctive reference points on the map and on the terrain. Each radar is assigned a principal reconnaissance sector, whose width corresponds to the radar's surveillance sector, and several additional ones also equal to the surveillance sector.

Alternate positions are assigned in case it is necessary to abandon the main position. Every radar must have alternate positions. Positions for radars are selected far enough from the forward edge to avoid their destruction by enemy small-arms fire.

On the basis of a topographic survey made after selection of the position, the crew leader draws up a plan of reference points that acts as a working document for the radar. All the topographic survey data are represented in the plan, and the necessary explanations are given in a legend. Besides the plan of reference points, the crew leader produces a working case map on which are entered the enemy's forward edge, the position of the radar, the reconnaissance sectors, the area(s) of special attention, the dead ground, and reconnoitered movement routes of targets.

The crew leader reports all acquired information immediately or at designated times, depending on its importance. He indicates the coordinates of detected targets, their locations in relation to a known reference point, their azimuths and distances. In addition, the operator reports what kind of target, in his opinion, is involved (personnel, wheeled or tracked vehicles, etc.).

These are the main missions entrusted to the reconnaissance resources of surface-to-air missile subunits: the timely detection, identification, and determination of the nature of the flight and of the combat actions of aircraft and missiles, the number of targets participating in the flight, their composition, the interval and distance between targets, speed and direction of flight, the structure of battle formations, the nature of the maneuver, etc. The main efforts of reconnaissance are directed toward timely determination of the locations of aerial targets and their characteristics, the detection of small, low-flying and high-flying targets, as well as jamming equipment operating under cover. [25]

Artillery Reconnaissance

Artillery reconnaissance is carried out by the artillery reconnaissance and fire subunits using optical and optoelectronic instruments, sound ranging, radar and electronic equipment, as well as other instruments.

Artillery reconnaissance is also carried out by artillery reconnaissance parties and with spotter helicopters.

Artillery reconnaissance is entrusted with the following main missions: detecting and determining the coordinates of offensive tactical nuclear weapons, field and antiaircraft artillery, mortars, tanks, antitank

weapons, control posts, observation points, electronic equipment, and other important targets; determining the locations of strongpoints and the nature of enemy defensive installations, obstacles, and fire plans; final reconnaissance of objectives (targets) selected for strikes by missiles and artillery fire, support of artillery aim and checking the results of its fire, reconnaissance of terrain on the routes of missile and artillery subunits (units) and in the areas of their deployment into battle formation.

Artillery reconnaissance includes optical, sound ranging, radar, and electronic reconnaissance as well as reconnaissance by artillery reconnaissance parties, by artillery fire, by spotter helicopters, and so on.

Optical reconnaissance is carried out from observation posts on the ground, using optical and optoelectronic instruments in their line-of-sight ranges.

Optical instruments include field glasses, periscopic artillery directors, artillery periscopes, stereoscopic range finders and reconnaissance theodolites. With good visibility and in open terrain, these instruments enable reconnaissance to be carried out to a depth of about 10 kilometers and more and permit highly accurate determination of the coordinates of targets discovered.

For detecting enemy sources of infrared radiation, infrared binoculars are used as well as more complex optoelectronic instruments, namely night vision devices and attachments for stereoscopic range finders and reconnaissance theodolites. **[26]**

Optical reconnaissance has many advantages. These are, first and foremost: rapidity of deployment of observation posts; ease of handling and operational reliability of the observation instruments; and ability to determine rapidly and accurately the coordinates of detected targets, reference points, check points and the bursts of friendly artillery and mortar rounds. At the same time, it must be kept in mind that conducting optical reconnaissance, especially in depth, depends on terrain relief and weather conditions. (In fog, rain, or snow, the possibilities of optical reconnaissance are greatly curtailed.)

To conduct reconnaissance, optical and optoelectronic reconnaissance instruments are assembled at the observation posts, which, depending on their purpose, are classified as command observation, observation, or auxiliary observation posts. They are usually situated together with the observation posts of the combined arms commanders or in their immediate vicinity.

The subunit leader is at the command observation post. From this point he directs the fire of the unit, conducts reconnaissance and observation of the enemy and the actions of friendly forces.

Auxiliary observation posts may be forward or flank posts. They are set up in order to study more fully those sectors of the enemy's disposition that are not visible or are poorly observed from command observation posts and also to provide closer communications with the combined arms subunits and for the correction of artillery fire. The place of deployment of observation posts must ensure observation of presumed positional areas of nuclear artillery and tactical missiles as well as objectives against which it is possible to conduct artillery fire.

The spot on which an observation instrument is set up at an observation post is fixed by topogeodetic survey and the instrument is lined up.

In a rapidly and abruptly changing situation, mobile artillery observation posts (APNP) [*artilleriyskiy podvizhnyy nablyudatel'nyy punkt*—U.S. Ed.] installed in special vehicles, become very important. A main advantage of such a post is that instruments for observation and directing fire and communications equipment are situated in the same vehicle. In the course of combat, the APNP crew can conduct reconnaissance and correct artillery fire on the basis of detected targets right in the battle formation of the forward [27] infantry subunits or tanks, thereby ensuring greater effectiveness and uninterrupted artillery fire support of troops' actions.

Because target coordinates cannot always be accurately determined from a single post, combined observation is set up in the battalion (or battery). It is carried out by an optical reconnaissance subunit, usually from two observation posts 200–500 meters apart, and sometimes further. At the combined observation posts, observation instruments—reconnaissance theodolites and artillery directors—are used with which horizontal angles can be measured.

Sound ranging is based on exploitation of the phenomenon of propagation in the atmosphere of the sounds that occur when guns and mortars are fired as well as those produced by shell and bomb bursts.

Sound ranging is carried out with sound ranging equipment. Its operation is based on utilization of differences of arrival time at the sound pickups of the sound waves from the guns (or mortars).

Sound ranging subunits detect and determine the coordinates of field and antiaircraft artillery, batteries (or guns) rocket launchers, mortars

and recoilless guns from their report, determine the caliber and number of guns (mortars) in the batteries located, and carry out observations on their firing activity. They are also used in supporting friendly artillery fire.

One of the main advantages of sound ranging is its independence of visibility conditions. It is capable of detecting targets acoustically at night, in fog, smoke, and other conditions of poor visibility. Sound ranging equipment does not radiate energy, and this hinders its detection by enemy reconnaissance. The coordinates of targets detected by sound ranging subunits, depending on the method used to process the data, can be obtained within a few minutes.

However, sound ranging does have serious disadvantages. Its success depends on the intensity of enemy and friendly artillery fire. Sound ranging becomes more difficult as the intensity of fire or shell bursts increases. The most favorable conditions for its operation are usually found at night and at dawn at any time of the year, in the daytime during heavy winter frosts, and also during the spring thaw. **[28]**

To conduct reconnaissance and to support artillery fire, a sound ranging subunit is deployed in a battle formation that includes sound ranging posts, a warning post, a control center, a weather post, and a motor transport parking place.

The sound ranging posts constitute the basis for the battle formation of the sound ranging subunit. Hence special attention is paid to the selection of their locations. Most suitable for this purpose are slight elevations, since sound waves propagated from shots (explosions) usually pass at a certain altitude above the surface of the ground.

Sound ranging posts should not be located in ravines or hollows; right up against steep slopes, high embankments or the back slopes of hills; or near thick woods, for such places distort sound and impair its reception.

As a rule, sound ranging posts are placed 2–2.5 kilometers (on the defensive, about 3–4 kilometers) from the friendly forward edge; the distance between adjacent posts constituting a sound ranging base must be 1–1.5 kilometers. The width of the reconnaissance zone of the subunit depends primarily on the number of sound ranging posts deployed.

Artillery *radar reconnaissance* is carried out with radars designed to detect moving targets (SNARs) and those designed to detect firing mortars (ARSOMs).*

*[*SNAR—Stantsiya nazemnoy artilleriyskoy razvedki* 'ground artillery reconnaissance radar'; *ARSOM—Artilleriyskaya radiolokatsionnaya stantsiya obnaruzheniya minometov* 'artillery mortar-locating radar'—U.S. Ed.]

A radar (SNAR) is assigned to reconnoiter moving targets on land and on water and also to support friendly artillery fire. It determines the current coordinates of targets in the polar system (range and direction) and, during support of friendly artillery fire, it fixes the bursts and determines their location. The range of detection of moving targets by SNARs depends largely on the nature of the target and the terrain relief features.

In choosing positions for deploying radars to detect moving targets on land, one is guided mainly by the requirements laid down for the locations of observation posts, since the radar line-of-sight range in moderately rugged terrain coincides, as a rule, with the conditions of ocular line of sight.

Radars that detect firing mortars (ARSOMs) are employed to fix firing [29] mortars and howitzers at various ranges by the trajectory of the bomb (projectile) and to support friendly artillery and mortar fire. ARSOMs differ from other reconnaissance equipment in their rapid determination of the coordinates of the fixed target and their ability to reconnoiter targets and determine their locations even in the presence of intense artillery and mortar fire.

The positions for these radars are chosen in the areas of deployment of the artillery subunits to which they belong integrally or to which they are attached.

Clearings in low woods, the backs of sloping hills, and other comparatively sheltered places are considered to be the most suitable deployment locations for such radars.

The mission of artillery *electronic reconnaissance* is to detect and locate the radars of surface-to-air guided missile units and field and antiaircraft artillery units, the early warning radar sites for mobile ground targets, the radars directing tactical aviation against ground targets, and those controlling unmanned aircraft. It is carried out by electronic reconnaissance radars (direction-finding receivers).

Direction-finding receivers are installed at two (and, for monitoring purposes, preferably three) sites. They fix the electromagnetic emissions of operating radar equipment and determine the direction (bearings) of these radars in degrees from north.

Direction-finding receivers may be either portable or installed in vehicles. The virtue of this equipment is that it does not give out powerful emissions of its own when in operation, and it is independent of weather conditions.

The units with an antenna system, a receiver and display unit, as well as analyzing equipment are able not only to determine the bearing of an operating radar but also several of its parameters: namely its operating frequency, the antenna rotation speed, which reveals the type of reconnaissance radar involved, and finally its subordination.

It is advisable to situate direction-finding receivers in terrain locations from which they have a good view of the radars being observed, roughly on the same line as our artillery observation posts. **[30]**

Artillery reconnaissance parties are sent out by the artillery subunit commanders as required in order to reconnoiter the enemy, his routes of movement, areas of artillery reconnaissance, and selection of locations for command observation and other observation posts.

The artillery reconnaissance party, detailed from the battery for reconnaissance of the area of intended fire positions, is led by a senior battery officer (or gun platoon leader). If the party is sent out to reconnoiter the enemy and the terrain, it is led by a headquarters platoon leader. The senior man reports by radio to the battery commander on the results of the party's work. On his return to the observation post, he reports to the commander personally on the situation, reference points, targets discovered, and the area reconnoitered for fire positions. One reconnaissance party is sent out from the artillery battalion as well as from the battery.

Reconnaissance by artillery fire is carried out in order to detect the enemy's permanent defensive structures and shelters by partially or completely destroying his camouflage cover so as to reveal the presence of reinforced concrete, concrete, or armor. It is also resorted to if the mission of exposing the enemy and minefields in the area cannot be accomplished by other means.

In fire reconnaissance, probable enemy disposition areas or his positions are subjected to bombardment in order to compel him to take retaliatory action and thereby reveal (decamouflage) himself. The enemy's responses may make it possible to discover his grouping and troop composition, the fire positions of his artillery and mortars and the locations of the infantry and tanks, and it may give more precise information about decoy objectives.

Artillery reconnaissance can obtain valuable information through systematic study of the fire activity of enemy artillery and mortars during the preparation of an attack and on the defensive. During enemy shelling, the observer determines the area against which the enemy is conducting the fire, what ammunition he is using, the effect of the projectile bursts,

and the method of fire. After the enemy has ceased firing, the area or objective of bombardment is examined. By studying unexploded shells, shell and rocket fragments, and the sizes of craters, it is possible to determine what artillery (or missile) systems the enemy was using and the kinds and effectiveness of ammunition. [31] All the information obtained about the guns and mortars being fired is recorded and reported to the battery (battalion) commander.

Furnishing artillery reconnaissance subunits with diverse reconnaissance equipment enables them to reveal and deal effectively with artillery, mortars, radar, tanks, and other enemy targets.

Spotter helicopters carry out reconnaissance by flying over friendly territory. They detect targets not observable from the ground posts, determine their coordinates, and adjust (monitor) the fire directed against these targets. At night, helicopters observe the flashes of firing guns and mortars and use infrared instruments.

Combined arms subunit commanders must know the locations of artillery observation posts and lines (or areas) of reconnaissance subunits in order to establish closer cooperation among reconnaissance resources and mutual exchange of intelligence information.

Engineer Reconnaissance

Engineer reconnaissance is carried out by the reconnaissance resources of the engineer troops independently and also by combat engineer scouts included in the reconnaissance elements of troop reconnaissance and security.

A most important mission of engineer reconnaissance is to determine the nature and degree of engineer preparation of the enemy's positions and dispersal areas; his obstacle system, especially the locations of nuclear mines; the passability of the terrain for combat equipment and transport; the condition of roads and bridges; the location and nature of demolished areas, barriers, floods, and other obstructions formed as a result of nuclear blasts; the nature of water obstacles and the problems of crossing them on the move; and the location and state of water sources. In addition, engineer reconnaissance determines the composition, equipment, and methods of the enemy engineer troops.

To carry out the missions of engineer reconnaissance the following are assigned from personnel in engineer forces' subunits: engineer observation points, ground photography points, and engineer reconnaissance patrols (IRD) [*inzhenernyy razvedyvatel'nyy dozor*—U.S. Ed.].

The *engineer observation point* carries out engineer visual reconnaissance. It includes [32] at least two or three observers, one of whom is appointed senior. The senior observer is responsible for the work of the observation point and performs duties similar to those of the senior observer of motorized rifle (or tank) subunits.

Roughly the following equipment may be issued to the engineer observation point: engineer reconnaissance periscope and field glasses; a night observation instrument; a range finder; color contrast filters for detecting camouflaged objectives; instruments and equipment for making a fix, including protractors, compasses, a watch, a map board, lighting equipment, and the necessary papers (a map or chart with reference points, an observer's log, and message forms).

Engineer ground photography points are made up of two to four combat engineer reconnaissance patrols and are provided with observation, photography, transport, and communications equipment.

When a mission is assigned, the point is told the purpose of the photography, the objectives or terrain sectors to be photographed, the place from which the photographs must be made, and also what photo documents must be prepared and when they must be ready.

Ground photography reconnaissance is carried out by photographing engineer installations and terrain at the enemy's forward edge and in his adjacent defenses. It consists in the photography itself, the processing of the photographic materials, and the interpretation of the photographs.

Sequential photographing of a single locality makes it possible, by comparing the pictures, to establish changes in engineer preparation there and to reveal new enemy objectives.

The materials from ground photography are processed in mobile darkrooms. The results of the photography are assembled in the form of a panoramic picture of an enemy defense sector or individual pictures with a legend.

An *engineer reconnaissance patrol* (IRD) is sent out from an engineer unit (or subunit). Its makeup in each specific case is determined by the nature of its missions and by the situation and may be anything from a squad to a platoon. The engineer reconnaissance patrol may include chemical warfare scouts with chemical and [33] radiological reconnaissance instruments. The engineer reconnaissance patrol carries out visual reconnaissance, inspection, and raids.

Direct inspection is the most common method of engineer reconnaissance and is used to reconnoiter ground, obstacles, and various fieldworks in both friendly and enemy dispositions; when there is no direct threat of a clash with them and it is possible to directly approach the objective to be reconnoitered, to inspect it in detail, take the necessary measurements, and so on. Direct inspection either independently or in combination with other methods of reconnaissance (raids, observation) produces the most reliable information.

Raids are carried out in order to reveal the disposition and nature of the enemy's obstacles and to work out in detail the places for clearing a passage through them, to study defensive installations, and to seize samples of engineer equipment.

For better and quicker accomplishment of their missions, engineer reconnaissance patrols are issued mine detectors, inclinometers, measuring tapes, field glasses, inflatable boats, diving suits, range finders, entrenching tools, compasses, route markers, signal flags (or lights) for marking the boundaries of crossings, roentgen meters, radioactivity detectors, etc.

In the course of its reconnaissance, the engineer reconnaissance patrol organizes all-around observation and air observation. Observers are appointed for this purpose. If it becomes necessary while on the move to inspect a particular object (terrain feature) off the route, the engineer reconnaissance patrol leader sends out a patrol squad or some foot patrollers.

The engineer reconnaissance patrol leader must pay special attention to the reconnoitering of bridges. The following incident testifies to the possible consequences of poor reconnaissance of a bridge. During the Great Patriotic War, when our forces were successfully advancing into the territory of Belorussia, the engineer reconnaissance of one regiment was ordered to reconnoiter the route, and especially the bridge over the Sluch' River. The scouts did not carry out a detailed inspection of the bridge, since it appeared strong enough to them. When the regiment's tanks moved out onto the bridge, the piers collapsed. Much equipment and many men piled up at the bridge. As a result of heavy artillery and mortar fire by the enemy, the regiment suffered considerable losses. The speed of the offensive was slowed and the regiment was late in achieving the objective of the day.

When reconnoitering a bridge, one must first determine [34] whether or not it and the approaches to it are mined, how convenient are the on- and off-ramps and what condition they are in, the size of the bridge, the exposed height of the piers (the distance from the crossbeam to the

ground), the length of the spans and stringers and the distances between them. After gauging the parts of the bridge, the scouts, using their tables, may determine its maximum load-carrying capacity and the possibility of getting all the freight of the marching column across it. If necessary, the scouts determine precisely what materials are needed to reinforce the bridge and what the possibilities are of constructing temporary by-passes.

In halt and rest areas, the engineer reconnaissance patrol determines whether there are any enemy bombs or land mines and if there is natural cover for protection from nuclear weapons, what the camouflaging conditions are, and if there are water sources and how suitable they are for drinking.

Combat engineer reconnaissance parties included as a part of the troop reconnaissance elements usually conduct reconnaissance of water obstacles to be crossed. However, engineer reconnaissance patrols may also be sent out for this purpose. They look for protected approach roads and places that are suitable to prepare crossings, determine the presence and location of obstacles on the banks and in the water, determine the width and depth of the river, the velocity of the current, the soil on the bottom and banks, and establish the presence of natural cover on the shore, determine the serviceability and load-carrying capacity of bridges, find fords, and determine the availability of local crossing means and building materials.

Engineer reconnaissance patrols are also sent out to find the locations and determine the nature of obstacles, and to look for possible changes in the terrain as a result of nuclear strikes.

Engineer reconnaissance of the terrain's protective and masking properties is carried out from friendly dispositions by direct inspection and in enemy dispositions mainly by observation and photography. When determining the protective and masking properties of terrain, one must keep in mind that its unevenness (ravines, elevations) as well as wooded tracts and other terrain features affect the nature of the shock-wave propagation of a nuclear blast as well as the propagation of thermal and penetrating radiation.

Radiological and Chemical Reconnaissance

Radiological and chemical reconnaissance are the most important means of protecting troops against enemy mass destruction weapons. [35] It is carried out in friendly dispositions or along the routes of their movement in order to detect radioactive and toxic substances and warn unit and subunit personnel.

The following missions are assigned to radiological and chemical reconnaissance: to promptly detect contamination of the terrain and the atmosphere by radioactive or toxic substances or bacteriological warfare agents; to determine the type of toxic substances involved and the degree of contamination of terrain, buildings, equipment, stores, and provisions by radioactive and toxic substances; to locate and designate the boundaries of zones (areas) of radioactive and chemical contamination, routes that bypass zones (areas) with high levels of radiation or routes (directions) by which they can be crossed through sectors with lower levels of contamination; to monitor changes in the degree of contamination of terrain and atmosphere by radioactive and toxic substances; to take samples of contaminated air, water, and soil and analyze them; to check subunit personnel for radiological exposure.

Radiological and chemical reconnaissance is conducted by all leaders and observers in the subunits and from observation posts and points and by chemical warfare observation points, chemical reconnaissance patrols, and all subunits (parties) engaged in reconnaissance.

In the subunits, reconnaissance is conducted personally by all subunit leaders, observers, and specially trained soldiers (squad, crew, team). Subunit leaders assign the observers radiological and chemical warfare observation missions at the same time that the general observation missions are assigned. They are told where and with what signals their superior is to be warned about a chemical attack and about radioactive contamination. The observers must be reminded of what chemical and radiological warfare agents the enemy may use and of the external signs indicating the start of a chemical attack and the drifting of a radioactive cloud.

In the squads and platoons, the start of chemical attacks and the movement of the radioactive cloud are detected by observers solely from external signs. They pay special attention to the timely reception of the signal concerning a chemical attack from the company observer, who carries a radiological indicator or roentgen meter.

In an offensive, when radioactive or toxic substances are detected in an area, the company commander sends out [36] a chemical reconnaissance patrol consisting of a number of specially trained soldiers. He outlines the mission to the leader of the chemical reconnaissance patrol personally or through a platoon leader, indicating the axis or area and the time by which reconnaissance is to be carried out, what should be marked with boundary signs, the departure point and the procedure for communicating and reporting reconnaissance results.

When a contaminated sector is detected, the patrol leader issues a chemical attack signal, reports to the company commander, and marks

the boundaries of the contaminated area. On the basis of the reconnaissance data, the company commander indicates the sequence of further movement and whether to cross or bypass the contaminated sector.

In the battle formations of a first-echelon company, during an offensive, a battalion chemical reconnaissance patrol may operate from which the company commander also receives information on radioactive and toxic contamination of the terrain and air.

In a battalion, in addition to subordinate subunits, radiological and chemical reconnaissance is carried out by the battalion observation points, observers at the battalion commander's observation post, and the battalion chemical reconnaissance patrol. The latter is sent out to reconnoiter detected sectors of contamination. A specially trained squad (party) assigned to this platoon is supplied with reconnaissance equipment, protective clothing, boundary markers, communications equipment and transport. The reconnaissance of a route (axis) contaminated with radioactive and toxic substances is carried out in armored personnel carriers (motor vehicles) and in tanks.

The battalion commander also receives information on the radiation and chemical situation from the adjacent forces and from the higher-echelon commander.

Radiological and chemical reconnaissance is organized by the appropriate officer of the chemical warfare service. It is conducted by chemical warfare observation points and chemical reconnaissance patrols. They carry out the missions assigned by the head of the chemical warfare service.

Chemical warfare observation points are made up of personnel from chemical defense subunits. They are located in the vicinity of control posts and carry out the following duties: they conduct observations on the direction and speed of the radioactive cloud after a nuclear blast; they detect contamination of the terrain and the atmosphere by radioactive and toxic substances; they determine the type (group) [37] of toxic substances and the level of contamination of the terrain by radioactive substances; they monitor changes in the level of contamination of the terrain and atmosphere by radioactive and toxic substances; they take samples of air, soil, water, food, and plant life, which they deliver to chemical warfare service laboratories.

Chemical reconnaissance patrols and individual chemical warfare observers may be included in reconnaissance and security subunits, forward detachments and movement-support detachments. In the battle

formations of friendly troops and under cover of their fire on the march, chemical reconnaissance patrols, when carrying out reconnaissance on behalf of second-wave echelons, as well as in other instances, may also act independently. They perform the same functions as chemical warfare observation points, and in addition they determine and mark the boundaries of zones (areas) of radioactive and chemical contamination, look for ways on which to bypass them, seek out axes (routes of march) with the lowest levels of radiation and set out boundary markers on the routes of movement or axes of action of the troops.

A chemical reconnaissance patrol is sent out whenever it is necessary to quickly identify an area of contamination by radioactive substances formed as a result of a nuclear blast of intermediate force, or an area where the enemy has made massive use of toxic substances, and to provide exhaustive data for assessing a radiation or chemical situation in a troop disposition area. It may reconnoiter a single route (axis), one sector of terrain contaminated by radioactive or toxic substances, or an area intended for occupation by a subunit.

The troops' standard radiological and chemical reconnaissance instruments are used to carry out radiation and chemical reconnaissance and to check exposure of subunit personnel to radiation and the contamination level of weapons, materiel, transport, equipment, provisions, and water supplies.

A radiological and chemical reconnaissance squad attached to a subunit, operating in reconnaissance, security, as a forward detachment, or as a movement support detachment, is given its mission by the appropriate commander. The squad leader reports the reconnaissance results to the leader of the subunit to which he is attached.

The chemical warfare observation points and reconnaissance patrols and squads attached to the subunit carry out [38] continuous observation of enemy air and artillery actions and of the direction of movement of the radioactive cloud of a nuclear blast and systematically switch on their instruments to determine the level of terrain and atmosphere contamination by radioactive and toxic substances. Automatic gas alarms are turned on at all times from the beginning to the end of the reconnaissance.

For rapid determination of radiation conditions over a large area on terrain difficult of access and also when there are high levels of radiation, radiological reconnaissance is conducted with helicopters equipped with special monitoring devices and communications equipment for passing the results of the reconnaissance.

AERIAL RECONNAISSANCE

Aerial reconnaissance is carried out by piloted aircraft and helicopters of reconnaissance and operational aviation fitted out with diverse reconnaissance equipment: optical observation instruments, photographic equipment, and electronic instruments.

Aerial reconnaissance resources, penetrating rapidly and suddenly to a great depth in the enemy disposition, can, in a short time, locate enemy troops where they are dug in or are on the move; can discover the presence and location of offensive nuclear weapons, the fire positions of the artillery and other targets, the nature of the terrain and the system of engineer preparation with which it is provided; and can also determine the coordinates of enemy control posts, electronic equipment, and objectives in the enemy's rear area.

The principal methods used in aerial reconnaissance are visual observation and aerial photography with electronic radiological equipment, etc. The choice of aerial reconnaissance methods depends on the specific situations and above all on the missions to be performed, the type of aircraft (helicopter) and its reconnaissance equipment, enemy countermeasures, time of day and weather conditions.

Visual observation is used in all aerial reconnaissance actions. It provides the quickest and most efficient way of informing the command element on all changes in situation. With a large-scale map, one can use observation to determine coordinates of objectives quite accurately, without any need at all for additional technical outfitting of the aircraft. **[39]**

Aerial reconnaissance by visual observation is carried out by the crew members (pilot, navigator, etc.) who observe the terrain and the objects of interest to them with the naked eye or with optical instruments.

The main advantage of visual observation is the possibility of investigating a large area or sector of the enemy defenses at one time, of observing it continuously, especially in the course of an engagement, and transmitting the intelligence by radio from aboard the aircraft directly from the reconnaissance area. The installation of a sound-recording device on the aircraft makes it possible to retrieve all the intelligence after the flight and to present the command element with a detailed written report of the entire reconnaissance flight.

However, visual observation does have certain disadvantages: the impossibility of distinguishing with the naked eye objects smaller than

1/500 of the flight altitude, the difficulty of detecting camouflaged objectives, the subjective nature of the crew's judgment, etc. Because of this, the information from visual observation may need to be supplemented by other methods of reconnaissance, mainly by aerial photography. Nevertheless, visual observation is the main method of aerial reconnaissance during combat actions.

Aerial photography makes it possible to obtain documentary information on reconnaissance objectives and terrain. This method is used especially widely during preparations for combat.

Aerial photography is classified as follows: in terms of the lens angle of the aerial camera at the moment the picture is made, as vertical or oblique photography; in terms of the methods of execution, as vertical pinpoint, strip aerial, or area aerial; in terms of the photographic materials employed, as black and white, color, or spectrozonal; in terms of time of day, as day or night photography.

Vertical aerial photography is used to take pictures of various objects and terrain on a prescribed scale. The optical axis of the aerial camera lens is in the vertical plane and must not deviate from the vertical by more than 20°. The photograph provides a vertical, or nearly vertical, view of objects and the terrain, making it possible to compare the terrain and objects in the photograph with a map and to carry out measurements.

When a route or area is photographed from the air, the following overlaps must be observed **[40]** without fail: 30 percent between pictures and 50 percent between routes. Vertical photography for stereoscopic inspection, in order to determine the nature of engineer fieldworks, artillery and mortars in fire position, camouflaged objectives, terrain relief, and the makeup of a reconnoitered objective, is carried out with at least 60-percent overlap between pictures.

Oblique photography is carried out with deflections of the aerial camera lens optical axis at various angles from the vertical (45° and up). Such photography gives a graphic, three-dimensional impression of the reconnoitered objective and terrain. Oblique photography is used to reconnoiter the enemy FEBA, defensive installations and other objectives, antiaircraft artillery screened by heavy fire or protected from observation only from above, for reconnaissance in mountains when there is low cloud cover and the reconnaissance objective is poorly lit.

As a rule, the following are designated for photography: the most important objectives of the enemy subject to destruction by nuclear weapons, proposed sectors for crossing water obstacles, lines of defense on a main axis.

Aerial photography obtains the best results when it is carried out at low altitudes, around a few hundred meters. The photographic records thus obtained are easy to decipher. Moreover, reconnaissance at low altitudes ensures surprise and security of operation. In the opinion of foreign experts, radar detection of aircraft is more difficult at low altitude. Radars have blind areas near the ground, so that low-flying aircraft are difficult for them to detect. On the other hand, the foreign press points out that reconnaissance at low altitudes requires a great expenditure of fuel, increases the difficulty of piloting, reduces the tactical operating radius of the reconnaissance aircraft and consequently reduces the area of reconnoitered territory.

Aerial reconnaissance with electronic equipment has become very important today. It is capable of discovering both electronic equipment and other important enemy objectives on the ground and in the air at great depth, in all weather, day or night. The electronic reconnaissance equipment installed in the piloted and pilotless reconnaissance aircraft of the armies of foreign states includes, for example, radios, electronic emission collection equipment, [41] radars, television and radar systems, and also devices for thermal (infrared) and radiation reconnaissance.

In assigning aerial reconnaissance missions, combined arms commanders must start with the capabilities of the crews. It must be kept in mind, for example, that a certain time is required for photographing and darkroom processing of photographic materials (negative and positive processes), for interpreting them, and for preparing and duplicating photo documents.

In designating a reconnaissance route, it is necessary to keep in mind not only the nature and effectiveness of the enemy's antiaircraft defense measures, but also the distance of the base air field from the front line, the aircraft's flight performance data, and the weather conditions as well as the nature of the terrain and the time of day.

Aerial reconnaissance missions are determined by the needs of the ground troops.

In the interests of troops on the march, aerial reconnaissance determines the enemy's location, the nature of his actions, the start and direction of movement of columns, their makeup, the existence of offensive nuclear weapons, and the starting time of enemy deployment.

In an offensive, aerial reconnaissance determines the enemy position, the disposition of his missile and artillery units, the areas of concentration of reserves, the starting time and direction of their movement for carrying out a counterattack (occupation of a line of defense), enemy

lines of defense in depth. From the beginning of pursuit of a withdrawing enemy, aerial reconnaissance determines the route (direction) of withdrawal of the main enemy troop groupings, the bringing up of his reserves from the rear and their occupation of prepared lines of defense and the fire positions (areas of concentration) of offensive nuclear weapons.

Aerial reconnaissance defensive missions are the simultaneous detection of the main body of the enemy on the march, determination of their direction of movement, their makeup, areas of concentration and deployment, especially of missile units, artillery and tank troops, determination of the dispositions of enemy control posts and electronic equipment.

Successful performance of these missions depends largely on how competently and promptly the combined arms commanders and staffs assign aerial reconnaissance missions [42] and on how skillfully they organize the acquisition of intelligence from them.

In organizing aerial reconnaissance, commanders and staffs at all levels and in all combat arms must pay special attention to organizing continuous collection of intelligence both at the start of the engagement and in the course of it.

The Fundamentals of Organizing Reconnaissance

A most important factor determining the great effectiveness of reconnaissance is careful organization, with consideration from every angle. It involves a set of measures carried out by commanders and staffs at various levels in order to get information about the enemy, the terrain, the area of impending actions, and about the weather—information that is necessary to prepare and successfully conduct an engagement.

The basic steps in the organization of reconnaissance include the following:

—determining the goals and missions of reconnaissance and allocating the resources required to conduct it;
—planning reconnaissance and disseminating missions to those who will carry them out;
—coordinating the efforts of reconnaissance resources in terms of missions, objectives, and times;
—preparing reconnaissance subunits (parties) allocated to carry out the reconnaissance, and their all-around support;
—organizing continuous communications with the subunits (parties) allocated for reconnaissance, directing them, and

organizing the reception of intelligence information from aerial reconnaissance;

—working out measures to protect the operating reconnaissance elements from being hit by friendly fire;

—organizing intelligence information collection and processing, its timely reporting to the commander and higher headquarters, as well as informing adjacent and cooperating subunits;

—monitoring execution of the orders given and providing tactical assistance to the subunits conducting the actual reconnaissance aimed at accomplishing the reconnaissance missions assigned to them, etc.

At the battalion/company level these reconnaissance steps may be as follows: determining missions and allocating resources to carry them out; preparing subunits [43] assigned to reconnaissance; organizing observation, sending out combat reconnaissance patrols, setting up ambushes, and, on the orders of senior-level officers, carrying out raids and conducting fighting patrols; organizing continuous communications with the subunit operating in reconnaissance; collecting and processing intelligence information and reporting it to the higher-echelon commander and also informing subordinate and adjacent forces.

All these measures for the organization of reconnaissance are inseparably interrelated and are carried out simultaneously and quickly.

The raw materials for organizing reconnaissance are as follows: the combat mission, the commander's decision, reconnaissance instructions of the higher headquarters, information on hand concerning the enemy, the composition of the reconnaissance resources and their capabilities. It should be noted here that the absence of instructions from the next-higher commander and staff does not free the commander (staff) from responsibility for timely organization of reconnaissance.

The commander is personally responsible for organizing reconnaissance. He determines the goal and the most important missions of reconnaissance and indicates where, on what objectives (in what areas) its main efforts are to be concentrated, what information must be obtained and when, and what resources are to be used for this purpose. Thereafter, the commander, personally and through his chief of staff, monitors the performance of the reconnaissance missions, and gets periodic reports from his chief of staff on matters concerning the organization and conduct of reconnaissance. Moreover, he constantly studies the enemy forces' organization, weapons, and tactics and instructs his staff and the subunits under his command on the organization and conduct of reconnaissance.

The chief of staff is directly responsible for organizing reconnaissance. It is his duty always to know the enemy in the area of responsibility of the unit (subunit) and on its flanks, to foresee possible changes in the situation, and to be ready to report his conclusions about the enemy, which the commander needs in order to make a decision and implement it.

The chief of staff gives concrete expression to the reconnaissance missions assigned by the commander and the higher headquarters. He determines the order in which they will be carried out, specifies the axis, area, and objectives where it is necessary to concentrate the main reconnaissance efforts, and determines what resources will be used to reconnoiter the most important objectives and the composition of the reserves of reconnaissance resources.

Determination of the goals, missions, and objectives of reconnaissance. The correct determination of the goals and missions of reconnaissance and the selection of objectives for it largely predetermine **[44]** the successful performance of the whole set of reconnaissance measures. Therefore all duly appointed personnel responsible for organizing reconnaissance, headed by the commander, participate in solving this problem. The procedure and time of their work in each separate case depend on the specific situation. However, in every case this work should be based on a number of factors, which also determine the specific content and scope of the reconnaissance missions. These factors include the following: the combat mission of the subunit (unit), the reconnaissance missions assigned by the higher headquarters, available intelligence on the enemy, the state of the reconnaissance resources and their capabilities, and also the nature of the terrain and weather.

Each of these factors has a different influence on the determination of the goal, the content and scope of the missions, and also the number of reconnaissance objectives that are to be discovered.

The main reconnaissance missions derive from the nature of the engagement and the combat missions performed by the troops.

In the interests of preparing and waging an *offensive*, the main reconnaissance missions amount to determining the following: the enemy's grouping and intentions, especially the presence of nuclear and chemical weapons, their location and level of preparedness for action; the construction of the enemy defenses and his equipment for defense against nuclear weapons; the outline of the forward edge, strongpoints, and defense areas, their engineer preparation, the presence and location of obstacles, especially nuclear mines, at all depths of the combat mission; the degree of passability of the terrain, the nature of water obstacles

and the most favorable sectors for crossing them; the existence of gaps, open flanks and poorly defended sectors; systems of fire of all types of weapons, especially antitank weapons, in advance of the FEBA and in depth.

On a *march* in expectation of a meeting engagement, the main missions of reconnaissance are as follows: detecting the enemy as far as possible in advance of friendly forces, his forward movement, and determining the composition of his resources, especially his nuclear weapons; determination of the direction, speed, and routes of movement and also his deployment lines; discovery of the condition of routes of movement and the passability of off-road terrain; determination of the presence of obstacles and of terrain sectors contaminated by radioactive and toxic substances.

In the interests of preparing and executing a *defense*, the main missions of reconnaissance will be detection of the main body of the enemy on the march; determination of the direction of their movement, [45] their composition, the areas of concentration and deployment, especially of missile subunits and units, and of artillery and tank troops; discovery of preparation and time for mounting nuclear attacks and also the time of going over to the offensive and determination of the axis of the main attack.

When an enemy is being pursued, information is required of reconnaissance on the preparation, start, and direction of withdrawal of his main grouping, on the strength and composition of his rear guards, on the movement of enemy weapons of mass destruction and preparations for using them in order to secure the withdrawal of the main body, on the preparation and occupation by troops of defense lines and on the moving out of reserves from the rear and from their concentration areas.

The list of necessary items of intelligence is by no means restricted to the items mentioned above. Depending on the conditions and the kind of combat actions involved and on the availability of resources, the enemy may have a number of other options, the discovery of which is also a reconnaissance mission.

Information about the nature of the terrain during the waging of an offensive is usually included in the necessary intelligence. Reconnaissance must determine what natural or artificial obstructions there are in the zone of advance of the unit and subunit, their nature, and the degree of influence they may have on the actions of the resources employed on the battlefield.

When defensive actions are conducted, the terrain in which friendly troops are deployed may be studied in detail without calling on reconnaissance resources.

Furthermore, commanders at all levels and in any circumstances must know the weather forecast and the meteorological conditions.

In determining the main reconnaissance missions or the basic information that must be acquired in the course of combat actions it is necessary to start, primarily, with what is already available. New data are required by a commander in order to confirm, sharpen, or refute conclusions drawn earlier concerning the enemy's forces, weapons, capabilities, and probable actions.

In a battalion (company) reconnaissance missions are assigned to the subunit leaders at the same time that combat missions are assigned. In an offensive, for example, these missions may be defined by the battalion commander as the following:

"Leaders of all subunits to organize constant observation of enemy, with following missions:

—determine structure of enemy defenses, outline of forward edge, strongpoints, extent of their **[46]** preparation for defense against nuclear weapons, and nature of engineer obstacles;
—determine locations of guns, command posts and observation posts, and electronic equipment;
—discover possible movement of enemy subunits from rear and also withdrawal of subunits from forward edge;
—monitor continuously radiological and chemical situation in friendly disposition area.

"At night observation is supplemented by monitoring, sending out two observers from each company at nightfall toward enemy FEBA.

"Commander of 1st company to have ready one armored personnel carrier reconnaissance platoon to operate as battalion combat reconnaissance patrol. Patrol mission will be established separately. Information on enemy to be reported to battalion staff."

Allocation of resources. Important steps in the organization of reconnaissance are allocation of resources for the main missions (objectives) of reconnaissance; determination of the time needed to prepare for the impending actions and to accomplish the missions assigned; es-

tablishment of the procedure for passing on the intelligence information gained.

Reconnaissance resources are allocated according to the missions assigned by the commander and according to his decision, the reconnaissance directions received from the higher headquarters, the volume of information on hand about the enemy, and also on the basis of the state of reconnaissance resources and their capabilities.

The staff begins organizing reconnaissance immediately after being briefed on the details of the assigned combat missions.

The sequence of work in organizing reconnaissance and its details depends on the conditions of the actual situation, and especially on the time available to the staff.

In setting out to allocate reconnaissance resources, it is first of all necessary to study and assess the enemy, the territory occupied by him, and, on the basis of his tactical norms as well as the specific situation and possible changes in it, to determine what grouping of resources the enemy has immediately available or may set up in the near future; where, when, and what the most important objectives, the ones that need to be hit first, may be. [47]

On the basis of a thorough study of the situation and a forecast of possible changes in it, the main missions and objectives of reconnaissance are determined, if they have not been already.

Today, when the effective range of conventional weapons has greatly increased, and combat is highly dynamic and fast-moving, reconnaissance of the above objectives (targets) becomes especially important. Accurate strikes against certain important objectives can guarantee quick success on the battlefield.

For the effective destruction, however, of such objectives, they must first of all be detected, identified, and their location determined. Detection means the process of establishing the actual existence of the objective (target). Identification involves determining the nature and size of the objective (target). Establishment of the location means determining the exact coordinates of an objective and its orientation in relation to a known point.

The next step in allocating resources involves their all-around appraisal. The potential of reconnaissance resources and elements and their suitability for the various missions to be assigned to them must be taken into consideration.

By the potential of reconnaissance resources or elements is meant their physical (technical) ability to acquire (possibility of obtaining) this or that intelligence. This potential must be exploited in the most expedient manner.

Expediency is the complete, most effective, and proper employment of the potential of the available reconnaissance resources and elements.

Reconnaissance resources must be employed in such a way that they can support each other and guarantee the obtaining of information about the same objectives from several sources.

After the main missions and objectives of reconnaissance are determined and the resources allocated, an estimate is made of the time needed to prepare them to accomplish the assigned missions. These missions vary in content and difficulty of performance. For accomplishment of some missions, the action of a single reconnaissance element may be sufficient. Other missions may be performed by several reconnaissance elements differing in men and equipment, and may take a longer time. For the performance of still other missions, it may be necessary to employ the whole reconnaissance system over the entire period of preparation and conduct of an engagement. [48]

If the staffs organizing reconnaissance do not make a proper estimate of the time, then the chances for successful performance of the assigned reconnaissance missions are considerably reduced.

The axis on which the main efforts of reconnaissance are concentrated is usually determined by the commander or the chief of staff. In an offensive it usually coincides with the axis of the main efforts of the subunit. On the defensive such axes may be primarily the tank-accessible sectors of the terrain where enemy groupings may emerge on the flanks and in the rear of the defense.

A great many of the available reconnaissance resources are concentrated on the axis of the main efforts of the subunits with the mission of discovering the main enemy grouping and especially his nuclear weapons.

Coordination of the efforts of reconnaissance resources. Reconnaissance in various kinds of combat can perform its missions successfully only through the combined efforts of all resources. Cooperation of reconnaissance resources is achieved by coordinating their efforts in terms of missions, objectives, and time and by maintaining constant and reliable communications and exchange of information between the cooperating staffs and subunits.

Coordination of the efforts of reconnaissance resources is mainly achieved during the allocation of reconnaissance resources and also during assignment of reconnaissance missions, while the battalion commander is conducting his personal reconnaissance, and when instructions are being issued on comprehensive support of combat actions.

Assigning reconnaissance missions to those who are to carry them out. Making a suitable decision about the employment of the reconnaissance resources that the commander has on hand, does not by itself ensure accomplishment of the missions confronting them. This decision must be disseminated promptly to those who are to carry out the missions.

If there is a delay in disseminating reconnaissance missions to those who are to conduct them, they will not be able to accomplish them in time. That is why the timely and accurate dissemination of reconnaissance missions to those who will carry them out is one of the most important steps in organizing reconnaissance.

Reconnaissance missions are assigned orally (by communications equipment), in writing, or graphically on a map to those who will perform them. To leaders of subunits allocated to reconnaissance, the missions are, as a rule, assigned orally, and, while they are being performed, they are updated by radio. When reconnaissance missions are assigned orally to [49] those who will perform them, they are recorded in an instructions and reports log.

When reconnaissance missions are assigned, those who will perform them are usually given: briefings on the enemy's grouping and actions; the missions (where, by what time and what information to acquire) and also what to give special attention; the time and procedure for presenting reconnaissance reports and turning over prisoners, defectors, captured or discovered documents, samples of weapons and equipment.

When necessary, the methods of reconnaissance may be indicated.

Reconnaissance missions, the performance of which may be beyond the capabilities of the reconnaissance resources of a given subunit, are carried out by the resources of a higher echelon on requisition and also by the resources of cooperating, supporting, and adjacent (forward operating) subunits.

The requisition (request) for reconnaissance indicates what information, about what enemy (objective) is to be obtained, and in what form and when it is desired.

Reconnaissance missions must be stated with extreme brevity, but not at the expense of clarity, so that those who are to perform them will correctly understand them and any possibility of a different interpretation is ruled out.

For example, one of the main reconnaissance missions that troops may face may be as follows: to determine if the enemy is going over to the offensive on a given axis and, if so, when, with what forces. To perform this mission with just any single reconnaissance element (observation point, reconnaissance party, combat reconnaissance patrol) is impossible. The whole reconnaissance system can perform it, and the reply to the formulated question will be obtained only after processing and analyzing the information obtained by the various reconnaissance elements. Hence, such a mission cannot be assigned to one reconnaissance element, since it can perform only a specific mission.

In determining the specific missions involved, one must proceed from the premise that certain preparatory activity must precede any combat actions. Typical forms of such activity applicable to an enemy offensive are, for example, moving troops and artillery forward, intensifying reconnaissance activity, increasing the amount of materiel brought forward, carrying out commanders' reconnaissance, ranging by enemy artillery of targets in the dispositions of our forces, etc. **[50]**

Depending on their capabilities, reconnaissance elements should be assigned missions to discover precisely these and similar enemy actions, on the basis of which we can draw conclusions concerning his intentions.

The preparation of reconnaissance resources for carrying out their missions consists of the general training carried on in the course of daily combat and political education and in the direct preparation carried out on the basis of the specific missions assigned to the reconnaissance elements.

The steps associated with the preparation of resources to accomplish their assigned missions include: maintaining reconnaissance resources in a state of readiness for immediate actions; replenishing and outfitting reconnaissance subunits with personnel and fighting equipment; synthesizing and disseminating the latest experience in organizing and conducting reconnaissance; deploying resources or moving them to new areas.

A high state of combat readiness of reconnaissance subunits entails training personnel to carry out reconnaissance under any conditions of the combat situation and at any time of the day or night. This is achieved by daily purposeful combat and political training and especially by sys-

tematic drills in going through those missions that they will have to perform in combat.

A knowledge of past experience in organizing and conducting reconnaissance is very important in training scouts. The history of the Great Patriotic War shows that, where the staffs of formations and units have constantly synthesized the experience in organizing and conducting reconnaissance gained in the course of combat actions and have applied it in training reconnaissance subunits, the overall skills of scouts and the skills acquired by experience have always come up to the required level.

For reconnaissance to be successful, it is very important that the staff officers and subunit personnel have a knowledge of the enemy's organizational structure and tactical views and the telltale signs of his most important objectives, especially his offensive nuclear weapons.

In the training of reconnaissance subunits, special attention is paid to purposeful and continuous party-political work, which is organized with the specifics of their purpose and use in mind. Scouts [51] must act alone or in small groups, cut off from friendly forces and in the enemy's rear area.

This calls for exceptionally great conscientiousness on their part and extremely intensified moral and physical strength, quick-wittedness, resourcefulness, and ingenuity. Party-political work must therefore be aimed at fostering in them high moral and political qualities, unlimited devotion to the socialist Motherland and a consciousness of personal responsibility for its defense, hatred for the enemy, the ability to bear steadfastly all burdens and deprivations in the performance of their honorable, but very difficult missions

An important condition for success in reconnaissance is the timely material and technical support of reconnaissance subunits as well as assembling them into the structure needed to carry out reconnaissance.

In modern combat, where there is a sharp increase in the volume of reconnaissance missions, motorized rifle and tank subunits will be called on extensively to perform them. Therefore all troops must possess the skills needed to conduct reconnaissance.

The organization of communications. One of the important factors contributing to the effective conduct of reconnaissance is the organization and maintenance of steady and responsive communications with the reconnaissance elements. Only with uninterrupted communications is it possible to assign or update missions for the reconnaissance elements

and to get the necessary information back from them. In highly dynamic combat, with frequent and abrupt changes of circumstance, the most valuable information obtained by the reconnaissance elements loses its importance if it is not passed on to the commander on time.

Radio and various kinds of mobile communications equipment are used to direct the reconnaissance resources, namely motor vehicles with high cross-country performance, armored personnel carriers, helicopters, motorcycles, etc. In reconnaissance elements at the tactical level, signaling equipment is also used: various colored rockets, colored smoke and flares, lights, signaling flares, tracer bullets and shells, signal flags, markers, etc.

Use of these various kinds of communications equipment assures that the missions are disseminated to those who are to perform them and that the efforts of all reconnaissance elements are coordinated, that reports and messages are received from them about accomplishment of assigned missions or arrival in a certain area (line), that intelligence information arrives from the higher headquarters and from adjacent forces, and that those who are to perform them get their additional missions. [52]

Monitoring and providing practical assistance. In order to ensure that information is obtained, the staff must not only send out the necessary resources in good time, assign them missions and take other measures involved in organizing reconnaissance, but must also know what is going on in the subordinate reconnaissance elements, how the assigned missions are being performed and what difficulties are being encountered.

That is why monitoring the state and situation of reconnaissance resources and their timely and precise accomplishment of missions is a very important responsibility of commanders and staffs at all levels.

Monitoring must be continuous and purposeful and must prevent failure or imprecise performance of assigned missions. Attention is paid here mainly to verifying accomplishment by reconnaissance elements of the missions on whose accomplishment at a given time the success of combat actions most heavily depends, especially discovery of the enemy's offensive nuclear weapons.

Monitoring implies giving assistance to subordinate staffs and reconnaissance elements in organizing and conducting reconnaissance. However, it must not be pettily paternalistic, restraining initiative and taking over lower echelon commanders' leadership of their reconnaissance resources. Moreover, monitoring must be set up in a way that

inspires in subordinates a burning desire for aggressive actions in complex situations, a readiness to take on the responsibility for bold decisions and to find ways, at all costs, of getting the required intelligence information in good time.

At the same time, all chiefs and leaders of reconnaissance elements and subunits must be well aware that any deviation from the performance of the assigned reconnaissance missions will not go unnoticed by the higher echelons. Therefore, it is very important to foster honesty and honor in every member of the reconnaissance team, to cultivate in him an inherent need to report quickly and objectively the actual state of affairs or the failure to accomplish an assigned mission (or to do so too late) for one reason or another.

The final part of the work of organizing and conducting reconnaissance is the assembly and processing of intelligence information, reporting it to the commander and higher headquarters, and informing subordinate and adjacent subunits.

Chapter 2. The Principal Methods of Conducting Reconnaissance and Troop Reconnaissance Elements

[53] Troop reconnaissance is conducted by reconnaissance elements that are either organic or created temporarily from reconnaissance, motorized rifle, and paratroop subunits.

The principal methods of conducting troop reconnaissance are observation, raids, ambushes, and reconnaissance in force. These methods are widely used by troop reconnaissance elements whose mission is to gather intelligence information on the battlefield.

The following may be intelligence-gathering elements: observers, observation points and posts; subunits (parties) for carrying out searches, ambushes, raids, and reconnaissance in force; patrol sections (scout vehicles), combat reconnaissance patrols, reconnaissance patrols, independent reconnaissance patrols, reconnaissance detachments, officer reconnaissance patrols, and reconnaissance parties for actions in the enemy rear area.

We will now consider the essence of the methods of conducting troop reconnaissance and the fundamentals of employing the reconnaissance elements created for this purpose.

Observation

Observation is one of the main methods of reconnaissance, and one of the commonest ones, organized in all combat arms and combat service support troops under all conditions of their combat activity, at any time of the year and of the day or night. It is conducted continuously by all classes of servicemen from private soldiers to commanders at all levels. However, reconnaissance elements have always been especially concerned with acquiring information about the enemy and the terrain by this method.

Observation as a method of reconnaissance arose with the first appearance of wars, has existed throughout history, and for long time was the sole method of reconnaissance on the battlefield. The battlefield itself in those times occupied [54] a comparatively small area, and the military leader could personally observe the actions of enemy and friendly forces from the beginning to the end of a battle.

Outstanding Russian generals have always attached exceptional importance to reconnaissance in the defeat of an enemy, and in all possible instances they have personally observed enemy actions both in preparation for a battle and in the course of it. For example, in 1778, before the start of the celebrated battle with the Turks at Rimnicu—where a Russian army of 25,000 destroyed a Turkish army of 100,000—the great Russian general, A. V. Suvorov, carried out reconnaissance with a few officers and Cossacks. In a grove on the bank of the Rimna River, he chose a branched, fairly tall oak tree, climbed up into it and began to observe the enemy with a telescope. Suvorov noted that the enemy forces were set up in three camps. The number of Turks in each camp was considerably greater than all of Suvorov's forces. However, this did not disturb the general. The division into three camps separated the enemy's forces and made it possible to defeat them in detail. Moreover, the Turks were not expecting an engagement, believing that Suvorov's forces could arrive no earlier than the second day after.

Suvorov reflected on this and immediately drew up a plan for the impending engagement. He decided to bring up his forces covertly and attack the enemy. At daybreak on 11 September, Suvorov crossed the Rimna River, led his troops into the attack, and, in a fierce battle that lasted 12 hours, completely routed the 100,000-man Turkish army, at the same time capturing rich booty.

During the great Patriotic War, a great deal of necessary intelligence information was acquired by observation, enabling commanders and staffs to discover the enemy's plans in good time and to take appropriate steps to thwart them.

For example, before the Battle of Kursk, 15th Rifle Division observers paid attention to something so apparently insignificant as the fact that enemy personnel had canteens, which they had not before. This information made it possible for the division staff to draw the very important conclusion that the enemy had begun to regroup his forces and had brought up new units to the front line. A prisoner captured later fully confirmed this conclusion. In this same battle of the summer of 1943 in the area of Belgorod, on the basis of data from observations received in the 51st and 52nd guards rifle divisions and information from other sources, correct conclusions were drawn about the enemy's prep-

aration for [55] an offensive and his occupation of the departure position for the attack. This helped to prevent the possibility of a surprise enemy shift to the offensive.

Also instructive were the results of observation by the formations and units of the 43rd army in May 1942. In just one month they discovered and confirmed the presence of 90 artillery and mortar batteries, 113 cannons moved out for direct fire, 68 antitank guns, 383 medium and light machine guns, 43 command posts and observation posts, 268 dugouts, 121 kilometers of barbed wire, 200 kilometers of fighting trenches, and 15 tanks.

During preparations for the Vistula-Oder Operation, observation established that the enemy was occupying the first trench only at night, while at dawn he would leave behind only alert-duty fire weapons and observers in it, withdrawing the main forces to rest in the shelters of the second trench. On the basis of this and other intelligence, our command decided to carry out artillery preparation during a time when the enemy's subunits were making the transfer from the first to the second trench. As a result, the enemy suffered great manpower losses.

The Great Patriotic War presents many other examples of the fact that intelligence information of the most varied and valuable kind is obtained by observation and that underestimation of this method of reconnaissance led to undesirable consequences. For example, on the night of 3–4 January 1945, the enemy suddenly went over to the offensive in the zone of the 31st Army's 331st Rifle Division, seized the frontline fighting trenches, and expanded a breakthrough about 3 kilometers wide and about 6 kilometers deep. Here is what was said on this occasion in an order to the troops of the 3rd Belorussian Front on 9 January 1945: "Reconnaissance and observation in the 331st Rifle Division were at a low level: commander's observation and observation from observation posts and points were poorly organized; the observers did not know their sectors of observation and their duties, and failed to report what they had seen in good time. The results of observation for the day were not summarized, and conclusions were not drawn from them. Observation logs were not kept or were kept very carelessly. As a consequence, the bringing up of new enemy forces from the rear and their deployment went undiscovered. The enemy attack was completely unexpected by the 331st Rifle Division command element."

The following case from the experience of the Great Patriotic [56] War will also serve as an example of underestimating visual reconnaissance. In the autumn of 1942 on the west bank of the Terek River, in the area of Kotlyarovskaya station and Mayskiy, the enemy set up a small bridgehead and brought fresh forces up to it from the rear. On 14

October 1942, a large concentration of motor vehicles was observed in the Mayskiy area; on 19 October a concentration of motor vehicles and about a battalion of infantry was observed in the area of Prishibskaya. On the same day, from the Verkhniy Kurp area to Planovskoye, the movement of 10 tanks was noted; on 21 October about 110 motor vehicles and about 10 tanks were seen on the move from Deyskoye to Arik; on 22 October about 300 motor vehicles, 8 tanks and 7 guns were observed moving from the area of Prokhladnyy to Mayskiy; on 23 October about 100 motor vehicles and 13 tractors with guns on trailers were observed moving from the Deyskoye area to Arik.

For 10 days our command element failed to pay adequate attention to this information, failed to organize final reconnaissance, and failed to take timely measures. The enemy, reinforcing his grouping and relieving his troops, suddenly went over to the offensive on 25 October, seized the town of Nal'chik, and began an offensive in the direction of Ordzhonikidze.

War experience shows that information obtained by observation has often by itself not provided a basis for conclusions on probable enemy actions, but has alerted the command elements to the need to confirm it by other reconnaissance methods and means. For example, in the period from 22 to 25 May 1943, the observation system of the 265th Rifle Division of the Leningrad Front noted an intensive movement of manpower and equipment to and from the front. In those three days, it was established that 10 guns, 240 trucks, 593 wagons, 78 horsemen, and 837 soldiers and officers had gone to the front; while 30 guns, 322 motor vehicles, 388 wagons, 36 motorcycles, 5 horsemen, and 197 soldiers and officers of the enemy had withdrawn from the front to the rear.

From 26 May 1943 onward, enemy transport traffic fell off sharply. The intelligence officer assumed, on the basis of the information obtained by observation, that the enemy was relieving units in front of the division defense zone. In order to confirm the correctness of these conclusions, on the orders of the division commander, a sweep was made on the night of 26–27 May. A captured prisoner confirmed the information that had been obtained by observation. The 290th Infantry Division had been transferred to the Karbusel'-Lodva line from the Demyanskiy bridgehead and was relieving units of the mechanized division that had been operating there earlier. [57]

Thus, the intelligence information obtained by observation enabled us to establish that the enemy had carried out a relief of troops and to move the commander to carry out reconnaissance by another method that actually confirmed the correctness of the intelligence officer's conclusions about the enemy's actions.

Today observation continues to be one of the most important and commonest methods of acquiring intelligence information. Owing to the employment of more sophisticated optical instruments, infrared technology, television, and other reconnaissance equipment, the capabilities of observation have been considerably expanded—especially at night and in other unfavorable conditions: the very times when the enemy will usually carry out regroupings of his resources and strengthen occupied positions.

By observation it is possible to establish the strength, composition, and grouping of an enemy to the depth observed; to determine precisely the configuration of the forward edge, the positions of platoon and company strongpoints and of firing points within them, the location of the fire positions of mortars and artillery (including nuclear weapons), of engineer fieldworks, obstacles, and control posts; to discover the nature of enemy actions (preparation for an offensive, shift to the defensive, the bringing up, withdrawal, regrouping of forces, etc.); to determine certain signs of preparation by the enemy for the use of nuclear and chemical weapons; to study the nature of the terrain in the zone of impending actions within line-of-sight range.

Observation is carried out continuously in person by all commanders, staff officers, and specially assigned observers from all observation posts and command observation posts; and also from observation points equipped with observation instruments and communications equipment, by observers present in the battle formations of subunits, from helicopters, by the crews of combat vehicles, and by all the personnel of the subunits conducting an engagement. Where necessary and where circumstances permit, visual reconnaissance is combined with ground photography and also with direct inspection of the terrain and of terrain features. At night and under other conditions of limited visibility, observation is carried out with night vision devices, ground reconnaissance radars, and terrain illuminants and is supplemented by monitoring.

Wartime and postwar exercise experience shows that [58] personal observation by commanders from their command observation posts is the most effective, for it permits the acquisition of the most reliable data. It cannot, however, take in the entire area of combat actions and the flanks of the subunits. Hence it becomes necessary to post observers and set up observation points.

The number of observers and observation points may vary. It is determined by the nature of the combat actions and the missions of the subunits, the nature of the terrain, the width of the area (sector) of responsibility, the weather, the time of day, the season, and other contributing circumstances. In the Great Patriotic War, for the preparation

of an offensive and on the defensive, the following were usually assigned: in a squad, one observer; in a platoon and in a company, one to two observers; in a battalion, two to three observers at the battalion commander's command observation post, and one or two observation points; in a first-echelon regiment, one or two observation points; and in divisions, two or three observation points. In addition, engineer and chemical warfare observation points were organized.

Today, in the preparation of an offensive and on the defensive, the following are recommended: in a squad, one observer; in a platoon and a company, one to two observers; in a battalion, one to two observation points, two to three observers at the battalion commander's command observation post, and one chemical warfare observation point. In mobile forms of combat, observers are assigned in the battalion (company) to carry out continuous observation of the enemy and of the status of friendly subunits.

However, successful performance of missions by observation depends not only on the number of observers posted and the number of observation points, but also on how carefully the observation is organized. This is confirmed also by experience in the Great Patriotic War. Thus, in the summer of 1943, at Belgorod, the system of observation in the 51st and 52nd guards rifle divisions, regiments, and battalions was organized in such a way as to assure an optimum view of the enemy situation and terrain to the greatest possible depth from the observation posts and points. The observation posts and points were disposed in echelon in the entire depth of the defense as well as on the flanks and the boundaries, in sectors of terrain providing a good view of the enemy position. They were well camouflaged and were furnished with observation instruments. Those situated close to the forward edge had alternate positions in the rear defenses in case of enemy penetration of the defense. Each [59] observation point had observation logs, a chart of reference points, and a chart with data on the enemy entered in it. Each observation point (observer) was assigned a sector, direction, or object of observation, given a specific mission and told what to watch for in particular. A procedure for reporting on the results of observation was laid down. Stable communications were organized with all observation points.

Divisions and regiments had authorized scout-observers who carried out special preparations and who were used only to conduct visual reconnaissance.

Division and regiment staffs worked out observation plans (maps) on which were entered the observation points and posts of the combat arms and combat service support troops and which showed the dead ground and organization of communications in the observation system.

From the observation points the senior observers reported the reconnaissance results at a set time by telephone to the commanders who had sent them out.

The intelligence officers in these divisions and regiments assembled and carefully processed all the intelligence information that came in from the observation posts and points and promptly reported to the commanders, chiefs of staff, and higher headquarters.

Over a period of eight days, this system of observation succeeded in establishing the arrival of as many as 8,300 infantrymen, 45 tanks, 17 armored personnel carriers, and 19 guns. At the same time, an increase in the number of infantry in the forward fighting trenches was noted, as well as enemy preparation of a departure position for an offensive. On the basis of the observation data and the information obtained from other sources, correct conclusions were drawn by the command element concerning enemy preparations for an offensive and the occupation by his troops of a departure position. The intelligence information obtained by observation in the Belgorod region helped to prevent a surprise when the enemy went over to the offensive on 5 July 1943. Moreover, the data obtained by the observation system enabled the command element and staffs to carry out more purposeful reconnaissance by other methods.

The organization of observation depends on the situation at hand, the kind of combat, the position of friendly and enemy troops, and the nature of the terrain.

In organizing observation, it is necessary: to determine the sectors or axes where the main efforts of visual reconnaissance are to be concentrated; to position the observation points correctly **[60]** on the terrain and to provide them with everything they need to successfully perform their missions; to determine and to assign promptly and clearly the mission of each point and set up reliable communications with it; to organize close cooperation between adjacent observation and radar sites and with the observation points of the combat arms and combat service support troops; to assure the rapid assembling of the intelligence information obtained by observation and its processing and reporting to the commander.

Points are placed so as to ensure the best view of the enemy and the terrain ahead of the front and on the flanks of friendly troops, to the greatest possible depth. For this purpose it is advisable to place them on inconspicuous slopes of elevations and hills facing the enemy.

The concealment of observation is one of the main conditions for successful reconnaissance. War experience has shown that well-

camouflaged observation points are the most efficient. Whenever the enemy detected an observation point, he immediately took steps to destroy it or tried to deceive the observers by his actions. Then, before the start of an offensive, he would destroy or blind all known observation points. Thus it was, for example, in the defense zone of one rifle division of the Central Front in June 1943. During artillery preparation before the offensive, the first salvos of an enemy battery were directed at this division's observation system. As a consequence, a considerable number of observation points were blinded or destroyed. Subsequently, an interrogated prisoner of war (an artillery observer) stated that before the offensive began, the Germans had discovered several observation points in the division's sector, on which they had been ordered not to fire until they received special instructions.

All information obtained by observation must be rapidly assembled, processed, and promptly reported to the commander and other interested parties.

A delay in reporting the results of observation may lead to undesirable consequences. This is confirmed by the following example from the experience of the Great Patriotic War.

On 9 September 1943, during the crossing of the Vit' and Desa rivers by units of a rifle division, an assault battalion broke into Koman', a strongpoint of the enemy defenses. An advance-post observer situated a little to one side of the assault battalion noted small enemy groups rushing over and assembling **[61]** in the vicinity of a hill with a reading of 180.1, but he could not report this information in time to the assault battalion commander because of a breakdown in telephone communications. While the senior observer of the point was trying to restore communications, the enemy, with a strength of about one infantry company and with the strong support of artillery-mortar fire and seven tanks, counterattacked from the direction of the hill. The assault battalion had not prepared in time to repel this enemy counterattack and was obliged to fight in difficult circumstances, which, of course, resulted in considerable losses. This might not have happened if redundant means of communication (prearranged signals, reports by runner) had been indicated to the point's senior observer, or if he himself had shown proper initiative in transmitting the data to the commander.

Today, with the appearance on the battlefield of nuclear weapons and other powerful combat equipment, the maneuverability of troops has increased sharply and the timely reporting of intelligence obtained has become even more important.

Observation in subunits is organized by the subunit leaders, and is conducted by observers from observation points and command observation posts.

One of the specially trained NCOs and men is usually assigned as *observer*. He must know how to get his bearings in a situation day and night; have excellent training in conducting visual reconnaissance; be able to select and camouflage a place from which to conduct observation, read a map, use observation instruments, determine the coordinates of discovered targets (objectives), and use communications equipment to transmit the results of observation. The observer must have a good visual memory; must have endurance, quickness of wit, coolness, and enormous self-control and patience; must be able to construct a graphic plan; and must master observation instruments to perfection.

Such qualities are best developed in soldiers who have in the past had close touch with nature: who have gone hunting, fishing, and mountaineering and have ventured to the lonely taiga, the mountains, and the arid deserts.

Observers must be well acquainted with the organization, weapons, and tactics of enemy units and subunits and with the intelligence and telltale signs by which it is possible to detect offensive nuclear weapons, fire **[62]** weapons, combat equipment, defensive installations, and obstacles.

During combat actions, the enemy will strive to conceal his forces and intentions and to deceive our reconnaissance by every means possible. For this he employs dummy offensive nuclear weapons, tanks, and guns; constructs false engineer fieldworks, and carries out feint troop movements. With the modern equipment at his disposal, the enemy can construct shelters for personnel and combat equipment in a short time and, with available camouflaging means, conceal the movement of his forces from our ground and air observation. Under such circumstances, the observer must be able to distinguish, by the slightest signs, false enemy actions from true ones and must be able to obtain information about an objective. A knowledge of the telltale signs of various enemy objectives (targets) can be a very important aid in this connection.

Enemy observation posts and points are usually situated in terrain sectors and on various terrain features that provide a good view of the terrain in front of them. Usually they are detected while they are being set up or occupied or when observers are changing shifts. The most typical signs of an observation post (point) are as follows: the vision slit, observed in the form of a dark horizontal strip in some terrain feature; flashes from the glass of optical instruments; changes in the shape and color of terrain features and vegetation; the construction or repair of wire communications lines; the appearance of small groups of people at approximately the same time and place (relief of observers, serving of food); the presence of sources of infrared radiation; the presence of a dark spot in a tree against a background of surrounding trees,

and in winter the absence of frost or snow on tree branches; motion of a tree in still air and nervousness on the part of birds; a wisp of smoke (from the heating of an observation post or point in cold weather).

Machine gun fire positions should be sought in separate emplacements and fighting trenches in sectors from which the enemy can conduct flanking fire in order to cover approaches and where a wide frontal field of fire is obtained. Machine gun emplacements are frequently set forward beyond the line of other emplacements. The embankment is higher at the fire position than at an emplacement. A sector field of fire is cleared in front (trees and bushes are cleared out, a ramp is sloped off). A machine gun firing at night or when [63] visibility is restricted may be detected by the flashes coming from its muzzle; and, in daylight, by pulsating jets of white smoke.

Tanks, tracked armored personnel carriers, and self-propelled artillery equipment traveling in dry weather are detected by the dust they raise and by the distinctive clank of their tracks and the noise of their engines. A tank in an emplacement can be detected by the freshly excavated ground, by the turret projecting above the emplacement and by the radio antenna.

As a rule, field artillery, including nuclear weapons, occupies indirect fire positions that are selected on the back slopes of hills, beyond woods, in forest clearings, beyond inhabited localities, in hollows, or behind other shelter. They can be detected from ground observation posts only while they are firing, by the flash or report of their shots, by the dust rising from the fire position after a round, or by smoke rising from behind the cover at the time of firing in the form of rapidly dispersing semitransparent puffs and rings. At night and at dusk, firing batteries give themselves away by the glow of their rounds against the background of a wood, the crest of an elevation, or a clear sky.

Mortars are positioned in ravines, behind the back slopes of hills, in large shell and bomb craters, in pits and excavations on the steep banks of rivers, behind structures, in the ruins of buildings, and in other places that make camouflaging easy and detection more difficult. On open terrain, mortars are set up in emplacements interconnected by crawl trenches.

Mortars, because of their few telltale signs and also because of their great camouflaging and maneuvering potential, can for the most part be detected from ground observation posts only when they are firing. When they are fired in daylight, a characteristic spurt of smoke is observed at the mortar firing position, moving in the direction of the round at a height of 10–15 meters. At night the flashes of the rounds are observed in the

form of a glow or gleam. The report is muffled and is easily distinguished from other sounds.

When rocket launchers are fired they create a great cloud of smoke and dust that rises above the fire position in still air a few seconds after firing and is easy to observe in daylight. At night, rocket fire positions can be determined by the increasing glow and fiery tracks from the combustion of the solid fuel. The sounds from rockets being fired are reminiscent of [64] steam escaping through an open relief valve of a steam generator.

Antitank guided missiles are positioned in sectors that are favorable for tanks. The telltale signs of these missiles are as follows: the presence of cruciform wings on the missile, one or two men with a control console situated 10–20 meters away from the launcher, jets of incandescent gases and the trace of the missile on firing and the flame and dust at the launching sites.

The telltale signs of antitank missile launchers are as follows: absence of a gun shield, the comparatively high position of the barrel above a breastwork, the presence of a two- to three-man crew. Antitank rocket launchers are easily detected when firing by the jet of smoke 10–15 meters long spurting out in the direction opposite the direction of the round. In dry weather, especially on dusty ground, an easily noted cloud of dust rises up after the firing.

Emplacements (fighting trenches) are dug into the slopes of hills facing in the direction of the enemy, in areas providing a good field of view and fire on the terrain ahead. Emplacements and other field structures are most easily detected at the time they are being equipped or work is being done to improve them. Ready, freshly dug emplacements (fighting trenches) are recognized by the presence of freshly excavated earth and by the differences of color of the grass and the vegetation cover in the camouflage turf of the trench and the terrain adjacent to it. From ground points, fighting trenches are observed in the form of thin, dark places merging with the terrain, twisting or broken lines with 15- to 20-meter faces and small breaks at the covered sections of the trenches. Crawl trenches are distinguished from fighting trenches by their placement. They go from the rear to front (are less equipped for the use of fire weapons).

Emplacements are observed in the form of dark depressions in the middle of a breastwork. In winter they can be detected by traces of snow clearance. Before the opening of fire, emplacements may be covered with nets or materials at hand with the color of the surrounding terrain. Incompletely profiled fighting trenches (crawl trenches) are de-

tected by the movement of people in them. In winter, emplacements, shelters, and fighting trenches are determined by smoke from stoves.

Permanent defensive structures should be sought in the slopes of hills, at the edges of woods, in the basements of outlying and corner buildings in inhabited localities, and at road and street intersections. These structures stand out markedly in the form of [65] elevations above the surrounding terrain; the embrasures of the structures are observed in the form of dark spots; in winter the snow melts in front of them and becomes dark.

In addition to reconnoitering the enemy, the observer has the duty of monitoring the actions of friendly forces and keeping watch over the terrain ahead, especially terrain features that the enemy may use to conceal his installations.

The observer is under the subunit leader, the duty officer at the observation point, or the senior observer.

The observer is given his mission, as a rule, at the location from which he will conduct his observation. When being assigned his mission, [66] the observer is told: the reference points and code (arbitrary) names of terrain features; information on the enemy and on friendly subunits; the observation site and the method of preparing it; the sector or object of observation; what to observe and to what special attention should be paid; the procedure for reporting the results of observation.

Depending on the situation, an observer may take up a position by some terrain feature, in an emplacement, in a specially equipped structure, or on open ground. In all cases the place for observation must provide the observer with a good view of the enemy position and the terrain in the indicated observation sector (object, axis) [67] to maximum depth, good concealment from observation by the enemy, and cover from his fire.

If the place of observation has not been indicated to the observer, he chooses it on his own on the basis of the mission to be performed and the condition of the terrain. On open ground, the observer chooses a place for observation so that the color of his clothing and weapons will merge with the natural coloring of the terrain (figures 2 and 3). If the observation is being made from shelter, the observer will be in standard uniform. If the position is on terrain with a large number of terrain features, the observation location may be set up to resemble a terrain feature (a bush, a stump, a knoll, a boulder, a ruin, etc.) (figure 4).

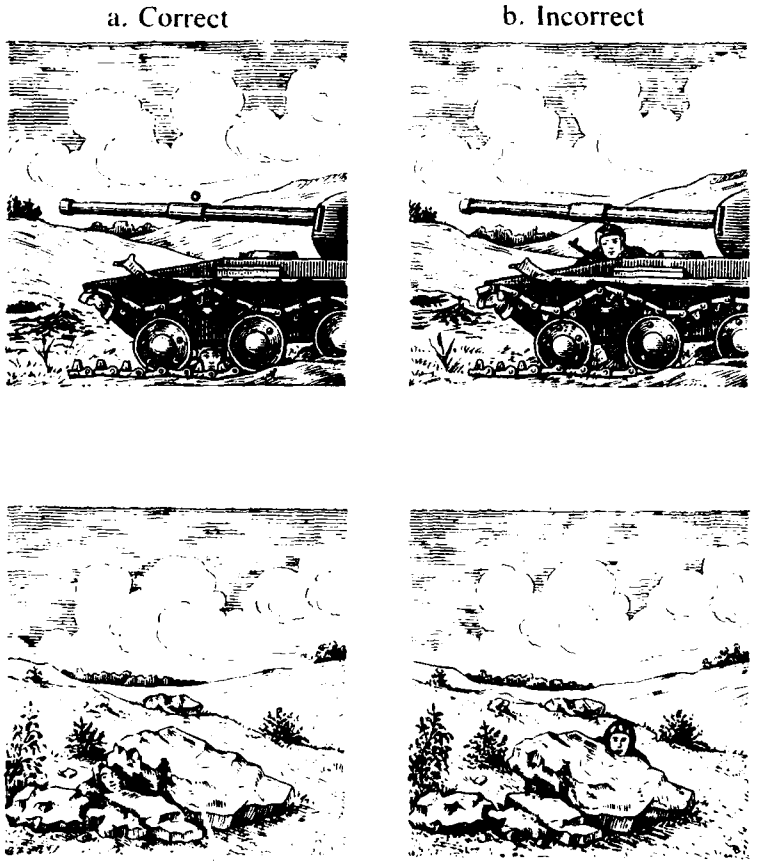

Figure 2. Position of an Observer by a Terrain Feature.

In addition to the regulation personal weapon and individual chemical warfare protective equipment, the observer in a subunit must have an optical instrument for observation, a compass, and a watch. An observer at a command observation post (observation post) of a battalion commander or at an observation point must in addition have a large-scale map (plan of the terrain), an observation log and communications equipment.

On the defensive and when an offensive is being prepared, the observer—after he receives and analyzes the mission—takes up his position in the indicated place, prepares it, and carefully camouflages it. After this he measures the distance to reference points, divides the observation sector into zones, lays out a diagram of reference points, studies the tactical properties of the terrain, and begins his observation.

Figure 3. Continuation of Figure 2.

In studying the tactical properties of the terrain, the observer determines the most probable position for offensive nuclear weapons, the fire positions of artillery, mortars, antitank guns, machine guns, engineer fieldworks, obstacles, and personnel and also what his possibilities are for concealed movement in his own rear area and on the approaches to our positions.

An observation must be conducted in a certain sequence. If an observer were to inspect the terrain quite unsystematically, randomly switching his gaze from one place to another, he might miss certain reconnaissance indications that reveal the enemy and permit discovery of his actions. For convenience of observation it is necessary to divide the given observation sector into zones: a near, a middle, and a far zone, identifying them with [68] arbitrary lines (figure 5) on the basis of terrain features (reference points). The near zone includes the terrain area within which small objects (targets) can be seen with the naked eye. The middle

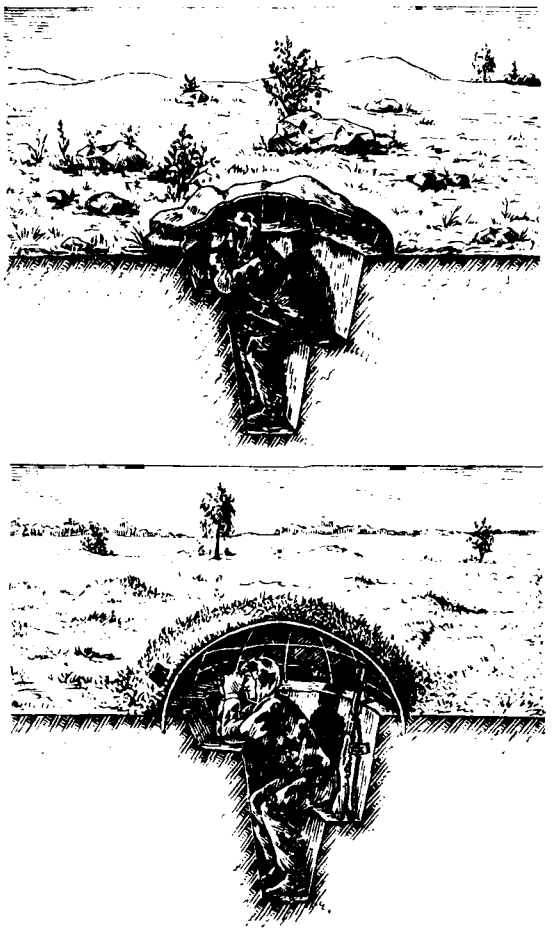

Figure 4. Observation Foxhole Simulating a Terrain Feature.

zone is marked within the limits of visibility of prominent terrain features. The far zone takes in all the rest of the expanse to the limits of visibility with optical instruments.

When dividing an observation sector into zones, the observer simultaneously determines the dead ground; i.e., [69] unobserved sectors of terrain, and gives them special attention, since these sectors can be used by the enemy as concealed approaches.

As a rule, the observer first inspects the terrain with the naked eye and then, using the optical instruments, inspects those sectors in which enemy objectives may be positioned. The use of optical instruments increases the effectiveness of observation and makes it possible to view

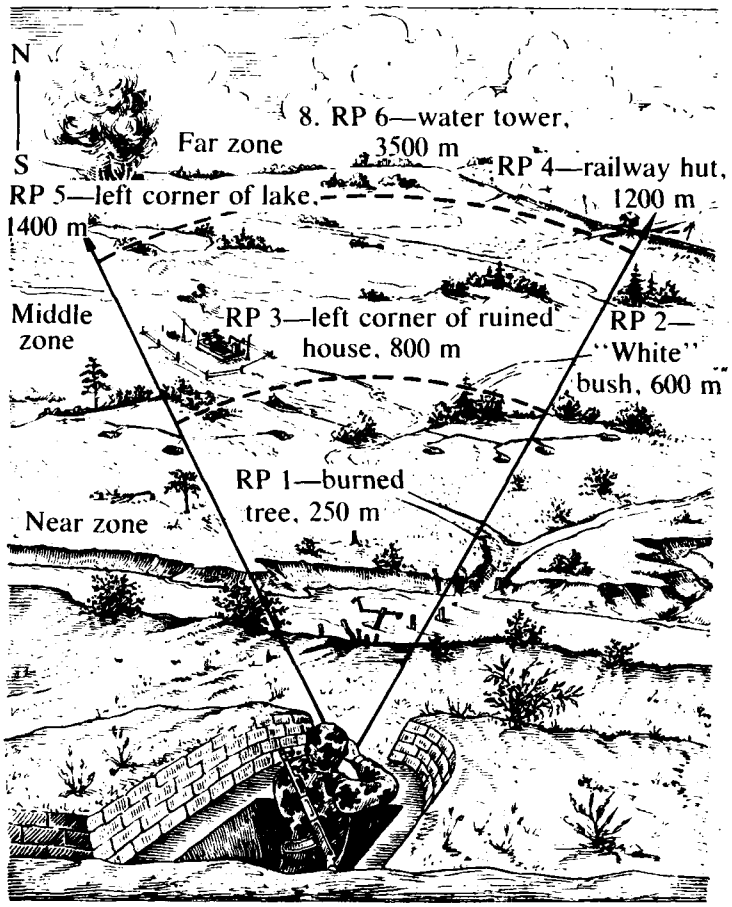

Figure 5. Division of Observation Sector into Zones.
[RP = reference point]

objectives and targets that are not visible, or poorly [70] visible, to the naked eye. However, prolonged observation with optical instruments tires the eyes and limits the sector of simultaneous viewing. Therefore, observation with an instrument alternates with observation with the naked eye.

When observing over short distances, it is better first to pick out an object (target) with the naked eye and only then, with the target revealed, to make an observation with an optical instrument for detailed study of the object and the surrounding terrain.

In motorized rifle subunits, scout-observers generally use binoculars. Observers at observation points, command observation posts, and

observation posts may use scouts' periscopes, theodolites, stereoscopic telescopes, instruments with high magnification, and night vision devices.

In a combat situation, it is not possible immediately to detect any given object or to discover the nature of enemy actions. The observer discovers them by painstaking assembly, study, and correlation of the various signs, which are sometimes circumstantial, minor, and contradictory. From the glare of glass, for example, it is impossible to say that one has discovered an enemy observation post or point, since a piece of broken glass, a can, a bottle, or a mirror fragment may also shine. It is also difficult to establish the presence of a firing battery from a report or from smoke appearing, since the direction of propagation of the sound is greatly distorted, depending on the terrain relief, terrain features, and wind direction, while smoke rising above a shelter may drift a long way in a direction away from the object. Moreover, the enemy will always take various deceptive measures, create decoy objectives, and employ deceptive actions. Every observer should bear in mind that only a number of signs confirming a given supposition will enable him to draw a conclusion as to the reliability of the intelligence information obtained.

The observer must not only discover enemy objectives, but also correctly determine their coordinates (location). The position of a target is determined in relation to reference points or terrain features by measuring the angle between them and the objective and its distance away.

When he has detected a target and determined its coordinates, the observer will, without interrupting his observation, immediately report on it to the subunit leader (senior observer). [71] then enter the target on the map or large-scale plan and make an entry in the observation log.

Observers are relieved at a time set by the leader (duty officer, senior observer). At the time of relief the relieving observer is informed of the mission assigned; is informed of the observation sector on the terrain; is told what he is to give special attention; and is also informed of the reference points, all targets discovered, the disposition of friendly subunits, and the location and nature of enemy combat activity; and the observation instruments and documents are handed over to him. After the shift change, the relieved and relieving observers make entries in the observation log, and the relieved observer, in addition, reports on the relief to the leader.

Observation of the enemy is not interrupted while the observers are changing shifts.

An observer may change to a new place of observation only on orders of the subunit leader (duty officer, senior observer). The transfer to the new place is carried out in concealment.

In the course of combat one of the observers must always be with the subunit leader.

In tank subunits and in subunits moving in combat vehicles, observation is carried out in the course of an engagement from all combat vehicles. The vehicle commander conducts observation ahead, while designated observers do so to the right and left, behind, and in the air.

The *observation point* is the group of servicemen with personal weapons, observation instruments, necessary documents, and communications equipment assigned for observation. It is also the place from which they conduct observation.

Observation points are organized in defense and during the preparation of an offensive. On the march, in the course of offensive combat, during disengagement, and in withdrawal, observers are appointed in battalions and companies and continuously observe the enemy and the position of friendly subunits.

Two or three observers are assigned to the observation point from among the NCOs and men trained for it; the point may also include signalmen. One of the observers is appointed senior; the entire complement of the observation point is subordinate to him.

An observation point is equipped with observation instruments (binoculars, a theodolite or stereoscopic telescope, a night vision device), a coded map or a large-scale plan, [72] a simple procedural chart, an observation log, a compass, a watch, communications and signaling equipment to warn of enemy air activity, chemical and radiological reconnaissance devices, and terrain illumination equipment for working at night.

When missions are assigned, the senior observer is told the reference points and, where necessary, the coded designations of terrain features; information about the enemy; the location of the advance subunits of friendly forces; the composition of the point and the time for preparation; the sector (zone), area, or object of observation; the observation missions and what to give special attention; and the procedure for reporting reconnaissance results.

If a raid is carried out or reconnaissance in force is made in a given sector, then before the actual start of actions by the reconnaissance

subunits, the senior observer is told the time and place of their execution. He is assigned the mission of observing a specific area or objective for the period of the reconnaissance element's actions.

The mission assigned to the observation point will be entered in the observation log.

The observation points are located in the battle formations of the subunits. If the exact position of an observation point is not indicated when the mission is assigned, the senior observer selects it independently on the basis of the mission assigned, the terrain conditions, and the situation.

To increase the field of view, the location of the observation point should be selected on an elevation with a good view of the enemy disposition to as great a depth as possible and of the forward edge of friendly subunits. However, an observation point should not be set up at the summit of an elevation or hill, since in this case it will stand out against the background of the sky and may be easily detected by the enemy; nor should it be placed on or near isolated terrain features that stand out sharply against the general background and are easily visible to the enemy.

No matter how much effort and skill commanders and scouts put into selecting a place for an observation point, there will never be ideal conditions for positioning it. In front of observation points, one will in most cases find uneven terrain, inhabited localities, woods, and so on, which will make observation of certain sectors more difficult and will leave dead ground. It will thus be necessary to define these dead areas exactly and then to determine from what place such sectors may be observed. These locations may be found close to the observation point. [73] For example, to examine a ravine or hollow running from the enemy position, one may limit oneself to a concealed approach to it by one of the observers who has been assigned to periodically inspect the sector that cannot be seen from the observation point.

In addition, such sectors of terrain may be examined from neighboring observation points. Under these conditions, cooperation is organized, whereby neighboring points carry out observations in certain parts of the terrain that are within another point's sector. As a result of such cooperation, dead ground may be reduced to a minimum.

The observation location is prepared by observation point personnel or by soldiers (combat engineers) especially allocated for this purpose. Its position must ensure the best available view of the enemy and his subunits in the indicated sector under the given conditions, the working

convenience of observers and signalmen, and the accommodation of observation instruments and communications and signaling equipment as well as protection of the point from enemy observation and enemy fire. Depending on the available time and the availability of construction materials, the observation point location may be prepared in the form of an open emplacement or one with a shrapnel-proof cover and a vision slit. In a prolonged period on the defensive, a covered structure with an observation slit may be prepared as an observation point on the orders of the detailing commander. In this case, the covering may be of timber and earth, reinforced concrete, or armor plate.

If the observation point is situated in an emplacement, a trench shelter will be prepared, and, if construction material is available, a light construction shelter will be provided for off-duty personnel.

The outside of the observation area should not differ in any way from the surrounding terrain. When an observation point is set up on a plain, it must not rise above the level of the ground and stand out against the general background. Sometimes an observation point can be prepared beneath a disabled tank or armored personnel carrier, using it as an armored covering and as an excellent means of camouflage. To increase the depth of observation on a plain, and especially in marshy terrain, towers are built as observation points. They can be mobile or stationary.

Communications with the observation point are organized on the orders of the commander and with his resources. Wire communications are set up with the observation point, [74] because, during preparation of an offensive and on the defensive, radio use is kept to a minimum.

The senior observer is in command of the actions of an observation point. He determines the procedure for continuous observation, organizes preparation of the location for the observation point, makes sure that the observation instruments and communications equipment are in good working order, monitors the observers' work, performs observer duties, enters the reconnaissance results in the observation log, enters them on the map (plan), and reports to the commander at the time set. The senior observer reports immediately on abrupt [75] changes in the enemy's position and actions, on important objectives (targets) detected, or on radioactive or chemical contamination of the terrain.

The principal documents of an observation point are the diagram of reference points, the observation log, and the map (diagram) with the reconnaissance data entered in it.

The diagram of reference points is a very simple sketch in which are entered the position of the observation point, the reference points,

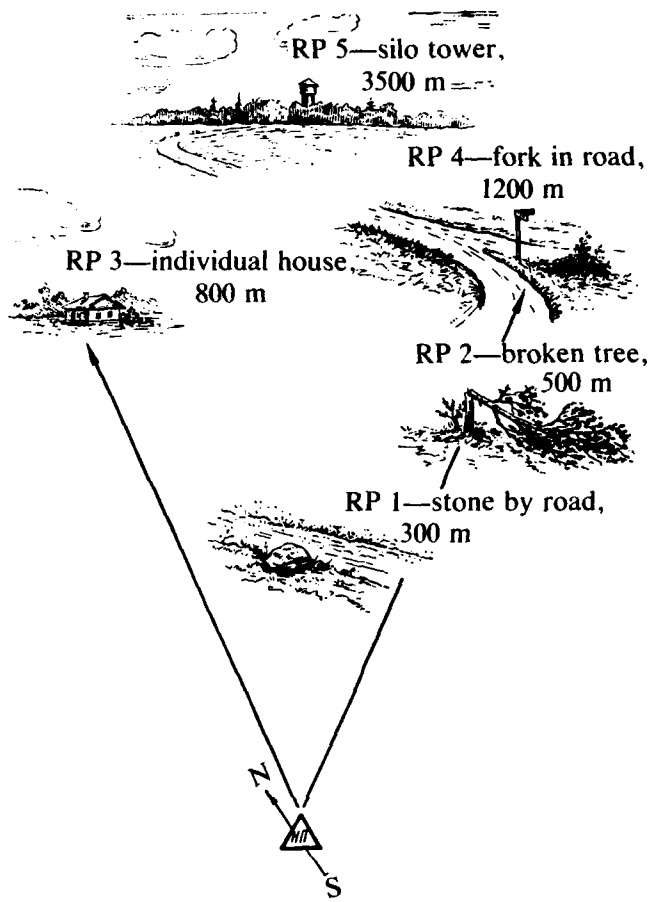

Figure 6. Plan of Reference Points [RPs].

the observation sector, distinctive features of the relief, and certain very important terrain features (figure 6). The reference points in the diagram are depicted by a sketch outwardly resembling those terrain features that correspond to the reference points in question. Other terrain features (hills, woods, rivers, etc.) are entered as conventional topographic symbols, while the point of observation is shown as a tactical symbol.

All the information on the enemy obtained by observation and monitoring is entered in the observation log, and a notation is made as to whom it was reported.

The following is an example of an observation log with an indication of the method for keeping it.

Time of observation	*What noted and where*	*To whom and when reported*
	25 July 67	
0730	Reference point 2, right 0-20, within 200, at tree stump, enemy soldiers laid mines.	Maj Trushnenko, 0740
0800	Reference point 3, five trucks with trailers passed on road to Shovskoye.	Same, 0805
0830	Reference point 4, left 0-10, within 100, heavy machine gun in window fired two short bursts.	Same, 0835

During an engagement, on a signal warning of the danger of nuclear or chemical attack, all observation point personnel except the observer on duty withdraw to the shelter, prepare the protective equipment, and make sure that the shelter is sealed tight.

After the blast wave has passed, all observers and signalmen put on protective clothing. The senior observer steps up his observation of the enemy, personally ascertains the results of the nuclear strike in the vicinity of the point and reports [76] them, as well as the consequences of the strike and the direction of movement of the radioactive cloud, to the commander who detailed him. The rest of the party eliminates the results of the nuclear blast in the immediate vicinity of the point. They first repair damage and restore camouflaging.

Where an observation point remains for a long time on terrain contaminated by radioactive or toxic substances and also in the event of a prolonged chemical attack by the enemy, relief of observers takes place more frequently and observation is conducted with gas masks on.

If the observation point site is subjected to chemical, radioactive, or bacteriological contamination that endangers the lives of the personnel, the senior observer must report this at once to the commander who detailed him, and on his orders move to a new observation site. If communications with the commander should be disrupted and cannot be restored and further retention of the observation point in its former place becomes impossible or inadvisable and will not permit performance of the assigned mission, the senior observer may decide on his own to change the observation position. After restoration of communications with the commander, he reports to him the new position of the observation point, the missions being performed by it, and the reasons for abandoning the old point.

An observation point moves to a new place for observation with all personnel simultaneously. The sequence and the route of the move is determined by the senior observer.

An observation point continues in service until a time set by the commander or until it is relieved by another observation point. In the former case, the senior observer reports to the commander on accomplishment of the mission assigned and ceases observation only on his orders. In the latter case, the observation point ceases observing after it has been relieved by the other observation point.

On being relieved, the senior observer of the relieved observation point personally briefs the senior observer of the relieving point and, if possible, all personnel of the new observation point as well, concerning the situation and the assigned mission. On the terrain he points out the forward edges of the enemy and friendly dispositions, any fire weapons, obstacles, and other objects detected in the enemy disposition, the sector of observation, reference points, encoded terrain features and their distances away. He also reports on any special features of enemy behavior and on the [77] organization of observation duty in the given sector; he hands over the diagram of reference points, the observation log and the map (diagram) with the reconnaissance data entered in them. Additionally, on orders from the commander, observation instruments, communications equipment, and documents may be handed over to the relieving point.

Observation in a town is considerably more difficult. It is frequently limited to mere scrutiny of streets and sometimes the facades of the closest buildings. The depth of the enemy's defense in such blocks can be observed only in parts of the town not built up or in areas of demolished buildings.

Smoke from burning buildings and dust rising from the explosions of aerial bombs, shells and mines severely limit observation. This necessitates the allocating of more observation points (posts) and observers in a town than in moderately rough country and placing a considerable proportion of them right in the battle formations of the attacking or defending subunits.

To observe the depth of the enemy position, it is advisable to place some of the observation points (observers) on factory chimneys, in the attics of multistory buildings, in belfries and other tall structures from which the best view is assured. In streets where there is a great deal of destruction, it is more convenient to place observers (observation points) not in intact buildings that attract the enemy's attention, but in rubble,

yards, and gardens. Streets and squares are best observed from observation points situated in corner buildings.

When an observation point is set up on one of the floors or in the attic of a building, observation is carried out through openings made in the walls by shells or through specially made observation slits in the walls, since window and door openings attract the attention of enemy observers and snipers.

In an undamaged part of a town, the observation site is usually selected in solid stone buildings with serviceable stairs and basement premises that can be equipped for the rest and shelter of personnel during artillery bombardment.

If an observation point stays in a building for a long time, steps are taken to improve its survivability and to fight fires. For this purpose windows, doors, and other openings (bullet holes) not used for observation are filled with bricks, fragments of building materials, or [78] sand bags. Highly flammable objects are removed from the premises, and supplies of water and sand are provided. When an observation point is being equipped in a building previously occupied by the enemy, precautionary steps have to be taken against the possible explosion of mines installed by him.

In a town, observation points are often set up very close to the enemy. Sometimes they are separated only by the width of a street, or the space between houses, or even by a wall. Under these conditions it is recommended that several places in a house be prepared for observation, and that precautionary measures be strictly observed when moving from one place to another.

Sometimes feints are recommended for uncovering enemy fire weapons. In April 1944, for example, when our forces were storming city blocks in Vienna, one of our subunits was obliged to go to ground because of strong machine gun and submachine gun fire from the enemy. Whenever any soldier raised his head, he would immediately draw an intense concentration of machine gun and submachine gun fire. Moreover, it appeared impossible to bypass this area. The soldiers resorted to a stratagem. They put steel helmets and headgear on sticks and pushed them out briefly from the corners of houses and fences and out of windows and ditches. The deception worked. Every time the headgear appeared, the enemy opened fire with machine guns and submachine guns. It was determined that the Hitlerites were firing from four houses situated on both sides of the street, through a window and embrasures just beneath the roof. This information was immediately passed on to the commander, who took suitable steps. The enemy machine guns and submachine gun-

ners were suppressed by artillery fire. The attacking subunit successfully accomplished its mission.

In the course of offensive engagements along the main arteries of a town, observation points can be sent out in tanks and other armored vehicles. Their actions are continuously observed in order to maintain timely fire support.

When it is necessary to reconnoiter certain important objectives (targets) that cannot be detected by observation from the disposition of our forces, parties of scouts with radios can be dispatched into the enemy's rear area. They carry out observations and correct our artillery fire from favorable viewpoints.

In a town at night, observation is supplemented by monitoring. For this purpose the observers are best situated near [79] ground level. Therefore, whereas in the daytime they conduct their reconnaissance from high buildings, at night they must go down to the lower floors.

Observation in mountains is considerably more important than under normal conditions, since reconnaissance by other methods now becomes more difficult, and is sometimes even impossible. The very rugged relief of mountainous terrain—combined with the forest tracts and individual groves covering the mountain slopes, the many ravines and folds on steep mountain sides, as well as the low creeping clouds and thick mists that envelop certain areas during quiet, calm weather for a very long time—restrict the possibilities for observation and sometimes make it almost impossible.

Experience in combat actions and exercises indicates that in mountainous territory, even with the most appropriate choice of a place for an observation point, not more than 40 to 50 percent of the terrain located within the field of view can be observed. Therefore, for each axis or area (objective, detected target) the observation has to be carried out from at least two points.

To increase the view, observation points have to be situated not only along the front and in depth, but must also be echeloned with respect to altitude. In cases where certain places in enemy battle formations are not observable from the subunit's disposition, the points may also be situated within the sector of adjacent forces. Helicopters are widely used for observation in mountains. In clear, sunny weather in the mountains, sharp contrasts are observed: brilliantly lit terrain sectors and areas darkly shaded by folds of mountains, which make targets more difficult to detect; deep hollows and ravines conceal distances, so that objectives and targets seem much nearer than they actually are.

The number of observers and observation points is increased in mountainous country by two or three times compared with level terrain. Thus while two or three observation points are enough for observation of a given terrain sector on a plain, for observation of an equal area in mountain regions five or six observation points will be required, and sometimes even more. This is confirmed by experience in the war and in postwar exercises.

When combat actions are conducted in the mountains, the flanks and rear of attacking or defending forces are more vulnerable because the enemy has greater opportunities for deep or [80] close envelopment. Therefore observation must be organized both ahead of the front and on the flanks as well as in the rear of friendly forces. The best conditions for observing terrain in the mountains are afforded by a circular, multitiered system of observation.

When a place is selected for observers and observation points in mountainous country, the nature of the mountain relief and the specific character of mountain climate must be kept in mind. Usually they should be placed on commanding heights on the slopes and ridges of mountains, near rocks and cliffs, in passes, and especially at places that permit a view of the terrain along ridges, passes, valleys, gorges, and hollows. One must never relax observation in sectors of terrain that at first glance seem impassable. They may actually be accessible to well-trained enemy subunits, especially his reconnaissance and sabotage parties.

It is not always advisable to place observers and observation points in the highest places.

This is first of all because when one observes from great heights, peaks and ridges ahead merge into a single whole and create a false impression of all-around visibility, whereas actually it is only the ridges that are clearly visible, while behind each bend of a slope, perhaps only a few meters from the observation point, there may be an area hidden from view. By utilizing these fields of dead ground the enemy may remain undetected by our observation points. Secondly, in high mountain regions very high peaks are often enveloped in clouds. And finally, from commanding heights it is possible to observe, as a rule, only distant approaches, while the view of nearby approaches may be limited.

Consequently, when selecting a place to put observers and observation points, one should be guided not by the height of a given mountain, but by the possibility of a good view, of camouflaging, and of reliable protection from all kinds of fire and nuclear weapons.

When the approaches to observation points are selected, care must be taken to ensure that they are not seen from the enemy side. New paths must absolutely not be worn, nor must new structures be erected, and the uniformity of the mountain landscape must not be disturbed, so as to avoid attracting the enemy's attention.

Because there are so many hidden approaches in mountains, the possibility of a surprise attack by the enemy on an observation point has to be considered. A careful watch [81] must be kept on the approaches, and if time, equipment, and terrain conditions permit, obstacles should be set up on them.

At night, observation in mountainous country is intensified by sending out additional observers into valleys and hollows, since observation from below upward against the background of the sky gives better results. Moreover, at night observation is supplemented by monitoring.

Monitoring is more effective in mountains than on flat terrain, since sounds that result from the movement of troops or the execution of engineer works are perceptible at considerably greater distances. At the same time, when one organizes monitoring, it must be kept in mind that in mountains, as in woods, sounds are often very deceptive. As they encounter various obstructions during their propagation, their volume is reduced and their direction of propagation is often changed. The sound of a shot, in the form of an echo, for example, can be perceived as coming from the opposite direction. Therefore, very careful attention must be given to the selection of soldiers for monitoring assignments. They must able not only to determine the source of a sound correctly, but must also know the characteristics of its diffusion in the mountains.

Observation in desert country may be easier or more difficult, depending on the conditions of the desert area and on the weather. Open terrain and its poor camouflaging properties favor the observation of objectives (targets) on the battlefield. On the other hand, the absence of heights for the installation of observation points and observers and also the development at high temperature of convection air currents and atmospheric haze considerably reduce the range of observation.

In deserts, observation points and observers are situated, as a rule, in emplacements and fighting trenches, and their locations are camouflaged with standard or improvised equipment. For protection against the burning rays of the sun, special coverings are deployed.

Observation in desert country is conducted with extremely limited numbers or even complete absence of terrain features that could serve as reference points. Hence enemy engineer fieldworks and obstacles can

be selected as reference points. To make target indication easier, artificial reference points can also be produced with special shells and mortar bombs. The boundaries of the sector for an observation point (observer) are indicated by azimuth. Target indication is also carried out by azimuth. When reporting on the results of an observation, the observer (senior man at the [82] observation point) states the azimuth (direction) to the detected objective (target) in dial-sight graduations and its distance in meters.

To determine the position of objectives (targets) on the terrain, observation points are furnished with instruments that measure angles. During times of strong atmospheric convection, it is recommended that optical instruments with relatively low magnification power be used. In bright sunlight as well as in atmospheric haze, the appropriate filters are put on the instrument eyepieces.

Special attention should be paid to observing in the morning hours, when there is no cloud of dust close to the ground concealing objectives. On the other hand, a wind coming up may disrupt or destroy camouflage completed during the night and make identification of objects considerably easier.

Mirages are a serious impediment to observation in desert country. The observer must know how to distinguish between mirages and true visibility of the terrain and the enemy by checking the terrain against the map for this purpose.

To increase the range of observation in deserts, mechanical observation towers mounted on cross-country vehicles can be used. They are placed in zones beyond the range of sniper or aimed machine gun fire.

Observation in a forest is much more difficult because wooded areas restrict visibility along the front and in depth, often making it difficult even to observe the enemy's forward edge. Because of this, the number of observers and observation points is considerably greater in the woods, as a rule, than in open terrain. Observation points (observers) may be located on the ground, in trees, and in observation towers. Observation points on the ground are set up in foxholes, emplacements and other places favorable for observation and are camouflaged to resemble stumps, fallen trees, bushes, etc.

The depth of observation possible from these points depends on the density and kind of forest involved. Thus, on a clear summer day, visibility in either a coniferous or a deciduous forest will not exceed 100 meters, on the average; and on a cloudy day, 60–80 meters. In winter,

in a coniferous forest (without undergrowth) visibility is 120–150 meters; and in a deciduous forest, 150–200 meters, depending on the density of the trees. In a young, low-branched forest total visibility is 20–30 meters. Visibility is the same in an old, mixed forest if it has a thick coniferous undergrowth or, in summer, a deciduous undergrowth. **[83]**

For increased surveillance, observation points should be located at the intersections of fire lanes, roads and foot paths, in front of sparsely wooded areas and natural clearings.

In a forest, observation from trees is the most common. Experience in past wars shows that an observer who is well camouflaged in the crown of a tree can successfully perform his mission in the immediate vicinity of the enemy. Such observers, however, especially if they are operating away from their own subunits, must be well covered by fire from the forward edge of friendly troops.

For an observation point, a tree should be chosen that is situated well within the forest, if possible growing in an elevated location. It must be tall and of thick girth, with a thickly branched crown that conceals the observer well, but in no case should it stand out in height, shape, or color of crown nor with respect to its position against the background of the forest. From the tree, observation is carried out of roads, fire lanes, and the treetop areas of the forest. Observation above the trees permits one to view certain sectors in the enemy's disposition to a considerable depth and makes it possible to obtain information about him from various visual and other telltale signs.

A forest not only permits observers and observation points to move up close to the enemy battle formations, but also to penetrate his disposition covertly and observe his actions deep within his defense. During the Great Patriotic War, observation points, as well as scouting parties made up of three to five men, would penetrate at night into the enemy disposition to a depth of 500 to 1000–1500 meters and at daybreak return to the friendly disposition and report on everything they had seen and heard. Often such parties were given missions taking them to a depth of 1–1.5 kilometers, and several days would be allotted to accomplish them.

For example, a party of four men led by Sgt. Simonenko was ordered to penetrate the enemy position in the Kupriyanovka area and to determine by observation the nature of the movement of personnel and equipment along the road to Tushkin. Under cover of darkness, working their way into the depth of the enemy's defense, the scouts picked out a convenient place deep in the forest and carried out continuous observation of his movements for three days. The nature of the movement of

personnel and equipment was established, and in addition the makeup of the garrison in the village of Kupriyanovka was determined. [84]

In order to verify the information obtained, Sgt. Simonenko decided to set up an ambush in the road in order to take a prisoner. Soon the scouts saw a lightweight vehicle approaching them. They attacked it and captured an officer with valuable documents. The prisoner, delivered to the unit, fully confirmed the observation data and gave other information to which the staff had not had access.

The good special training of the party of scouts and the intelligent initiative and bravery shown by Sgt. Simonenko had made it possible to obtain valuable information that was taken into account in planning the impending engagement.

Since a forest greatly limits observation and at the same time facilitates concealed penetration by certain enemy groups into the friendly disposition, special attention should be paid, in organizing observation, to the flanks and boundaries of subunits and in the direction of the rear of the friendly forces, so as to ensure that the observation is all around. All observation points and posts must be accurately tied in with the terrain and entered on the large-scale map.

In a forest, an observer often sees less than he hears, especially at night. Therefore, more than anywhere else, reconnaissance by monitoring is warranted here. By patiently picking up every kind of sound coming from the direction of the enemy, it is possible to obtain valuable information in much greater depth than by observation. However, it must be kept in mind that the strong reverberation of reports creates an impression that the enemy is conducting fire from every direction, and it is often difficult to determine where fire is coming from and where, therefore, the enemy fire weapons are situated. An echo creates a deceptive impression of the number of weapons firing, their distance, and their location.

Experience in the Great Patriotic War shows that with skillful organization of observation it is possible to obtain a considerable amount of information about the enemy even in a forest, and even if only certain sectors of the defensive disposition of his subunits can be seen.

For example, on 22 March 1944, observers of one of the units on the Karelian Front reported the movement of some covered trucks from Voyvara Station along the road south in the direction of Sirgala. At 1430 hours on 23 March, eight horse-transported guns proceeded from the Mustanino area to the Sirgala area. At the same time, infantry was observed moving up in small groups into the Soongola and Sirgala areas.

On the basis of this information it was concluded [85] that the enemy was concentrating forces for an offensive with a limited objective, namely to hurl our forces back from the railroad and improve their own position. At daybreak on 25 March, the enemy actually did take the offensive, but, thanks to steps that had been taken earlier, he was repelled and suffered severe losses.

Observation in northern areas has a number of special features. Its organization and conduct are influenced by the climatic conditions, the long arctic nights, and the terrain relief.

While the observation sector of an observation point in moderately broken terrain is 300–400 meters along the enemy FEBA in daylight, in an arctic night, when visibility is poor, it is narrowed to 50–150 meters (depending on the distance from the enemy forward edge). Moreover, in many sectors, the terrain ahead is only 30–50 percent visible from observation points. Therefore, to discover enemy targets (objectives) in one and the same terrain sector, observation must be conducted from two or three observation points.

In northern regions, special attention must be paid to observation of exposed flanks; intervals (gaps) between the battle formations of troops; rivers, lakes, and other possible routes by which the enemy can penetrate into the disposition of our forces. For this purpose the observation points are located outside the battle formations of subunits, even quite far from them. The numerical strength of an observation point must not be less than five or six men, in order to ensure continuous observation, the security and defense of the point, and rest for the men after their shift.

Communication with the commander is maintained by telephone or radio. All observation points are carefully camouflaged.

In winter, observers are issued warm clothing, and the points are equipped with shelters from the wind and cold. To warm them, chemical or electrical heaters are issued, which are used only when there is no alternative for relief from the cold.

In a period of severe frost and winds, it is recommended that observers on duty be relieved every 30–40 minutes. If an observation point is located in a snow emplacement, personnel are relieved every 24 hours.

Observation during the arctic night is carried out both with conventional observation instruments and with night vision devices. Work in a point in darkness [86] calls for proficiency on the part of the observers and a certain physical fitness, especially highly sensitive night vision.

For observation purposes it is possible to use successfully the aurora borealis, the brighter periods of the day—for example noon, the twilight, and also artificial illumination of the terrain. When artificial illumination is used, care must be taken to do so with various means of illumination over a broad front and in various ways. Otherwise the enemy can determine the area that is of interest to us. Consequently, terrain illumination must be carried out only on the orders of superiors.

When observations are conducted in winter, it must be borne in mind that all enemy combat equipment may be painted white, and subunit personnel may be dressed in camouflage robes. This considerably reduces the distance at which they can be detected. Thus, in a field of snow, a steel helmet can be seen in the daytime with binoculars about 1500 meters away, whereas a helmet camouflaged with white fabric or painted white is observed with some effort at a distance of 150–200 meters. On a clear winter day, a soldier in ordinary uniform is easily distinguished with the naked eye from 2000 meters, or lying in snow from 1000 meters; but a soldier in a white camouflaging suit who is well camouflaged, will generally not be noticed.

Observation at night. The enemy will always attempt to utilize night and poor visibility to prepare offensives or reinforce defenses, to regroup forces, to withdraw and relieve units and subunits, to alter the structure of a battle formation, to emplace fire weapons, and so on. In all types of combat actions, therefore, observation at night becomes especially important.

Darkness limits visibility, changes the outlines of objects, and gives a distorted idea of distance: dark objects seem farther away, while light ones seem closer. Therefore, orientation on the terrain and the detection and identification of objects is more difficult and the danger arises of a sudden appearance of enemy reconnaissance parties in front of the observation point. That is why the number of observers and observation points is increased at night and their location is chosen as close as possible to the enemy. Observation at night is conducted with radars and night vision devices and also with artificial illumination of the terrain, which, [87] as a rule, is carried out by order of the next-higher commander.

Night observation is organized during the daylight period, before the onset of darkness. Suitable places are chosen for fitting out observation points, and their missions are assigned on the terrain. In addition, the officer setting up the observation points must verify the readiness of the observers for night work: their skill in using reconnaissance equipment and in correctly interpreting the effect of artificial terrain illumi-

nation on the determination of distances, and their knowledge of the telltale signs of objectives.

The following is an example of the preparation and operation of an observation point at night in a tactical exercise.

The troops were preparing to take the offensive in the morning. For this purpose it was necessary to know precisely the location of the "enemy's" fire weapons and the nature of his actions by morning and to determine any possible overnight changes in his battle formation.

The leader of one subunit was ordered to set up an observation point on the northern edge of a "Kound" grove of trees by 1800 hours. Two hours before the onset of darkness, he moved out to the edge of the grove with the personnel detailed for observation and assigned the mission.

The point senior officer, Lt. Kudryavtsev, began preparing the observation point in advance for night work. First he selected a place for the point in an old, half-demolished emplacement on a small rise beside the grove, which gave an excellent view of the terrain to a considerable depth; then he designated reference points and organized constant observation of the "enemy." As reference points he selected terrain features that stood out well against the background of the sky. He then wrote down the reconnaissance missions in the observation log, prepared the map, drew up a plan of the terrain and reference points, determined the distance to the latter, set out markers in the direction of poorly visible objects, and set up communications.

The observers, without ceasing their reconnaissance of the "enemy," checked the operation of their night instruments and unpacked and prepared the radar without extending the antenna above the breastwork of the emplacement.

At 1800 hours the point officer reported that they were ready to perform the mission. By the time of reporting, the observers had already, while it was still daylight, observed and entered in the plan two tanks in emplacements and five machine guns.

At the onset of darkness, the scouts finished equipping the observation point, camouflaged it, and began [88] the observation with the aid of the night vision devices and radar.

While it was still daylight, the lighting of the point was prepared using a KBS* battery and a po·ket flashlight, which would not betray

*[*KBS*—name of type of flashlight battery—U.S. Ed.]

the point at night and at the same time would not prevent the eyes from becoming accustomed to the darkness.

As a result of excellent preparations and skillful actions by the observers, the missions assigned to the point were successfully performed. The scouts detected two antitank guns, noted a change in the fire positions of three tanks and two armored personnel carriers, determined the periodic switching on of the night instruments of two new machine guns and one artillery piece, and—most important of all—discovered the movement of combat equipment into the depth of the enemy defense and the transfer of infantry from the forward fighting trench to the rear.

All targets revealed, as well as the data on the enemy's movements, were entered by the scouts in the plan and noted in the observation log. The updated results were then and there transmitted by telephone to their subunit leader.

The intelligence obtained enabled the commander to conclude correctly that the "enemy," had discovered our forces' preparation for an offensive and was withdrawing some of his resources back from the forward edge into the depth and was altering the structure of his battle formation.

The example cited demonstrates convincingly that with skillful organization and the effective outfitting of observation points with equipment, they can successfully conduct reconnaissance at night and when visibility is poor and can obtain the intelligence information needed by a commander to successfully accomplish combat missions.

Monitoring

Monitoring is employed mainly during actions at night and when visibility is poor, where there is direct contact with the enemy, and also when reconnaissance elements are operating in the enemy's rear area.

The essence of reconnaissance by monitoring consists in determining the enemy's position and the nature of his actions from typical audible telltale signs. These include noises made by the movement of combat equipment and personnel, the reports from various types of weapons, the building of defense works, commands (signals) given, and so on. **[89]**

Reconnaissance by monitoring can be conducted with the ears only or with equipment.

Without the use of equipment, monitoring can detect an enemy by auditory signs, can determine his position and the nature of his actions and engineer works; the approximate positions of machine guns, mortars, artillery and other fire weapons that reveal themselves by their reports; the movement of tanks, missile launchers, armored personnel carriers, self-propelled artillery and other combat vehicles, from the sounds of their engines and the clanking of their tracks.

Monitoring supplements observation and is used in combination with it. The range of reception of sounds by persons depends on the amplitude of the sound, the time of year, the time of day, the state of the weather, and also on the acuteness of hearing. The most favorable conditions for monitoring occur on quiet summer and autumn nights.

Practice has established that auditory telltale signs (noises) are audible to the ear under favorable conditions at the following distances, on the average:

Sound source	*Range of audibility in km*
Artillery round	10-15
Automatic weapon bursts	3-4
Single round from an automatic weapon (rifle)	2-3
Movement of tanks, tracked armored personnel carriers and rocket launchers on tank chassis (clanking of tracks)	2-4
Sounds of an aircraft engine on a clear, frosty night	about 40
Sound of tank engines	1-1.5
Motor vehicle horn	2-3
Sound of truck engine	0.5-1
Excavation of emplacements (striking of shovels or picks against stones) and engineering preparation of positions	about 1
Commands	0.5-1
Movement of infantry subunits on foot	0.3-0.6
Soft speech, cough	0.3-1.0

Important intelligence information was obtained by monitoring during the Great Patriotic War. For example, at the beginning of September 1942, 90th Rifle Division listening posts on the Leningrad Front determined that the 121st Infantry Division of the German fascist forces was being relieved by units of the 250th Spanish Division, and listening posts of the 72nd Rifle Division established the boundary between the Spanish and German infantry divisions from the difference in languages. The information obtained by monitoring, along with [90] other data, enabled the staff to form well-founded conclusions concerning the enemy's regrouping and his preparation for an offensive.

In June 1943, scouts of the 1317th Rifle Regiment, after moving out at the onset of darkness toward the enemy FEBA, heard in his position at midnight the cracking of twigs, the noise of tank and motor vehicle engines, and voices. On the basis of this information and the circumstances that had taken shape toward the end of that day, it was concluded that the enemy was probably withdrawing from the line he had occupied. Our forces made timely preparation for pursuit of the enemy and scored a success.

In January 1945, a party of scouts of the 2nd Belorussian Front's 165th Rifle Division, set up not far from the forward enemy fighting trench and established by monitoring the moving of five machine gun crews and listening posts toward the forward edge and a bustling movement of troops in the vicinity of the forward edge. On the basis of this information it was concluded that the enemy was reinforcing his defenses. On the night of 13–14 January, a prisoner was captured whose interrogation confirmed that the German fascist troops, expecting our forces to go over to the offensive, were adding two companies of a penal battalion to the forward line of defending subunits.

In a number of cases, monitoring made it possible to discover not only the enemy's preparation for an offensive, but also its starting time.

On 26 May 1943, in the region of Mginsk, observation of subunits and units established that enemy reconnaissance parties were operating. During 26 and 27 May the enemy, without disrupting the regular firing regime for that sector, carried out a ranging. This permitted the 265th Rifle Division command element to conclude that the enemy was preparing for an offensive. The commanders of the first-echelon battalions received an order on the night of 27–28 May to step up visual reconnaissance and monitoring. The commander of one of the battalions, Capt. Sidorchuk, dispatched a three-man listening post toward the enemy position at nightfall.

At 0300 hours the scouting party, at a distance of 100–150 meters from the forward enemy fighting trench, heard the clanking of metal parts, the rustle of clothing, and animated voices. The noise was increasing gradually. Sgt. Biryukov, in charge of the post, concluded that there was enemy movement through a crawl trench into the forward trench. All at once the soldiers [91] heard the noise of tank engines. The post commander immediately dispatched one of the scouts to the battalion commander to report to him that the enemy was probably preparing for an offensive, while he himself, with the other scout, remained to continue the reconnaissance.

On the basis of the information obtained by the listening post, together with information obtained from other sources, the regimental

commander took timely steps to break up the offensive being prepared by the enemy. At dawn, when the enemy actually began to operate actively, he was met by organized fire, suffered severe losses, and did not succeed.

If changes in enemy behavior are noted, the number of listening posts is increased. Thus, on 5 November 1944, when signs of enemy preparations for an offensive were noted, a number of listening posts were additionally dispatched from the 51st Rifle Division to the enemy's disposition. Moving out toward the enemy FEBA, they heard the noise of engines, the clatter of carts, and animated voices in the enemy's disposition. On receiving this information, division staff intelligence concluded that a regrouping of the German fascist forces was taking place. Captured prisoners totally confirmed this conclusion.

Reconnaissance by monitoring is carried out by observers of subunits and observation points as well as subunits operating in reconnaissance. In addition, listening posts consisting of two or three soldiers who are well able to orient themselves when visibility is limited and who possess exceptional hearing and can identify enemy actions from audible telltale signs, may be set up in the battalion. If conditions make it possible to listen to enemy speech, then post personnel should include NCOs and men who know the enemy's language.

Depending on the circumstances and the mission to be performed, monitoring is carried out from the positions of forward subunits, or observers are moved as close as possible to the enemy.

In the battalion, monitoring missions are assigned by the battalion commander or, on his orders, by the chief of staff. In the subunit they are assigned by the subunit leader; for an observer at a command observation (observation) post, by the duty officer; for an observer at an observation point, by the senior observer. When a mission is assigned, the senior man at the point [92] is told: the reference points that are visible at night, where the enemy is and what he is doing or from what direction he may be expected, the listening place, the monitoring missions and the audible telltale signs that are to receive special attention, the time for conducting reconnaissance by monitoring, the procedure for reporting the intelligence.

If a listening post is dispatched beyond the friendly forces' outpost line, the senior man at the post is, in addition, told the procedure for moving out and returning to the friendly disposition, and is also informed of the password and reply to challenge. In addition, a commander dispatching a listening post must be prepared to support the actions of his scouts by fire from his own position if they are detected by the enemy.

The place for listening is chosen so that sounds from the direction of the enemy will arrive with minimum echo distortion.

As a preliminary, before the onset of darkness, the scouts study, by observation, the enemy's position and his fire weapons, the terrain in the area designated for monitoring, the routes of approach, the reference points, and the paths of withdrawal.

At the set time, usually at the onset of darkness, the scouts move covertly out to the place indicated and begin to perform their missions. They commit to memory all sounds and noises they have heard that are typical of enemy actions and report them to the commander when they return from their reconnaissance. In their report, the scouts usually indicate where, in what place or from what direction, and at what times various sounds have been heard and what enemy actions they characterize.

If the sounds and noises heard give reason to assume that important changes are being made in the nature of the enemy's combat actions and position—for example, if they indicate that he is preparing to use nuclear weapons, preparing for an attack, relieving troops, withdrawing, etc.—the senior man at the listening post must immediately dispatch one of the scouts to report to the commander on what has been heard.

NCOs and men trained for reconnaissance monitoring must possess, in addition to excellent vision and hearing, a good memory in order to retain everything that has been seen and heard; they must be able to determine the place from which a sound originates and distinguish what is important and real from what is false. The ability to monitor and to determine the significance of sounds and of light phenomena is imparted by drill and practice. [93]

To determine the direction of a sound, one must not turn his head frequently. A person can determine the direction of an audible object by being aware of the small interval of time elapsing between the instant of reception of a sound first by one and then by the other ear. For example, if a sound, by some split second, reaches the left ear first, it means that the source of the sound is to the left, whereas if it reaches the right ear first, then it is to the right. If the sound reaches both ears at the same time, then the source is either ahead or behind. To establish the direction of an audible object (target) we must first determine roughly where the sound is coming from, then turn the head that way and make note of some reference point in that direction. Then one should wait for a repetition of the sound and determine more accurately the direction from which it is heard, turning the head slightly to the right and left until

the source of the sound is not in front or until it is no longer possible to detect it by other telltale signs.

Monitoring with communications equipment makes it possible to obtain intelligence information by intercepting enemy telephone conversations. Listening in on telephone conversations is possible with an ordinary field telephone connected directly into the enemy's communications line. This mission is entrusted to reconnaissance elements operating in the enemy disposition.

To listen in on telephone conversations by induction, it is also possible to use a receiver with a pin. This makes it possible to listen to enemy telephone conversations without connecting into the wire communications line.

Thus, by continuously observing the enemy, and supplementing observation at night by monitoring, important information about the enemy can be obtained.

There are many reconnaissance missions, however, that neither observation nor monitoring can perform. Examples of these are determining the numerical designation of enemy units, their numerical strength, their armament, and where they have come from; discovering the enemy's grouping and intentions; getting an idea of the fighting efficiency and the political and morale state of his troops. These items of information are obtained by other reconnaissance methods.

Raids

The *raid* is one of the principal and most difficult methods of reconnaissance, the essence of which consists in the concealed approach and surprise attack by a party (subunit) on [94] a previously noted and studied objective in order to seize prisoners, documents, and samples of weapons and combat equipment. In the last war the raid was the commonest and most effective method of reconnaissance for capturing prisoners.

Thus, Southwestern Front formations and units in the period from October 1942 through November 1943 conducted 5,397 different reconnaissance actions associated with the seizure of prisoners and documents, including 3,380 raids, 1,336 ambushes, and 316 cases of reconnaissance in force and dispatched 365 reconnaissance parties to the enemy rear area. Fifty-eight percent of the total number of prisoners and documents taken by all reconnaissance elements during this period can be attributed to raids, 29 percent to ambushes, 10 percent to recon-

naissance in force, and 3 percent to reconnaissance parties in the enemy rear area. We find similar figures in the accounts of the reconnaissance activities of formations and units in other fronts in 1943–44.

As the result of a successful raid on the night of 4–5 July 1943, a prisoner was taken from whom the exact time that the German fascist forces would go over to the offensive in the Kursk salient was learned.

Postwar experience in the combat training of troops shows that despite the considerable development of reconnaissance techniques, raids have not lost their importance in modern combined arms combat.

The raid is usually organized when there is direct contact with the enemy. It is most widely employed during the preparation for an offensive and in the defense. This is because with other methods of reconnaissance, in the absence of dynamic actions, it is considerably more difficult to discover the effective combat strength, the numerical designation and subordination of enemy units and subunits, the axis of his main attack (concentration of main efforts) and the time for going over to the offensive. Moreover, considerably more time can be allotted to the organization of raids under these conditions. Therefore, in preparations for a raid, there is the possibility of more detailed study of the nature of the enemy's behavior, the objective of the attack (capture), and the terrain in the area where the raid is to be carried out; to prepare better the subunit (party) allocated to the reconnaissance, and to support its actions more effectively.

A raid can be carried out in any terrain, in any season, at any time of the day or night, and in various kinds of weather. It should be noted that during the first years of the Great Patriotic War scouts adhered blindly to a pattern and sometimes, failing to take into account the conditions of the given sector of the front, **[95]** as a rule carried out their raids at night, some of which were unsuccessful. In no other field of military affairs is a stereotype so damaging as in reconnaissance. Later on, because of the changeover by the enemy to a system of continuous fighting trenches densely protected by engineer obstacles and because of his increased vigilance, it became more difficult to conduct raids at night. From 1943 on, therefore, daylight raids also began to be widely practiced.

In confirmation of the effectiveness of daylight raids and also of their widespread use, we may cite the statistical material summarizing the experience in reconnaissance activity of formations and units of the 6th Guards Army from July 1944 through May 1945. During the period, 1,838 raids were carried out, 1,367 of which were conducted at night and 471 in the daytime. The numbers of prisoners captured in them were

693 in night raids and 378 in daylight raids. Of the total number of raids carried out, 559 of the night raids, or 41 percent, were successful; while 342 or 74 percent of the daylight raids were successful. The following fact is no less significant. Some 557 scouts were lost in carrying out night raids and 159 in daytime raids. It is easily calculated that for each prisoner during the indicated period the loss of scouts suffered in night raids was 0.86 and in daytime raids 0.42—only half as great in the daytime as at night.

The successful execution of the daytime raids is explained by the fact that enemy vigilance decreased with the coming of daylight. Moreover, in the daytime—besides performing the main mission of taking a prisoner—there was the chance to obtain more complete information on the enemy's fire plan, on his numbers of personnel and fire weapons at strongpoints, and on the engineer fieldworks and obstacles. Furthermore, in the event of an abrupt change of situation in the area of the raid, scouts had the chance to quickly reorient themselves and make new decisions in order to successfully accomplish the assigned mission.

Daylight raids were carried out especially often in boggy, forested terrain, during combat actions in large urban areas and cities, in moderately broken terrain with abundant vegetation (tall grass, unharvested field crops, etc.), in conditions where the enemy had suddenly gone over to the defense, or where the no-man's-land was of negligible extent. The weather situation and choice of time were very important in carrying out a raid. Inclement weather (rain, snow, fog) has always been a reliable aid to scouts. It has been noted that **[96]** at daybreak and just after dinner enemy vigilance drops. This circumstance has been widely used by scouts to achieve surprise.

Since in a daylight raid the action of the raiding party must be sudden and of very short duration, the raid objective will have been chosen in an area where it would not create unfavorable conditions for the party's actions and would not require the prolonged presence of the scouts in no-man's-land and in the enemy disposition. Therefore, isolated fire positions, advance emplacements, earth and timber fire positions, and isolated observers have been considered profitable objectives for attack.

The following may be cited as successfully conducted daylight raids in the last war. In early March 1945 in the region of Ruzaykas, the enemy, while introducing new subunits into the forward line of his battle formations, was holding off an attack by a guards rifle regiment. Night raids failed to reveal what new units were being committed to action by the Germans. It was decided to conduct a daylight raid, utilizing the factor of surprise. It was established by observation that after the relief of machine gun posts at 0800 hours, only on-duty machine gunners

remained in the trenches. By 0900 hours in the morning on 7 March, a nine-man reconnaissance party led by Sgt. Maj. Trukhin had approached, during the night before the raid, to within 40–50 meters of the assault objective and had hidden in two aerial bomb craters. During this same night, combat engineers had made passages in the enemy minefield and the wire entanglements. After the posts had been relieved, the scouts, with a sudden rush, burst through into the enemy trench and captured two German machine gunners. The party's withdrawal was covered by well-organized artillery and mortar fire.

In 1942, in one sector of the Western Front, a squad led by Senior Sgt. Shchukin was chosen to conduct a daylight raid. According to the approved plan, the squad was to attack an earth and timber defensive installation. But when the scouts covertly approached the objective in the daylight, the enemy was not there. Sgt. Shchukin found that 80 meters to the right of the open area a light machine gun was being fired. He decided to capture the machine gun crew. Leaving a covering force in the trench, Shchukin and the other scouts crept unnoticed through the crawl trench to the rear of the enemy machine gunners and silently took them prisoner. After dispatching the prisoners under escort to the friendly disposition, he took advantage of the silence and made observations [97] for a time from the trench so as to reconnoiter the enemy defense more effectively; then he gave the signal for the rest of the squad to withdraw. The scouts carried out their mission successfully and without loss.

What is characteristic in this example is that the squad leader, failing to find the enemy in the place designated for the raid, quickly figured out the situation, made a new decision, and carried it out unwaveringly.

In the organization of daylight raids during the last war, much attention was paid to fire support of raiding party actions by the weapons both of rifle subunits and artillery. During the withdrawal of raiding parties to the friendly disposition, camouflaging smoke screens were often effectively employed.

Conducting a raid in daylight also has its negative aspects. In daylight, if the enemy is extremely alert, it is considerably more difficult than at night to achieve secrecy and tactical surprise when attacking an objective. In the daytime, the effectiveness of enemy rifle fire is greater, which also adds to the difficulty of carrying out a raid.

Nevertheless, in the Great Patriotic War night raids were the most widely employed.

Knowing all the positive and negative factors of a specific situation and skillfully analyzing and weighing them allows one to correctly determine the time for conducting a raid and to select the objective for assault.

The experience of the past war shows that only by weighing the circumstances and judiciously combining daylight and night raids was it possible to perform missions with minimum losses and expenditures of resources.

Today the preparation and conduct of raids have changed considerably. The inclusion of nuclear weapons in the armament has necessitated changes in the tactics of conducting an engagement and in the deployment of troop battle formation elements in order to reduce their vulnerability and provide for their survivability. Defense has begun to take on a focal nature, and the intervals and gaps between the elements of unit and subunit battle formation have increased. All this has considerably facilitated the choice of raid objectives and the approach to them.

At the same time, development of a large number of night vision devices, reconnaissance signaling equipment and radars that detect moving targets on the ground has added considerably to the difficulty of preparing and conducting night raids. Thus the organic resources of subunits and units in the armies of the probable enemy [98] enable him to produce an uninterrupted radar field ahead of his forward edge, with which he can detect the movement of groups and individuals for distances about 6.5 kilometers from the location of a radar and direct aimed fire against them. Consequently, no night actions of our scouts can be successful if camouflaging measures are not employed and if the radars and night vision devices in the raid area are not jammed and destroyed. The destruction and jamming of these radars and instruments is carried out at various times over a broad front.

When a raid is being prepared, a route of movement must be selected that cannot be observed with night vision devices and radar equipment.

However, instruments employing infrared technology also have a number of disadvantages. They can only detect a target within the limits of optical visibility and cannot discern objects in hollows, ravines and grass, behind terrain features, etc.

Experience in the Great Patriotic War and in exercises shows that a decision on the time to conduct a raid must not be approached merely from the point of view of the difficulty or simplicity of carrying it out. The combat situation at hand may demand immediate execution of a

raid, whatever the difficulty. Therefore, the time to conduct a raid should in each specific instance be selected as a function of the mission assigned, the necessity of capturing a prisoner (documents), the enemy's routine, the level of his vigilance, the nature of the raid objective, and the terrain and weather conditions.

The number of raids carried out depends on the nature of the combat actions of friendly and enemy forces, the completeness of our information about him, and the time available to prepare for combat actions. The need for raids is reduced when there is adequate information about the numerical designation, composition, fighting efficiency, and grouping of the enemy; conversely, it increases when changes in enemy behavior, combat activity, or grouping are perceived.

These principles are confirmed by experience in the Great Patriotic War and postwar exercises. Thus, during March 1945, the 53rd and 417th rifle divisions, with adequate information on the enemy, carried out 11 raids each; whereas the 270th, 169th, and 198th rifle divisions, in whose zones of defense the enemy grouping had not been [99] discovered, carried out 28, 17, and 32 raids, respectively, during the same period. When the enemy was expected to go over to the offensive, raids were organized even more often. Thus, the 51st and 52nd guards rifle divisions of the 23rd Guards Rifle Corps in the Belgorod area carried out one to three raids every day from 1 to 5 July 1943.

In the last war, raids were carried out both along the forward edge and deep within the enemy disposition. At the forward edge, they were usually conducted in cases where an enemy attack was expected from close contact (from a defensive position). If there was reason to assume that the enemy was preparing to attack on the move, the importance of raids carried out on the forward edge was reduced. This was because prisoners taken at the forward edge generally would not know the grouping and intentions of their own forces. In this case, an attempt would be made to take prisoners mainly from the units and subunits earmarked for attacking on the move in the concentration areas (waiting areas), and only later at the forward edge.

The raid objective is chosen, as a rule, by the leader of the party (subunit) designated for the raid. The officer by whose order the raid is carried out indicates only the time and area in which a prisoner must be captured.

The most favorable objective for a raid is one which the raiding party may approach quickly and covertly in order to carry out a surprise attack on it. The following may be raid objectives: individual enemy fire positions moved out by him in front or on a flank; observation points

and observers; sentries guarding shelters, combat outposts, individual guard posts, runners, etc. At the tactical depth of the enemy's position, such objectives include small individual parties of soldiers occupied in fatigue duties, staffs, communications centers, and stores guarded by small numbers of soldiers.

The most favorable of the above objectives are those situated on the flanks and the boundaries of enemy subunits and units, poorly supported by enemy fire from adjacent sectors, objectives to which there are concealed approaches, or objectives in positions where enemy vigilance has weakened.

To carry out a raid, a reconnaissance or motorized rifle subunit is assigned from a squad up to a reinforced **[100]** platoon, or a party of specially selected personnel is assigned. For a raiding party, NCOs and men should be selected from one subunit; men who are brave, clever, physically fit, have good vision and hearing, can orient themselves extremely well in darkness and fog and on unfamiliar terrain, can move quickly and noiselessly and crawl over any kind of terrain, and are exceptionally skillful with firearms and silent weapons as well as hand-to-hand combat techniques. It is desirable for raiding party (subunit) personnel to know (to have learned) 15–20 words of the enemy's spoken military language—for example, "halt," "lie down," "throw down your weapons," "hands up," "don't yell," and so on—which may be needed in carrying out a mission.

The composition of the subunit (party) and its weapons and equipment is determined in each specific instance as a function of the mission and the nature of the objective selected for the raid, the nature of enemy actions, the terrain and weather conditions, the time of day and the season. In the first two years of the war, raids were typically carried out by relatively large parties (subunits), but the percentage of successful raids was not high. Beginning in 1943, these parties were made up of fewer men—six to sixteen on the average—but the results were much better.

Today the composition of a subunit (party) assigned to a raid may be roughly the same as in the last years of the Great Patriotic War. Under no circumstances, should a large number of men be chosen to conduct a raid unless there is a special need for this. The more personnel in the party (subunit) allocated to a raid, the more quickly it may be detected by the enemy and the more difficulty it will have in achieving covertness of action.

The weapons and equipment of the scouts must be in line with the nature of the impending actions. During the Great Patriotic War, the personnel of subunits (parties) assigned to carry out raids were armed

with automatic weapons, light machine guns, pistols, hand grenades and army knives and were equipped with mine detectors and wire cutters. The scouts carried ropes to tie up a prisoner, sacks or capes to throw over a prisoner at the time of attack, and rags or field dressings to stuff into a prisoner's mouth. More or less the same weapons and equipment are needed today by a subunit (party) in conducting a raid. **[101]**

For conducting a raid, an assault (capture) team, one or two fire support teams, and an obstacle clearing team are usually set up within the subunit (party).

The purpose of the assault team is to capture and deliver to the friendly disposition prisoners, documents, and samples of enemy weapons and combat equipment. It is made up of NCOs and men who are excellent masters of the methods of hand-to-hand combat, are physically fit, brave and dexterous and know how to attack an enemy silently and take him prisoner. The scouts of the assault team are armed with automatic weapons, hand grenades, and knives. The number of NCOs and men in the assault team is determined as a function of the nature and distance of the raid objective, and will be about half of the total personnel of the subunit (party).

The fire support team is responsible for providing fire cover and support for the assault team's actions if the need arises. For this team, NCOs and men are brought in who are well trained in throwing grenades long distances and can fire light machine guns and automatic weapons accurately under any circumstances. Fire support team scouts are armed with automatic weapons, light machine guns, and grenades, including smoke grenades for covering the withdrawal after completing the mission.

The purpose of the obstacle clearing team is to clear, mark, and cover passageways in the enemy's obstacles on the way to the raid objective. It will include combat engineers or specially trained scouts with mine detectors and wire cutters.

If the enemy detects the scouts, their actions and withdrawal are covered by artillery, mortar, and machine gun fire. The number of weapons called on for this purpose will depend on the number of enemy fire points to be suppressed and on the dimensions of the fixed barrage fire sectors that are set up to box in the party's area of actions. On the average, as experience in the Great Patriotic War has shown, about an artillery division, one or two mortar batteries, one or two direct-laying guns, and one or two machine guns are allocated to cover a raid at the enemy's forward edge.

Today, to guarantee the successful conduct of a raid, additional resources are needed to combat the enemy's night vision devices, his radars that detect moving ground targets, [102] and his reconnaissance signaling equipment.

The mission of carrying out a raid is assigned personally to the party (subunit) leader and, as a rule, on the spot. The mission is assigned by the officer who is immediately responsible for directing the preparation and conduct of the raid, but in some instances it may be assigned personally by the commander on whose orders the raid is organized.

When the mission is assigned, the leader of the subunit (party) designated for conducting the raid is given information on the enemy, including the location of night vision devices and radars for detecting moving ground targets; the place, time, and target of the raid; the procedure for passing through friendly forces' front lines; the procedure for fire support (in what sectors fire is being prepared); the signals for requesting and ceasing fire; and the password and reply to challenge.

Moreover, if there are mines or barbed-wire entanglements in the vicinity of the raid objective, he is also told when and by whom passages are being cleared in them or how many combat engineers are attached to the subunit (party) and when they will report. If necessary, the procedure for preparation of the subunit (party) to conduct the raid is defined.

After the mission is received and the procedure for carrying it out determined, comprehensive preparation of the subunit (party) for its actions begins. This includes organizing continuous observation of the raid objective and of the enemy's behavior; studying the terrain in the vicinity of the assault objective and determining the most favorable approaches to it; working out a plan of action (making the decision); organizing cooperation with supporting fire resources; conducting drills with personnel; clearing passages in our obstacles; assigning missions to those participating in the raid; verifying preparedness for the actions.

Observation of the raid objective is carried out throughout the period of preparation. All personnel participating in the raid take their turn at this, especially the NCOs and men belonging to the assault team. Observation of the raid objective is organized from two or three points, utilizing optical instruments. The places for the observation are selected from the standpoint of ensuring the concealed positioning of the observers and a good view of the raid objective, the approaches to it, and the enemy's fire weapons situated on the flanks of the raid objective and

behind it. [103] The time and order of relieving observers is laid down by the subunit (party) leader.

In the dark, night vision devices are used for observation. The raid objective is subjected to infrared beams by order of the commander organizing the raid and with his equipment. It is recommended that irradiation take place during specific, previously determined time intervals of various lengths, alternately from a number of directions at an angle relative to the raid objective. For concealment purposes, it is recommended that other objects (sectors of terrain) in the enemy position also be irradiated, strictly observing the procedure for operating night vision devices laid down in the sector in question.

To detect enemy radars in an area where a raid is to be carried out, electronic reconnaissance equipment may be brought in by order of the senior-level officer. When the mission is assigned, the scouts assigned to night observation are told the schedule of infrared radiation of the terrain (the time and procedure for irradiation of the objective and of the approaches to it). Observation of the raid objective is supplemented at night by monitoring.

The following facts must be established by observation of the raid objective: the duty routine of the enemy field service; the number of soldiers, the time at which they are present in the position, and the number that are off duty; when the shifts change and how; when they are fed; the arms possessed by enemy personnel in the area of the raid objective, and the fire plan; the terrain sectors not covered by small-arms fire; where flanking fire weapons and ones situated within the depth of the defense are located and how they cover the objective; whether the enemy is using night vision devices and radars for reconnoitering targets moving on the ground and, if they are used, where they are situated and where their dead zones are; the presence of artificial and natural obstacles and how these are covered by fire; the presence and nature of engineer fieldworks in the raid area; what assistance the enemy may give to the raid objective at the moment it is attacked.

When studying the terrain, the party (subunit) leader must select the route of movement of the personnel toward the raid objective. The most favorable route will be the one that is shortest, most effectively concealed from enemy observation, and that cannot be discerned with his radars and night vision devices. It is desirable that on the path of movement there should be no serious obstructions impeding the movement of the party toward the objective (deep ditches, [104] steep and rocky ascents and descents, marshy places, etc.).

It should be kept in mind that the enemy will always try to render concealed approaches to his position relatively impassable and will set up various kinds of obstacles—and sometimes ambushes—in them.

The route by which the party moves out toward a raid objective is determined by a bearing or by well-marked reference points (lone trees, structures, ravines, roads, the edges of a wood), and the distance to the objective is also measured with instruments. The parts of the route that can be watched by the enemy, taking into account his use of radars and night vision devices, are established and, depending on this, the order and method of movement of the party upright, crouching, or crawling on elbows are determined.

For more effective study of the terrain and the approaches to the raid objective and to determine the dead spaces, profiles of the terrain are compiled both for the route of movement of the party and for the observed enemy fire positions along the most distinctive points of the route.

Experience in the Great Patriotic War and in postwar exercises shows that failure to attach due importance to study of the terrain and the route of movement to the raid objective will, as a rule, result in failure to accomplish the mission.

On the basis of the assigned mission and the results of studying the raid objective and the terrain, the subunit (party) leader makes a decision for conducting the raid in which the following are determined: the specific assault objective, if this has not been identified in assigning the mission; the effective combat strength and the missions of the assault, fire support, and obstacle clearing teams, their arms and equipment, the departure point and the time of assembly at it; the route and movement procedure of the subunit (party) toward the raid objective; the places where passages are to be cleared in friendly and enemy obstacles and also the procedure for covering the combat engineers when they are clearing a passage in the enemy's obstacles; the procedure for actions of the party in its attack on the objective; on what targets (that may hamper the actions of the subunit [party]) artillery, mortar and machine gun fire should be trained and the signals for requesting and ceasing fire; the direction and procedure for withdrawal after completion of the mission; the organization of control of the subunit (party) as the mission is being carried out; the procedure to follow in the event of detection by the enemy or a sudden encounter with him during movement toward the raid objective; **[105]** the steps taken to prepare the subunit (party) for their actions in the raid.

The subunit (party) leader reports the decision for conducting the raid on the spot to the officer who is directly responsible for organizing and conducting reconnaissance.

After approval of the decision, the officer organizing the raid assigns missions to the leaders of the subunits (fire weapons) called in to support the actions of the party conducting the raid and organizes cooperation between them.

The main missions of the fire weapons assigned to support the actions of a subunit (party) in a raid may be as follows: blinding, suppressing, or destroying enemy fire weapons, night vision devices, and radars that could impede the actions of the subunit (party) in the raid; securing the withdrawal of the scouts to the friendly disposition in the event they are detected by the enemy.

In the organization of cooperation, targets and objectives and the times and procedure for their suppression are pinpointed, sectors for the placing of barrage fire in order to box in the zone of actions of the party (subunit) are determined, and the signals for requesting, transferring, and ceasing fire are specified.

The leaders of the subunits supporting the raid enter precisely on their maps and plans the enemy's fire positions or the locations in which it is intended to hit him. All targets marked for suppression by our fire are numbered from right to left and from front to rear. Sometimes targets may be numbered according to degree of importance regardless of their location. For each target, signals for requesting, ceasing, and transferring fire are laid down. In order to simplify fire control, the raiding party leader must not select many targets. When signals are established for communication with the supporting subunits, it must be kept in mind that rugged terrain, terrain features, and weather conditions (fog, rain) may interfere with observation of signals. Signals must be simple and understandable to everyone taking part in the raid, so as not to complicate their transmission and reception.

All signals for requesting and ceasing fire and sectors (targets) on which to train the fire of the allocated weapons must be thoroughly mastered by the leader of the subunit (party) carrying out the raid.

During preparation for actions, the officer [**106**] responsible for directing the organization and conduct of the raid, together with the subunit (party) leader, works out a plan for carrying out the raid. This plan is approved by the commander on whose orders the raid is conducted. In the raid plan the following basic questions are considered: the target of the raid and the composition of the subunit (party); the composition and

missions of the assault, fire support, and obstacle clearing teams; the means of reinforcement and support weapons selected to back up the raid; the time for starting and completing the actions of the subunit (party) conducting the raid; the paths of approach and the order of movement toward the objective; the method of assault on the objective; the organization of control and communications within the subunit (party) and with the supporting subunits; the place of assembly of the scouts after completion of the assigned mission; the route and procedure for returning to the friendly disposition.

The plan of the raid is drawn up in arbitrary form and, as a rule, graphically with the addition of a legend.

As an example, we may cite a graphic plan of a raid that was devised in one tactical exercise by Lt. Martynyuk, leader of the mortar rifle platoon assigned for the raid (figure 7).

"Mission—capture 'prisoner.'

"Raid objective—light machine gun crew at fire position in interval between strongpoints.

"Raid participants—1 motorized rifle platoon and 3 combat engineers.

"Capture squad—1st; arms—TOE, plus 3 hand grenades per soldier; squad also has 2 rain capes (for evacuating 'wounded'), rope, rags for a gag, and 1 spare camouflage robe.

"Backup squads—2nd and 3rd; standard arms—TOE, with 4 hand grenades and 1 smoke grenade per soldier.

"Party clearing passage in 'enemy' obstacles—3 combat engineers with obstacle clearing equipment.

"Actions supported by fire from 2 artillery battalions, mortar platoon and subunits defending at forward edge.

"Route of movement—along Balta Brook. Order of proceeding: obstacle clearing party under cover of 2nd squad, then 3rd squad, with 1st squad bringing up rear.

"Procedure for assault on objective: 4 men led by Sgt. Ramakhin bypass machine gun crew on left and penetrate to it from rear. Others stay in front, ready to help comrades in [107] capture of 'prisoner.' Assault takes place on signal from squad leader. 2nd squad occupies

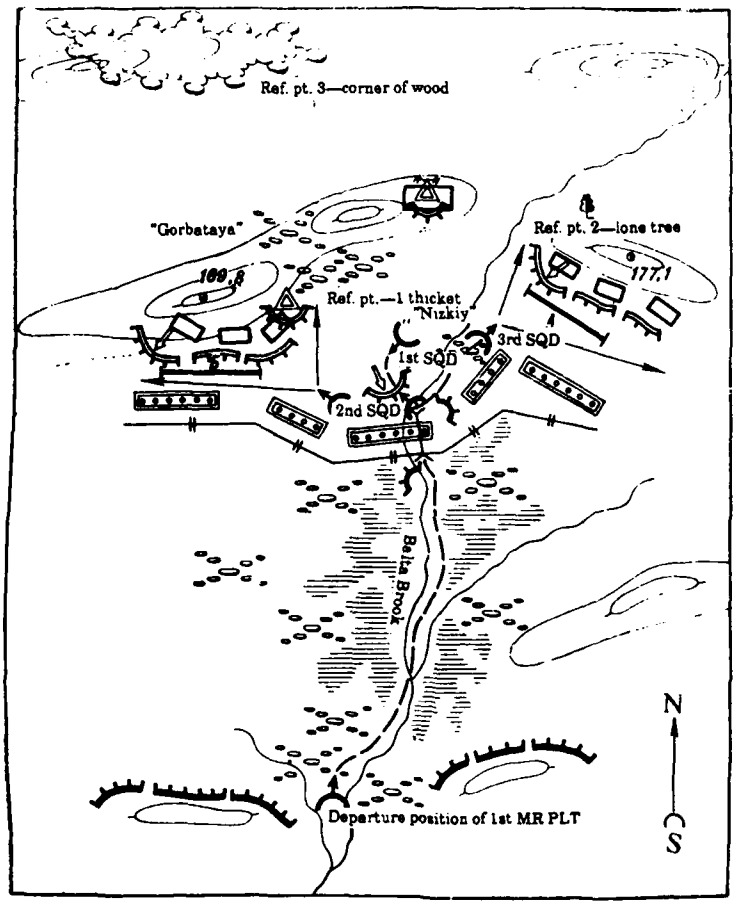

Figure 7. Plan of Raid From Exercise.

position on west bank of Balta Brook, ready to cover action of capture squad from direction of strongpoint at hill 169.8. 3rd squad, from position on north side of 'Nizkiy' thicket, supports its actions from direction of strongpoint on hill 177.1. Combat engineers guard passage through minefield.

"Route of return—along east bank of Balta Brook; first squad to withdraw is capture squad with 'prisoner,' **[108]** then 2nd squad, then obstacle clearing team, and 3rd squad covers platoon from rear.

"Start of raid—0100 hours, 29 October.

"Signals: 'Passage ready'—3 pulls on rope; 'Request fire'—red 3-star rocket; 'Cease fire'—green rocket; 'Attack objective'—personal example of 1st squad leader; 'Withdraw'—independently after completion of mission, or in case of detection by enemy, on signal 'Request fire.'

"When moving out and in assault on objective, I will be with 1st squad; during withdrawal, I will be with 3rd squad.

"Backups: leaders of 1st and 2nd squads."

As the example shows, when Lt. Martynyuk drew up the plan of the raid he determined not only the battle formation of the platoon and the missions of the squads, but also the procedure for carrying them out.

In accordance with the plan for conducting the raid, personnel are drilled in the friendly rear area on terrain similar to that in the area of the raid objective. If there is time to prepare the subunit (party) for the raid, defensive installations and obstacles similar to the actual enemy objectives in the raid area are set up on the ground and his fire weapons, observation posts, and radars are marked.

All subunit (party) personnel should be brought into the exercise, including the combat engineers.

Before starting out on the mission, the subunit (party) leader checks on how well the personnel have understood the subunit mission, the raid objective, how well they have studied the terrain adjacent to the objective, and whether they are thoroughly familiar with the tactical control code signals and the questions of cooperation. Before the the raid begins, the subunit (party) leader verifies the good working order and adjustment of the weapons and equipment of every NCO and man and whether they have turned in their personal and other papers. Only then does the subunit (party) set out for the departure point, which is usually designated at the friendly troops' forward edge and must guarantee the covert positioning of the subunit (party) and good observation of the raid objective and the terrain in the area where it will be carried out, as well as covert movement to the raid objective.

At the departure point, the leader of the subunit (party) assigned to the raid issues the operation order.

In the operation order (or when the missions are assigned) the subunit (party) leader indicates: the reference points; information about the enemy (his disposition, fire weapons, the presence of night vision devices and radars, **[109]** defensive installations and obstacles in the area of the raid objective); the mission of the subunit (party); the missions of the assault (capture), fire support and obstacle clearing teams; the procedure for actions during the assault on the objective and the withdrawal to the friendly disposition; the command signals and the password; the deputy leaders.

Moreover, the leader indicates on what sectors (targets) the fire of the designated fire weapons will be trained, the signals for requesting and ceasing fire, and the procedure for evacuating dead and wounded.

As an example, the operation order of the leader of the motorized rifle platoon assigned to action in a raid during a tactical exercise (figure 7) may be cited.

"Reference points: 1—bushes on Gorbataya Hill, 2—lone tree, 3—corner of woods.

"'Enemy' defending Gorbataya Hill; his fire weapons detected: reference point 1, within 100 m, foxhole with observer; south slope of Gorbataya Hill—squad and machine gun crew in single foxholes; reference point 2, within 200 m, paired foxholes for squad with light machine gun; northeast slope of Gorbataya Hill—radar scanning moving targets on ground. At night, 'enemy' periodically illuminates terrain in front of FEBA with infrared radiation sources, and in intervals, with signal cartridges. Ahead of 'enemy' forward edge, barbed-wire entanglement and mixed minefield installed.

"Our platoon with 2 combat engineers to carry out raid tonight in Gorbataya Hill area to take prisoner a member of machine gun crew 300 m southwest of 'Nizkiy' thicket. Platoon actions to be supported by artillery and mortar battery and 1 antitank gun. Fire to be trained on foxholes on south slope of Gorbataya Hill, within 200 m of reference point 2, and on radar.

"1st squad to move out covertly toward machine gun (points to it on terrain) and at my command attack machine gun crew, take 'prisoner,' and deliver him to our disposition.

"Party for clearing passages in obstacles, Senior Sgt. Petrov and 2 scouts of 3rd squad (Pvts. Somov and Komarov) to move out to 'enemy' barbed-wire entanglement, clear and mark passages in it and in minefield (points them out on the terrain) and guard it until platoon has completed mission. With approach of 3rd squad to passage, Pvts. Somov and Komarov **[110]** to operate as members of squad.

"2nd squad move out covertly to east slope of Gorbataya Hill, occupy position, and be ready to cover with fire actions of 1st squad and its withdrawal with captured 'prisoner.'

"3rd squad, with light machine gun, move into position at isolated bush (points to it on the terrain) and be ready to prevent enemy from firing on and approaching from foxholes within 200 m of reference point

2, and to cover with fire withdrawal of 1st and 2nd squads after completion of mission.

"Direction of movement (points out). Combat engineers move out first to 'enemy' obstacles, and scouts Somov and Komarov clear passage and mark it. When passage is ready, 2nd squad begins to move, then 3rd and 1st squads; I follow after 1st squad. After occupation of indicated positions by squads, 1st squad, on my command, attacks objective, takes 'prisoner' and delivers him to disposition of our subunits.

"After withdrawal of 1st squad to passage on my command, 2nd and then 3rd squads begin withdrawal. 3rd squad, after passing through obstacles, occupies position on this side of them and supports withdrawal of all platoon personnel to departure position.

"Route of withdrawal (indicates it on the terrain).

"In event of detection of platoon by 'enemy,' withdrawal to take place in same sequence under cover of artillery and mortar fire.

"Signals: passage in obstacles ready—3 pulls on rope; request fire—red 3-star signal flare; cease fire—green signal flare.

"Password—'Barrel.'

"I will be with 1st squad until withdrawal to passage in obstacles, and then with 3rd squad.

"My deputies are leaders of 1st and 2nd squads."

When necessary, the subunit (party) leader specifies to the team leaders the order of actions during performance of the mission and reports to the officer organizing the raid that they are ready to carry out the combat mission. After receiving permission to begin actions, the subunit leader gives the signal for the subunit (party) to move out from the departure point toward the raid objective.

The scouts move out in a previously established order, crawling, as a rule, at intervals [111] of 1 to 2 meters in single file, silently and observing the strictest discipline and measures of auditory and visual camouflage. The direction of movement is maintained on the basis of earlier marked reference points that are visible in the dark, or by a bearing. On level, open terrain it is necessary to avoid movement parallel to the front, because a group of men or even a single person moving along the front line is more easily observed by radar and observation instruments from the enemy side than one moving toward the front line.

During the movement it is necessary to make brief stops and to listen intently and make observations of the nature of the enemy's behavior and of the raid objective.

If the enemy lights up the terrain with illuminants or with infrared searchlights, everyone must stop moving immediately, lie down and stay still; movement can continue only after the infrared searchlight has been turned off or destroyed (or blinded with a smoke screen) or the other artificial terrain illumination equipment has stopped operating.

The enemy's opening fire does not in itself mean that he has detected the scouts. In this case it is necessary to wait a while and to determine where the enemy is firing from and on what area and, adjusting to the situation, to continue to perform the assigned mission. Random enemy fire provides a favorable opportunity get closer to the objective of the raid.

Depending on the circumstances, terrain conditions, weather, and the distance to the raid objective, communications and control within the subunit (party) are achieved by various quite simple methods. Commands are given in a whisper or luminous signals are given with a pocket flashlight with colored filters (violet, blue, green), a cord is used for control, and also touching the hand and other methods.

The order of movement of a subunit (party) from the departure point may vary. Usually combat engineers, with two or three scouts to cover their actions, move out first in order to clear passages in the enemy's obstacles. If the enemy's obstacles are situated only a short distance from our forward edge (departure point), the subunit (party) will at that time be at the departure point ready to cover the actions of the combat engineers with fire and will begin to move out after receiving a signal that the passage in the obstacles is ready. **[112]** The fire support team moves first, then the assault (capture) team. If the enemy's obstacles are a quite far away from our forward edge, this may be the order of moving out: one of the fire support teams, the obstacle clearing team, a second fire support team, and the capture team.

On reaching the obstacles, the fire support squad (team), moving in front, deploys and secures the passage cleared by the combat engineers, while the rest of the subunit (party) remains some distance away from the enemy's obstacles, ready to support the actions of the fire support team and the obstacle clearing team.

The combat engineers detect mines, disarm them, and mark a passage; then they carefully reconnoiter barbed-wire entanglements to determine if there are any sound-alarm attachments, pull-action mines,

and other signaling equipment. If they detect such devices, they remove them and then clear the passage. When they have done so, the combat engineers pass the subunit (party) through it and remain to guard the passage, positioning themselves on one or both sides of it. The fire support team is the first to go through the passage in the enemy obstacles and occupies designated positions in preparation for covering the actions of the assault team with fire.

After this the capture team negotiates the passage and moves out toward the raid objective (figure 8).

The subunit (party) leader moves out toward the raid objective, as a rule, with the capture squad (team) and personally takes charge of its actions in the assault on the objective.

The assault on the objective takes place after the team has approached close enough to it to overcome it in one short rush, and the

Figure 8. A Raid. One Version of Party Moving out to Capture a Prisoner.

Figure 9. Capturing a Prisoner.

remaining subunit (party) personnel will be ready to support the actions of the assault team (figure 9).

The raid objective is best approached from downwind. A headwind carries sound away and assists in the covert approach to the enemy.

Depending on the nature of the objective, the terrain, the size of the capture team, and other conditions, the assault on the objective may take place from one side only or simultaneously from two sides. In all cases it is best to attack a raid objective from the rear or a flank and as soon as the scouts have approached it to within the distance of a single rush, since the prolonged [113] presence of the capture squad close to the enemy may lead to detection of the scouts and the failure of the raid.

The most convenient moments for an attack on the enemy are on a sentry (observer) when he has his back to the attackers or has turned in the other direction and also when he is performing some task; on a crew, when they are reloading their weapons, firing, or during conversations of enemy soldiers among themselves; on a group of soldiers, when they are occupied in fitting out their position or eating; on the illuminant operator, when the rocket he has fired goes out. **[114]**

The rush for the assault on the objective is carried out on signal from the leader of the subunit (party) or of the capture squad. The personal example of the leader is the signal for the rush. The actions of the attackers must be swift, sudden, and silent so as to surprise the enemy and give him no opportunity to resist.

When the prisoner is captured, he must be disarmed, gagged, bound by the arms, dragged out of the emplacement, and quickly brought back to the friendly disposition. If the enemy **[115]** resists during capture, he must be knocked out and then disarmed and bound.

In an attack on several enemy soldiers it must be determined in advance how many are to be killed and how many taken prisoner.

It is preferable to kill the enemy without shooting, with a bayonet, rifle butt, or knife.

During the assault on the objective, the fire support teams are in their positions, ready to support the actions of the capture team with fire from their weapons and to hinder enemy attempts to assist the objective of the assault.

If, while the subunit (party) is moving out toward the raid objective, it is detected by the enemy or when a silent assault on the objective cannot be achieved (high state of enemy vigilance, intensive illumination of the terrain, etc.), the subunit (party) leader requests fire from the supporting fire weapons and attacks under cover of their fire and that of the fire support squad (team).

Often the situation in the raid area may change to the point that none of the alternatives prepared in advance is suitable. The subunit leader, therefore, must rapidly assess the situation at hand, and make a new decision or introduce the necessary changes into the previously selected plan of action.

Let us cite an example from Great Patriotic War experience. By early April 1942, the command element of the 74th Rifle Division, op-

erating in the Donbass area, had certain information about the approach of enemy troops from his depth, but they had not succeeded in determining the nature of the actions being carried out by the enemy.

The division commander ordered the division intelligence officer, Maj. Gorchinskiy, to organize a raid in the area of hill 262.2.

Maj. Gorchinskiy and Lt. Matsar', a reconnaissance company commander, decided to capture a prisoner from a machine gun crew situated in a shelter, and, beginning on 2 April, they organized continuous observation of them and careful preparation of a raid.

By the end of 4 April, everyone participating in the raid had studied the paths of approach to the objective on the terrain down to the smallest detail. The leaders of the teams and the commanders of the supporting fire weapons assigned missions to each of the participants in the raid and made sure that they understood these missions correctly. **[116]** After this a training exercise was carried out in the friendly disposition on a similar sector of terrain, where each leader and private scout strictly performed his functional duties, carefully polishing solitary actions for noiseless movement on the terrain, for sound masking, hand-to-hand combat, and the capture and delivery of a prisoner. Then, in a night exercise, the actions of the party were worked out in full. This exercise was carried out with a designated enemy and with supporting fire weapons called in.

The training of the reconnaissance party on a practice objective was a finishing step in the preparation for the raid.

On 4 April, with the coming of darkness, the party assembled at the departure point, 400–500 meters from the objective, which was situated behind the enemy FEBA. At the signal "advance," the teams began to move out in the predetermined order. They moved by crawling, absolutely silently, maintaining close contact.

The fire support team moved out on the flanks. The assault team worked its way slowly around the side of the enemy's covered shelter in order to attack it from the rear. All at once the assault team leader, Junior Lt. Yashin, saw a German soldier making his way toward the shelter. The scouts were 60–70 meters away from him. There was no time to hesitate. "Was the concept, as it had finally taken form, good Could it have been mistaken After careful preparation of the raid, is it worth changing the plan for conducting it Then it will be all his—Yashin's—fault." To report his decision to Senior Lt. Matsar' and wait for him to decide would be unwise: a favorable situation like this comes only once. The booty can quickly slip through one's fingers.

The decision to capture the German soldier grew in Yashin's mind with lighting speed. He sent a messenger to Senior Lt. Matsar' to report the unforeseen actions.

Everything took place in a few moments. Creeping up to within 4–5 meters of the fascist, five scouts captured him in a quick rush, quickly tied his arms, and gagged him.

Soon Yashin's assault team was back in its own disposition with a prisoner captured for interrogation.

The mission was accomplished even though the original version had been changed—the enemy shelter thus had not been attacked by our scouts. **[117]**

This example shows that a display of intelligent initiative, resourcefulness, and bravery—combined with skillful calculation—was a decisive condition for successfully conducting the raid. The success of the raid was also promoted by its careful, all-around preparation, especially the planned moving out of the party toward the objective and its withdrawal to the friendly disposition.

The procedure for subunit (party) withdrawal depends on the actual situation at the time of the assault on the raid objective. If the subunit has not been detected by the enemy and the attackers have taken a prisoner silently, it withdraws, observing all camouflage measures, in the following order.

First the capture team withdraws with the prisoner, the documents, and samples of weapons, without waiting for any additional orders. The fire support team remain at their posts ready to repel any enemy attempt to prevent the withdrawal of the capture team. After the capture team, the fire support squads (teams) withdraw next, then the combat engineers. If the situation permits, the passage cleared in the obstacles is camouflaged.

The subunit (party) leader is the last to withdraw, along with one of the fire support squads.

If the enemy detects the scouts at the moment of their assault on the objective, the withdrawal is carried out under cover of fire from the fire support squads and the supporting fire weapons. The signals requesting fire are given by the subunit (party) leader.

The assault team with the captured prisoner, documents, and samples of weapons is the first to withdraw from the enemy disposition.

After the capture squad has negotiated the passage in the enemy obstacles, two or three scouts escort the prisoner, while the other NCOs and men of this team, together with all the personnel of the subunit (party), destroy the pursuing enemy with their fire. The subunit (party) leader personally directs the fighting and is the last to withdraw with the subunit.

When the enemy does not pursue the scouts and his fire weapons are suppressed, the whole subunit (party) may withdraw simultaneously.

If there are wounded and dead, the subunit (party) leader takes steps to have them evacuated.

After returning to the friendly disposition, the scouts assemble at an appointed place. The subunit (party) leader takes stock of the men and weapons and [118] reports the completion of the assigned mission to the commander who organized the raid.

A raid involving the crossing of a water obstacle may take place in the daytime or at night. The most favorable time, however, is in the morning when the enemy is removing his night watch posts and the morning mist on the river reduces the effectiveness of the enemy's observation and helps the scouts to keep their actions covert and also at night in inclement weather and in other conditions of limited visibility.

For conducting the raids, subunits (parties) are brought in whose personnel have been trained in crossing water obstacles underwater in light diving gear, can swim well and noiselessly in uniform and with weapons, can steer a boat (raft) and row, and can aid drowning men and ferry wounded and prisoners over water.

Covertness of action, surprise in the attack on the enemy, and reliable fire coverage of the party are the basis of success in carrying out a raid involving the crossing of a water obstacle.

Therefore the commander by whose order the raid is organized must allocate a sufficient number of fire weapons to suppress the enemy effectively in the event the party withdraws with resistance, and he must assign alert-duty ferrying equipment with a rescue party to give assistance to the scouts in case of need.

The raid objective is selected by the same procedure as in ordinary conditions, but more careful study is required of the behavior and condition of the water obstacle, its width, depth, swiftness of current, the soil on the bottom and on its banks, the presence and nature of obstacles on and under the water, and the availability of shelter on one's own bank and of concealed approaches on the enemy bank.

In addition, the officer organizing the raid must also determine the following: the distance of the raid objective from the water's edge on the enemy side and the conditions of observation of the objective from our bank; the place, method, and procedure for getting the ferrying equipment down to the water's edge; the method of clearing passages in friendly and enemy obstacles on the banks and in the water obstacle; the organization of protection and camouflaging of the ferrying equipment on the enemy bank; the time, place, method, and order of getting the subunit (party) across the water obstacle; the order of withdrawal and recrossing by the subunit (party) after completion of the mission; and the mooring point on our own bank.

When one studies the raid objective, special attention should be [119] paid to detecting the position of enemy observation points, radar installations, and night vision devices used in conducting observation of the surface of the water obstacle and of the approaches to the enemy disposition.

The crossing point selected is such that the subunit (party) can reach the opposite bank as quickly as possible with the least possibility of being noticed by the enemy, emerge covertly onto it, and get to the objective of the raid by the shortest possible route. Special attention is paid to determining the place where the scouts land or emerge on the opposite bank and then, depending on the nature of the river, the place where they push off and regain their own bank.

The embarkation point of the subunit (party) from its own bank is selected with an eye to the swiftness of the current, the width of the river and the method of crossing, upriver from the designated landing place on the enemy bank. In a swift current, the embarkation point must be higher up by a distance equal to twice the width of the river. On the return to one's own bank, the designated debarkation point will be downstream from the area where the raid was carried out.

In cases where obstacles installed in the river may prevent its crossing, passages in them are cleared and marked in advance by order of the commander on whose orders the raid is organized.

Depending on the nature of the water obstacle, the location of the raid objective, and the availability of ferrying equipment, the scouts may cross to the opposite bank by swimming, on standard-issue or improvised ferrying equipment, by fording, or along the bottom of the water obstacle. In all cases the method of crossing selected must guarantee rapid, silent, and covert negotiation of the river.

The order of crossing to the opposite bank may vary. Usually the combat engineers go first to clear passages in the obstacles on the opposite bank, with two or three scouts to cover their actions, then the rest of the party. If the river is narrow or if the raid objective is not far from the water's edge and is well observed from our own bank, the squad (team) giving fire support on the opposite bank may stay and perform their mission from there.

When the raid objective is a long way from the water's edge and the place selected for crossing is not observed by the enemy, the subunit (party) allocated **[120]** to carry out the raid may cross the water obstacle at full strength. The leader of the subunit must allocate personnel to the crossing equipment in such a way that each group emerging onto the enemy bank is able to perform its mission independently even if other groups cannot cross.

When swimming across or fording, the scouts must be equipped with life jackets, life belts, or flotation suits and must also have one or two spare life belts for evacuating prisoners. Scouts must enter the water, cross over, and leave the water without making any noise or splashing.

When crossings are made in standard-issue or improvised equipment, oars must be wrapped in cloths and oarlocks oiled; the rowing must be done quietly, without splashing. It is important for the scouts to be able to hold strictly to the prescribed course and tie up to the opposite bank exactly at the designated point. Unskilled actions by scouts during the crossing may result in failure of the mission.

Thus, in October 1944 a reconnaissance party of the 27th Guards Division carrying out a raid across the Vistula River did not take the speed of the current and the width of the river into account. Consequently the current carried them 900 meters downstream from the designated point. Disembarking at night on the opposite bank, the party could not find a suitable objective for an assault. Moreover, at dawn it was detected and crossed to its own bank under enemy fire, suffering losses.

In November 1944 a reconnaissance party of six men under Sgt. Maj. Seleznev was assigned the mission, on the night of 17–18 November 1944, of taking a prisoner from the area of an unnamed hill on the west bank of the Vistula. A machine gun crew was selected as the assault objective. It was decided to cross the Vistula in a boat.

The plan for carrying out the raid was as follows. Taking into account the speed of the current and the width of the river, the departure position for the actions of the raiding party was to be 900 meters south

of the raid objective (upriver), and the mooring point on the enemy bank was to be 80 meters south of the raid objective, near three lone trees that were easily visible at night.

One soldier was detailed to guard the boat on the enemy bank; there would be two men to clear a passage through the minefields, one of whom would be left behind to guard the passage. Sgt. Kultazhev and Pvt. Semenychev, after [121] negotiating the minefield, would stay in a fighting trench to cover the actions of Sgt. Maj. Seleznev and Sgt. Medvedev, who were to attack the machine gun crew from the rear and take a prisoner.

The order of withdrawal according to the plan was to be as follows. Sgt. Maj. Seleznev and Sgt. Medvedev would leave first with the prisoner. After they had passed through the minefield, Sgt. Kultazhev and Pvt. Semenychev (fire support team) would withdraw, and after them the rest of the scouts. They would go downstream in making the boat crossing to their own bank.

Three batteries of 76mm guns, two companies of 82mm mortars, two 45mm guns for direct fire, and four medium machine guns were allocated to give fire support to the actions of the party.

Two boats were prepared for the crossing. The oars and oarlocks were carefully fitted and bound with cloths, and there were spare oars and life preservers in the boats. One boat was intended for the immediate ferrying of the party, while the second, with two scouts and an oarsman, was held in reserve in the area of the departure point, ready to come quickly to the aid of the scouts, if necessary.

On 18 November, an hour after the regular enemy change of guard, the boat with the scouts left our bank; and 25 minutes later, undetected by the enemy, it tied up to his bank at the designated point. Acting in accordance with the plan, the party captured a prisoner and, without any losses, delivered him to the friendly disposition.

Thus, thanks to careful organization of a night raid involving the crossing of a wide water obstacle, the raiding party led by Sgt. Maj. Seleznev brilliantly performed the mission assigned.

A subunit (party) crossing underwater in light diving suits is an excellent way to ensure covertness in gaining the opposite bank. However, this method of crossing is more difficult and requires very careful preparation and prolonged training of personnel. After the crossing, the diving suits are removed and hidden, while the equipment for ferrying prisoners and wounded—towed across by the scouts—is carefully cam-

ouflaged. If the river is not wide, the scouts can bring across a rope, with which a boat or raft can subsequently be pulled over.

Moving out to the raid objective, attacking it, [122] taking prisoners, and withdrawing are carried out in approximately the same order as under normal conditions.

The manner in which the scouts return to their own bank will depend on the situation that develops after the assault on the raid objective. The crossing may be made covertly or under the cover of the allocated fire weapons and subunits in the area where the raid is made. The subunit (party) may cross with all personnel simultaneously or in teams. The fire support team must be ready to cover the crossing of the entire subunit (party). It is the last to cross and is covered by fire from its own bank.

Raids in mountains are best carried out by small parties consisting of hardy, agile scouts who can get their bearings and move around in the mountains.

Experience in the Great Patriotic War and military exercises in recent years shows that the best times for carrying out a raid in mountains are the evening and morning twilight hours. This is because night in mountains is considerably darker than in plains, and the difficulty of orienting oneself and the extreme ruggedness of the terrain make it more difficult for a party to move toward the raid objective. In the final analysis, not only does this not lead to success; it sometimes results in unwarranted losses. At the same time, the rugged terrain, with many concealed approaches to the raid objective, and also the considerable gaps in the enemy's battle formations, make it possible to move out under cover and suddenly attack a selected objective even in daylight.

Preparation for a raid in mountains requires a considerably longer time than on level ground, because the raid objective and the route by which it is to be reached must be very carefully selected, and the approaches to the objective and the nature of the obstructions in the way of a party must be studied in detail. In many cases the scouts will have to overcome obstructions with mountain-climbing equipment, and additional training is also required for this.

Raid objectives are selected on the flanks or in the rear of an enemy strongpoint, i.e., in places where he least expects our scouts and where there is less density of fire.

Observation of the objective and also study of the route and approaches to it are carried out by small parties (two or three men), all personnel taking turns at observation from several points and as close

as possible to the objective [123] of the raid. Negligence in this may lead to failure of the mission.

For example, in the Great Patriotic War, in October 1942 during the engagements in the Caucasus, a party of scouts led by Lt. Znobin was assigned the mission of capturing a "squealer." For two days the scouts carried out the necessary preparation and carefully studied the raid objective and the route for reaching it, but only from a single point. On the way to the raid objective, the party encountered a previously unobserved deep ravine with an electrified wire entanglement which it would be impossible to surmount silently. As a result the mission was not accomplished.

For a party to move toward the raid objective, they should utilize difficult terrain sectors so as to emerge in the rear of the raid objective, and they should avoid movement along mountain roads and paths in order not to fall into an ambush laid by the enemy.

It is best to attack an objective from the rear and from a nearly inaccessible direction where the enemy will be less vigilant and it will be easier to achieve covertness and surprise; and also from above downward, since this permits a swifter attack with less physical exertion.

As an instructive example, a raid in mountains carried out during a military exercise may be cited. It was necessary to determine the precise grouping and numerical designation of the "enemy" in advance of the front of a certain unit. Squad leader Sgt. Yakovlev was assigned the mission of a raid in the sector of hills 125.6 and 152.4. Two combat engineers were placed at the disposal of the squad leader. For fire support of the raid, there were a mortar battery and two SPGs.*

Two days were set aside to prepare for the raid. An observation point on the west slope of hill 152.4 was selected as the objective.

The party was distributed as follows: four men were assigned to the assault team, four to the fire support team, and two to the obstacle clearing team.

A carefully developed plan for carrying out the raid was approved by the commander. In preparing the personnel, special attention was paid to a detailed study of the raid objective, the approaches to it, and the route by which the squad would move. Observation was conducted from three points in rotation by all scouts in the raiding party.

*[*SPG*—perhaps *stankovyy pulemet Goryunova* 'Goryunov heavy machine gun.' This seems more likely, especially in mountains, than *stankovyy protivotankovyy granatomet* 'antitank grenade launcher' —U.S. Ed.]

The time for starting and completing the raid was calculated with great accuracy, taking into account the fact that the squad, when approaching [124] the "enemy," would be negotiating unfamiliar and barely passable mountainous terrain.

All the scouts in the party studied their respective missions, the order and direction of movement, the signals, and the conventional symbols.

On the night of 11–12 May the squad occupied a departure point in the area of our FEBA. Before this, Sgt. Yakovlev had checked the weapons and equipment of each scout and his knowledge of his mission.

Toward dawn on 12 May, the combat engineers moved out toward the "enemy" obstacles, cleared passages in them, and gave the signal for the fire support and assault teams to start moving.

The commands and signals were transmitted by cord and great care was observed in moving.

The assault team, after safely negotiating the "enemy" FEBA through the passage cleared by the combat engineers, moved to the rear of the assault objective where the appearance of scouts was least expected because the objective was protected by barely accessible terrain.

With a sudden rush, the scouts broke into the emplacement and silently took "prisoner" two observers. However, on returning to their position, the assault team was detected and fired on by the "enemy." The party leader gave the signal to request fire from the supporting mortar battery. The fire support team also opened fire on the "enemy."

The assault team with its "prisoners" concealed itself in shelters. Waiting until the firing was over, the scouts safely returned to their position. The mission had been successfully completed.

Raids in northern regions are carried out at various times of the year and various times of the day or night. In the units of the Soviet Army operating in the Arctic during the last war, raids were considered very important. Thus in the Kola Peninsula between 25 September and 25 October 1944, in the 14th Army, out of 333 reconnaissance actions 227, or 68 percent, consisted of raids.

When raids are organized and carried out in northern regions, the special nature of the climatic conditions and the polar day and night exert a considerable influence. The polar day adds to the difficulty of carrying out raids; the polar night facilitates the camouflaging of scouts

and their covert approach to the objective even when the enemy has night vision devices and radars that detect moving targets [125] on the ground, but it adds to the difficulty of studying the raid objective and targets in the area of the enemy's disposition. However, if the enemy's routine behavior has been thoroughly studied and the locations of his fire weapons and the ways of approach to the objective of the assault are known, the raid can be carried out successfully either during the polar day or night.

During the polar day, fire support of a raid is organized so as to suppress all enemy fire weapons near the raid objective if the scouts are detected.

In the polar night (in winter), special attention has to be paid to covertness of movement, to measures for ensuring the trouble-free functioning of weapons, and to protecting the scouts against frostbite. All members of a party are furnished with white camouflage robes.

It must also be kept in mind that in winter low temperatures and high atmospheric humidity make it necessary for enemy sentries and observers to take shelter from the cold and wind and to warm themselves frequently in dugouts and covered shelters, and that the warm clothing hinders their movement. All this reduces the enemy's vigilance. Moreover, personnel off duty, as a rule, will be in shelters and will be unable to give direct assistance promptly to their guards even when a raiding party has been detected.

During snowstorms and blizzards at temperatures from –25 to –30°C and lower, no raids are possible. It is possible to carry out raids in bad weather only in cases where the "neutral" zone is no wider than 200–250 meters.

Carrying out *raids in urban areas* is more difficult than in flat or moderately rough terrain. The close proximity of friendly forces to the enemy, the existence of good shelters and concealed fire points for him, and his increased vigilance all add to the difficulty of surprise actions by scouts.

The execution of a raid is also complicated by the fact that the inadequate field of view virtually eliminates the possibility of observing the raid objective and selecting the path of movement toward it and by the fact that debris, brick rubble, glass, reinforced concrete scrap, and other objects hinder the silent movement of scouts.

The enemy mines all obstacles, sets up barely noticeable explosive booby traps, and rigs alarms. Therefore the preparation and execution

of raids in urban areas demands special care on the part of the commander organizing these raids. [126]

In a large inhabited locality (city) a raid objective is selected near our forward edge, in ruins, isolated structures, or within buildings. Also taken into account are terrain conditions, the existence of concealed approaches to the objective, and the possibility of supporting the subunit by fire from advance subunits. The best routes to a raid objective in a city are subway tunnels, sewer networks, passages and gaps in the walls of buildings, yards and gardens with openings at both ends, and narrow passageways between houses.

To support the actions of a subunit (party) in a raid, howitzer artillery subunits, mortar subunits, and direct-laying-gun subunits are called on.

The raids are usually carried out by small parties, because in an urban area it is more difficult for a relatively large subunit to maintain concealment and achieve surprise. Very serious attention is paid to drilling those in the parties on throwing grenades through windows, embrasures, and slits and on firing automatic weapons from all positions, and crawling silently through paved streets and obstructions and the ruins of buildings.

If a raid objective is inside a building, the whole party must not break into the building. Some soldiers remain in the street near the entrance to the building in order to warn the scouts inside or to repel enemy attacks. They position themselves so they can conduct fire along adjacent streets and intersections and also through exits in the building under attack and the windows of the lower floor.

We may cite an example from experience in the Great Patriotic War of a raid carried out in a large city.

In Vienna the enemy was occupying a defense south of the Danube Canal, utilizing large brick buildings for this purpose. Especially strongly reinforced were houses at intersections of streets, and the enemy had transformed some of them into powerful strongpoints. In the area of responsibility, the 98th Guards Rifle Division was required to determine precisely the grouping and numerical designation of the opposing enemy units and subunits. The leader of one of the subunits was ordered to carry out a raid. The party was made up of ten veteran NCOs and men under the platoon leader, Guards Lt. Rybakov. The party was assigned the mission of capturing a prisoner in the area of the houses overlooking the Danube Canal. On receiving the mission, the party leader organized careful observation of the enemy in the area of impending actions. After

studying in detail the enemy's behavior and fire plan [127] in the area of the raid, the party leader drew up a detailed plan of the impending actions, determining the missions of each scout and of the supporting weapons.

On the evening of 8 April 1945, the party moved out to the departure point near a house on the south side of Schiller Street. Just after nightfall the scouts crawled across the street and concealed themselves in the entrance of the house opposite. From there they moved noiselessly from house to house until they reached the southwest corner of a detached green house. Unexpectedly, from a third-story window of one of the houses, a machine gun started firing. The scouts concealed themselves and began to observe this house. According to the plan as outlined, this was where the prisoner was to be captured. At the main entrance stood two sentries. Three scouts crawled covertly across the street, crept up on the sentries, attacked them suddenly, and killed them with cold steel. Leaving two soldiers on guard at the entrance, the entire party silently entered the house and climbed to the third floor, where the enemy was located. Grenades were thrown and automatic weapons fired. As a result of the brief skirmish, 15 enemy soldiers were killed and one officer and a soldier were taken prisoner. After capturing documents and prisoners the scouts withdrew to the friendly disposition. As a result of interrogation of the prisoners and study of the documents, the numerical designation of the subunits, the effective combat strength of the units, and the enemy's intentions in the sector in question were precisely determined.

The success of this raid was due to the detailed study of the raid objective, the careful preparation and drilling of the scouts, and their bravery and resourcefulness.

Experience in organizing and carrying out raids in the last war shows that the procedures and methods of actions of raiding parties may vary greatly. The decisive factors leading to success, however, are careful preparation, covert movement, surprise in the attack, and audacity of action on the part of the raiding party. Of considerable importance, also, is good organization of cooperation both within the raiding party and with the subunits giving fire support.

Even though reconnaissance equipment is undergoing rapid development at the present time, raids have not lost their importance even today as a method of carrying out reconnaissance. Soviet Army NCOs and men must, therefore, fully master the methods of covert approach to the enemy and surprise attack on him in order to seize prisoners, documents, and samples of weapons and combat equipment.

The Ambush

[128] The ambush as a method of reconnaissance is used to capture prisoners, documents, samples of weapons, combat equipment, and supplies and also to destroy the enemy and especially his offensive nuclear weapons. An *ambush* is the advance, covert positioning of a specially chosen subunit (party) on the probable routes of enemy movement for a surprise attack on him.

Compared with other methods of reconnaissance, the ambush has a number of advantages. The subunit (reconnaissance element) occupies in advance a battle formation out of sight of the enemy and, concealing itself, awaits his approach; the enemy, unaware of the danger, walks into the hands of the scouts. The suddenness of the attack at short range stuns him and denies him the chance to take any countermeasures. The brief duration of the attack itself and the fire, opened at point-blank or short range, is extremely effective, and the scouts either have no losses or only very minor ones. Another advantage of this method of reconnaissance is that the personnel of the party, placing themselves on the probable routes of enemy movement, can select the most important objectives for the assault and can successfully accomplish their mission with minimum forces in a short time and inflict losses on the enemy.

The ambush as a method of reconnaissance is employed in all kinds of combat actions, on any terrain, in various weather conditions, and at any time of the day or night. Depending on circumstances and terrain conditions, it can be set up deep within the enemy position, at his forward edge, ahead of the forward edge of our own advance (security) subunits, or in the friendly disposition.

The most favorable conditions for carrying out ambushes are produced during the enemy's preparation for an offensive and also when he is regrouping and relieving his forces. When preparing for an offensive, the enemy will step up his reconnaissance of our forward edge; his combat engineers will be making passages in the minefields and barbed wire entanglements, and the movement of troops within his position will be intensifying. During the regrouping and relieving of forces, enemy troops newly arriving in that sector of the front will be poorly oriented on the terrain, will not know the situation, and will often be roaming around in search of some object they need. All this will make it easier to carry out ambushes.

These may be objectives of assault from ambush: individual soldiers or officers or groups of soldiers and officers proceeding in formation [129] on foot or in motor vehicles, armored personnel carriers, or other

combat vehicles; guided and unguided missile launchers, nuclear artillery guns, and other kinds of enemy weapons and combat equipment on the move.

The correct selection of a place for the ambush is very important. Ambushes should be set up in places that will ensure concealed positioning of the scouts, surprise in their actions, and their concealed withdrawal after accomplishing the ambush. Ambushes are usually organized close to roads or footpaths, at bridges and crossings, at passages in obstacles, at sources of water, at deliberately damaged lines of communication, in passes, in a defile, or in crawl trenches or other places where the appearance of single soldiers and small groups of the enemy is most probable.

Scouts operating in ambush employ a very wide variety of methods. The subunit leader determines, in each individual case (depending on the nature of the terrain and the objective of the actions), the composition of the party and how best to organize the capture of a prisoner. The basic operating rules are covertness and surprise.

Ambushes were widely used in the Great Patriotic War. Thus, on the Southwestern Front alone, from November 1942 to October 1943, 1,100 ambushes were carried out, enabling 350 prisoners to be captured. During the preparation of the Berlin Operation, 307 ambushes were employed, resulting in the capture of a large number of prisoners and documents.

Let us consider some examples of ambushes carried out during the Great Patriotic War.

It had been established by advance observers of the 47th Guards Rifle Regiment of the 2nd Ukrainian Front that parties of 15–20 Germans were making systematic trips to certain sheds situated ahead of their FEBA and were demolishing them and taking the material away. It was decided to organize an ambush in the vicinity of the sheds.

At 0730 on 8 December, observers posted from the ambush reported to the platoon leader that a group of some 40 enemy soldiers and officers was proceeding through a ravine. When the enemy approached to within 40–50 meters of the sheds, the scouts began a hail of automatic fire. Some 30 Germans were killed and three soldiers taken prisoner. The prisoners gave valuable statements.

Units of the 173rd Rifle Division were preparing for an offensive in the Orsha area. Between the enemy FEBA [130] and our forward fighting trenches there was a no-man's-land about a kilometer wide containing

a small ravine. In the ravine, close to the enemy barbed wire entanglement, there was a pond. It was learned by observation that the Hitlerites were going to the pond in groups of 5–10 men for water. A decision was made to organize an ambush. A reconnaissance party of eight men was selected to perform this mission. On 13 December 1943 at nightfall, our scouts, crawling on all fours, crossed the no-man's-land and approached the enemy's barbed wire entanglement. They observed that at one point in the entanglement, to which a path had been worn, the bottom strands had been cut. Hence this was where the fascists were passing through to the pond. A decision was quickly reached. Four scouts positioned themselves on either side of the passage in the barbed wire to prevent the German soldiers from turning back after emerging from the entanglement and going toward the pond. The other four scouts took up positions near the pond in order to attack the German soldiers with a sudden rush as they approached it and to take them prisoner. The scouts camouflaged themselves carefully. After a few minutes, eight German soldiers appeared. Three of them, without weapons, proceeded to the pond for water, while the rest went to ground at the wire. Just as the three Germans came abreast of the assault party, the latter swiftly fell on them. One of the Germans was taken prisoner and two were killed. The German soldiers remaining at the wire took to their heels, but they were felled with a few bursts from the submachine guns.

The captured signalman's statements proved very valuable. He gave information not only on the position of infantry, artillery, and other subunits, but also on their numerical strength, and the positions of command posts and communications centers—all of which played an important part in the success of the offensive by the regiment.

Prisoners captured by ambushes in the enemy rear area can provide very valuable information.

Thus Lt. Zubarev's party consisting of six scouts, having penetrated unnoticed into the enemy position in the area of Melitopol', observed a car coming toward them on a road, and behind it a truck.

The platoon leader ordered the passenger in the car to be taken alive. The scouts quickly placed themselves on both sides of the road and prepared to attack. As soon as the car approached, a short burst **[131]** of submachine gun fire was given. The vehicle stopped; the driver was killed. The truck, carrying three Germans, turned sharply aside, but hit a mine and was blown into the air.

Racing to the car, the scouts captured a German colonel. On his chest were six medals given him by Hitler for plundering and murdering Soviet citizens. Interrogation of the prisoner produced very valuable

information about the disposition of the German units in their positions and the intentions of the German command element on this sector of the front.

Reconnaissance using ambushes has made it possible to capture important enemy documents. In August 1944 a division of the 32nd Guards Rifle Corps dispatched a reconnaissance party to the enemy's rear area. Near the inhabited locality of Sladkuv-Duzhe, the scouts noted two motorcyclists traveling along a road. The party leader, without a moment's delay, decided to organize an ambush. The scouts, camouflaging themselves in bushes, positioned themselves on both sides of the road and stretched a wire across it at a height of 80–100 centimeters from the ground. The motorcyclists, failing to see the wire, ran into it and were thrown from their vehicles. The scouts quickly attacked them and took them prisoner. In the motorcycle sidecar there was a map case with documents, among which was found an order for an offensive from the commander of the 16th Tank Division of the German fascist forces.

Today the ambush, as a method of obtaining intelligence information, is used very widely in all forms of combat actions.

A subunit (party) assigned to set up an ambush may consist of a reinforced platoon, or sometimes even a company. Ambushes may also be set up by combat reconnaissance patrols and reconnaissance (independent reconnaissance) patrols, reconnaissance detachments, and reconnaissance parties operating in the enemy rear area.

The mission is given to the party by the leader of the subunit from which the personnel for organizing the ambush have been allocated.

The mission to set up an ambush is usually assigned on the terrain, but if the ambush is set up a considerable distance from friendly forces, then it is drawn up on a map as well.

When the mission is assigned, the party assigned to the ambush is given the necessary information about the enemy; the strength of the subunit (party) and the means of reinforcement; the place, time, and goal of the ambush; the sequence of actions after completion of the mission; **[132]** fire support procedure; the warning, control, and cooperation signals; the password and the reply to challenge. In addition, the subunit leader may be given the procedure for preparation for action; and also, when setting up an ambush at night, the procedure for employing night vision devices.

If the ambush is set up in advance of the line of protection of friendly forces or beyond the enemy's forward edge, the subunit leader is given

the place and order of crossing the front line when moving toward the site of the ambush and when returning to the friendly disposition.

After receiving the mission, the leader of the reconnaissance subunit assigned to the ambush must analyze it in detail, assess the situation, and immediately organize with his scouts the study of the enemy and the terrain in the zone of impending actions and in the sector where it is intended to cross the front line. Special attention here must be given to studying the enemy's system of observation and to detecting his fire weapons, his radars for observing moving targets on the ground, and his night vision devices; as well as any natural obstructions on the subunit's path of movement toward the ambush point, and the camouflaging properties of the terrain.

After this, the subunit leader must check the arms, condition, and material provisioning of the personnel and prepare them for the actions, and must also organize observation and cooperation within the party and with the leaders of supporting subunits.

The leader appoints observers and assault and fire support teams to carry out the combat mission.

The observers' mission is to alert the commander in good time of the appearance of the enemy and his approach to the ambush site. They are appointed from among those NCOs and men with keen vision and excellent hearing. The chosen place of observation must be such as to ensure a good view both in the direction of the enemy and in the direction of the ambush position. The observers must be posted close enough to the the ambush site for visual communication.

The assault team is designed to charge the enemy suddenly in order to seize prisoners, samples of weapons, combat equipment, and documents. It must include physically well-developed, strong, agile NCOs and men with an exceptional mastery of hand-to-hand combat methods, trained in the accurate throwing of grenades at great distances, and able to capture prisoners noiselessly. In attacks on individual enemy soldiers or officers, two scouts are usually assigned [133] to one prisoner to be captured.

The mission of the fire support team consists in approaching the enemy to almost point-blank range, suddenly overwhelming him with full firepower, demoralizing him and not allowing him to deploy or take up a battle formation, i.e., denying him the chance to take countermeasures, much less to extricate himself from the fire trap. The fire support team also has the responsibility of covering the flanks of the assault team and, where necessary, securing its withdrawal. The fire support team

includes NCOs and men able to throw grenades accurately, direct fire confidently, and use cold steel in close combat.

Depending on the circumstances and the terrain conditions, one or two fire support teams may be assigned. When a small subunit is chosen to carry out an ambush, it is not always divided into teams. However, in this case as well, the leader distributes the duties, assigning observers and men responsible for capturing the prisoner, for supporting the ambush actions with fire, and for killing enemy soldiers trying to escape.

If time is available, the subunit leader, depending on the decision made, carries out a drill with the scouts on terrain similar to the area of impending actions. Each team works out the problems it will have to solve during performance of the combat mission. In cases where subunit actions are supported by artillery, mortar, and machine gun fire, the supporting subunit leaders must carefully study the plan of action of the ambush and the area of its disposition, and must resolve the problems of cooperation.

In the operation order, the subunit leader indicates reference points (as needed); information about the enemy (where he is coming from and when he is expected); the mission of the subunit and its route of movement to the ambush point; the places of disposition of squads (teams), and their missions; the order of returning after completion of the mission; the procedure for supporting the subunit by fire from the friendly disposition; the departure point and the time of passing it; control and target indication signals and those for opening and ceasing fire; his own location and those of his deputies.

Also given is the procedure for evacuating wounded and dead as well as delivering prisoners, captured documents, samples of weapons and combat equipment; the procedure of the subunit **[134]** in the event the enemy detects the ambush; and, if necessary, who is to prepare (install) what obstacles, and where.

As an example we may cite an operation order issued by the leader of the 1st motorized rifle platoon, assigned to an ambush (figure 10).

On the night of 15–16 September, the 1st platoon was given the mission of organizing an ambush near the inhabited locality of Trutin and capturing a prisoner.

After analyzing the mission assigned and assessing the situation, the platoon leader issued the following operation order.

"Reference points: identified on the spot.

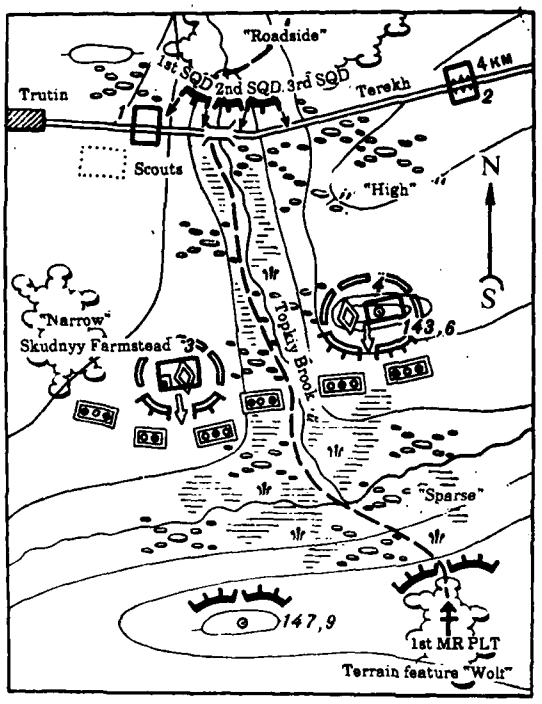

Figure 10. Actions of a Platoon in an Ambush (one version).

"Enemy dug in on north bank of river with forward edge on line: south slope of hill 143.6, Skudnyy Farmstead, southern edge of 'Narrow' wood. Platoon strongpoints on hill 143.6 and in vicinity of Skudnyy Farmstead.

"Fire weapons observed: on west slopes [135] of hill 143.6—tank in emplacement, on south slope—machine gun; 50 m east of Skudnyy Farmstead—tank in emplacement; 30 m south of farmstead—machine gun. Ahead of forward edge in gaps between strongpoints—mixed minefields. Up to one motorized infantry company stationed in Trutin area. Individual vehicles and motorcycles seen driving back and forth along road from Trutin to Terekh. With onset of darkness this activity increases.

"Motorized rifle platoon with two combat engineers is ordered to penetrate enemy FEBA overnight on 15–16 Sept., on foot along Topkiy Brook, and to organize ambush at south edge of 'Roadside' Wood, capturing prisoners and documents.

"Route of movement to ambush area and return—by ravine along Topkiy Brook.

"1st squad with two combat engineers will be support team No. 1. From departure point, move in direction of 'Sparse' Thicket southwest of 'Roadside' Wood and follow ravine along Topkiy Brook. On arrival in ambush area, take up position beside road on right bank of brook. Be ready to hit enemy with fire at close range and secure capture of prisoners. Prevent approach of reserves from Trutin, mine road ahead of bridge (exact position of teams and fire zones will be indicated by leader on spot when platoon arrives in ambush area).

"2nd squad is assault team; move out behind 1st squad. On reaching ambush area, occupy a position beside road on left bank of Topkiy Brook. Be ready at my signal to attack enemy suddenly and capture prisoners and documents.

"3rd squad will be support team No. 2. Move out behind 2nd squad. Position to be on southwest edge of 'Roadside' Wood 20 m east of assault team. Be ready to hit enemy with fire at close range and secure capture of prisoners. Prevent arrival of reserves along road from Terekh.

"Observers—scouts Dushin and Petrov (Dushin in charge)—will take up observation point in thicket 300 m east of 3rd squad. Carry out observations in direction of Terekh and immediately report enemy's approach with following signals: armored personnel carrier or tank—rapid flashes of green light; motor vehicle or motorcyclist, rapid flashes of white light. Be ready **[136]** to prevent enemy's withdrawal with fire. Withdraw to position of 3rd squad.

"Order of return: 2nd squad withdraw first with prisoners, followed by 3rd squad; 1st squad cover withdrawal.

"Artillery prepare concentrated fire on following sectors: No. 1—300 m east of road junction; No. 2—embankment on road; No. 3—strongpoint in Skudnyy Farmstead area; No. 4—strongpoint on hill 143.6.

"Departure point—northern edge of terrain feature 'Wolf.' Platoon proceed at 2300 hours on 15 Sept.; be ready to move at 2230.

"Signals: open fire—short whistle; attack—word 'Forward'; call for concentrated fire on sector No. 1—red flares, by radio 'Thunder'; on sector No. 2—green flares, by radio 'Hail'; on sector No. 3—blue flares, by radio 'Storm'; on sector No. 4—yellow flares, by radio 'Gale.'

"Cease artillery fire—white flares, by radio 'Stop.'

"I will be with 2nd squad.

"My deputies: authorized, and leader of 2nd squad.

"Password—'Bolt.'

"In assigning missions of squads (teams) operating in ambush in combat vehicles or tanks (besides what stated in above operation order), fire sectors and main and alternate fields of fire of infantry fighting vehicle (tank) are indicated. For example, 1st squad—support squad No. 1, to occupy position on southern edge of 'Roadside' Wood in sector of footpath and ditch and support actions of assault squad; zone of fire to right—lone fir tree, reference point 3; to left—ditch, reference point 2. Fire position of infantry fighting vehicle—on right flank of position of squad; fire sector—thicket, straw stack, alternative—isolated group of trees."

At the appointed time, the subunit (party) leader leads the personnel to the departure point. Then, making sure that those under his command have correctly understood their missions and are ready for the actions, with the permission of his superior, he gives the signal to move out.

Passages in obstacles (friendly and enemy) are cleared and defended by resources of the senior-level officer. The subunit moves out covertly. For timely warning of any possible appearance of the enemy during the time the party is moving out to the ambush site, [137] the leader appoints observers (scout vehicle). If there is a sudden meeting with a small enemy party, the subunit attacks it swiftly and takes prisoners. Should there be a sudden meeting with superior forces and it is impossible to avoid combat, the subunits will hit the enemy with fire and withdraw, trying at the same time to capture prisoners.

After moving out to the ambush site, personnel and combat vehicles take up their positions according to the decision of the subunit (party) leader, carefully camouflaging themselves so as not to be detected before their attack on the enemy. The combat vehicles are camouflaged against the background of the surrounding terrain and, if time permits, are dug in. The subunit (party) leader will be at a place where he can see the observers' signals and personally observe the approaches to the ambush site as well as keep an eye on the position of his subunit (party) and direct its actions.

The assault team is situated, as a rule, in the center of the ambush, directly adjacent to the probable route of enemy movement, or at grenade-throwing range from him.

The fire support teams occupy a position on the flanks of the assault team at a place where they can conveniently fire on the enemy when he

appears. The combat vehicles are positioned so as to be able to support the actions of the support and assault teams with fire.

The combat engineers or the scouts themselves set up obstacles at places where they are sure the enemy will encounter them.

On the approach of the enemy, the observers silently alert the leader by the established signal.

If the attack is being made on single enemy soldiers or officers or small parties, it is best to let them reach the center of the ambush position, then suddenly, on the party leader's signal, attack and take them prisoner.

The subunit allows larger enemy groups and single combat vehicles to get within short range, then, on a signal by the leader, opens fire on them. Combat vehicles concentrate their fire primarily on tanks, infantry fighting vehicles, and other motor vehicles, while machine guns and other fire weapons open fire on personnel. Under cover of the fire weapons, the assault team, on signal from the team leader, boldly and resolutely attacks the enemy and takes prisoners. Documents discovered **[138]** during inspection of the dead and of vehicles are removed. Conventional signs (insignia) on combat equipment must be memorized and if possible sketched (figure 11).

The subunit leader usually directs the actions of the attackers personally, and together with them takes part in capturing prisoners. Then, if circumstances permit, he organizes the hiding of the traces left by the completed ambush.

Thereafter the subunit (party) acts in accordance with orders received: either continuing to perform **[139]** the previously assigned mission or joining up with friendly forces.

If the enemy does not detect the subunit, it withdraws covertly. In the event the enemy does detect the scouts and begins pursuit, the assault team with the captured prisoners and documents withdraws first. Other personnel cover their withdrawal, destroying the pursuing enemy with fire and grenades. If support of the ambush by artillery and mortar fire from the friendly disposition has been provided for, the subunit (party) leader calls for their fire by a prearranged signal.

On reaching the friendly disposition, the subunit leader reports accomplishment of the mission to his superior.

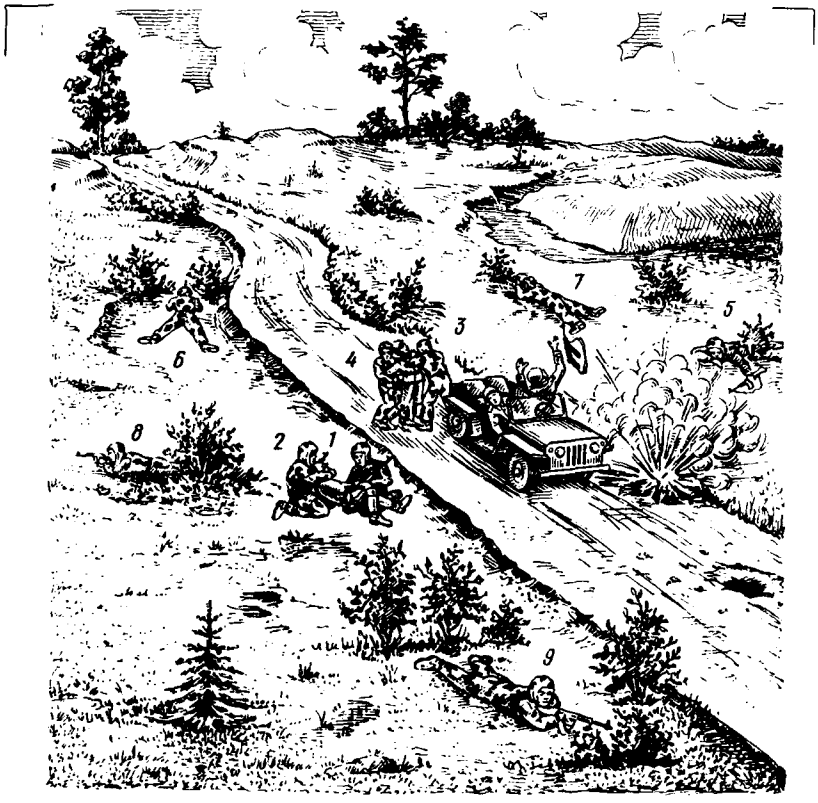

Figure 11. Capture of a Prisoner From Ambush.

1. Leader of the party; 2–4. Assault team; 6–7. Support team; 5, 8 and 9. Soldiers detailed to support the assault team.

As an instructive example of the organization of an ambush we may continue the analysis of the actions of the 1st motorized rifle platoon in the tactical exercise (figure 10).

After issuing the operation order and ascertaining that his subordinates understood their missions, the platoon leader organized cooperation. Specifically he indicated the following:

"Ford river in area of 'Sparse' Thicket. 1st squad first to cross to opposite bank, then 2nd and 3rd squads.

"Combat engineers to reconnoiter for minefields on route of movement of platoon; in ambush area they will be with 1st squad, ready to lay mines on threatened axis.

"Observers, using night vision devices, to watch road attentively.

Report approach of 'enemy' to me with short flashes of green light.

"After completing mission, withdraw on my command. When platoon reaches interval between strongpoints on hill 143.6 and in vicinity of Skudnyy Farmstead, artillery is to open fire on enemy's forward edge. At that time, platoon will move out to river and cross to south bank."

The platoon leader then carried out a training exercise with the scouts. He paid special attention to the ability of the NCOs to direct their squads and also to the development of quick movements in the soldiers assigned to the assault team. Two options were worked out: a silent assault on the objective, and an attack with weapons.

At the appointed time, the platoon moved out to northern edge of terrain feature "Wolf." The platoon leader checked weapons and **[140]** personal equipment, supplies of ammunition and mines, and the good working order of the night vision devices. After making sure that the squads were ready, he gave the order to move out. In front, in visual communication range, went the scouts and the combat engineers with mine detectors.

The platoon reached the ambush area at 2400 hours. The platoon leader showed each squad its position on the terrain, specified the observers' positions and missions, informed everyone of the signals; he also clarified the procedure for taking prisoners, documents, and weapons and the order of withdrawal.

When the team occupied the indicated places, the platoon leader verified the suitability of the choice of positions for observations and for conducting fire.

The assault team was placed 10–12 meters from the road. The platoon leader occupied a place next to the leader of this team. From this point he could observe the approaches to the ambush site, see the signals of the observers, and, after inspecting the positions of his subunits, direct their actions.

Soon the signal came from an observer that the "enemy" had appeared, and after a certain time an armored personnel carrier showed up on the road. Behind it came a car. The platoon leader decided to destroy the armored personnel carrier and to capture the automobile crew.

As soon as the armored personnel carrier had drawn even with the assault team, "antitank grenades" went flying into the carrier and it was "destroyed." The assault team hurled itself at the "enemy." After taking

prisoners, documents, and weapons, they began to withdraw. Behind them went support team No. 2.

Support team No. 1 covered the withdrawal. Soon their leader reported three armored personnel carriers with motorized infantry approaching along the road from Trutin. The platoon leader ordered the road to be mined and called for artillery fire on sector No. 1. Exploiting the enemy's confusion, the platoon reached the brook, crossed to the south bank, and in a few minutes reached the friendly forward edge.

The example cited confirms that the success of an ambush depends to a great extent on the careful preparation of the subunit and the skill of the leaders in clearly directing their subordinates' actions, on the bravery and resourcefulness of all personnel, and also on the completeness and reliability of the information on the basis of which it is organized.

A subunit (party) or other reconnaissance element (BRD, RG, ORD, RO)* operating deep within the enemy's battle formations sets up ambushes independently. **[141]** In this case, the decision to set up an ambush is made by the subunit (party, reconnaissance element) leader on his own initiative, based on personal observation and the information obtained by scouts. He determines the following: the location of the ambush; from what direction the enemy is most likely to appear and by what route he may move; where to position the subunit observers, combat vehicles, and support weapons, and what their missions will be; where and how obstacles are to be set up; his own location; and the control signals.

It must be kept in mind that the time for organizing an ambush when operating in the enemy's rear area will be very limited.

After detecting an advance by the enemy, the reconnaissance element leader must quickly assess the situation, make a decision for setting up an ambush, and covertly position personnel and combat equipment so as to ensure a sudden and effective assault on the enemy.

Selection of the place for the ambush will depend on the circumstances. Personnel and combat equipment will be carefully camouflaged against the background of the surrounding terrain. In the woods or bushes, branches are used for camouflaging; in a mowed field or meadow, straw, hay, etc. (figure 12).

*[*BRD—boyevoy razvedyvatel'nyy dozor* 'combat reconnaissance patrol'; *RG—razvedyvatel'naya gruppa* 'reconnaissance party'; *ORD—otdel'nyy razvedyvatel'nyy dozor* 'independent (sometimes 'separate') reconnaissance patrol'; *RO—razvedyvatel'nyy otryad* 'reconnaissance detachment'. These acronyms are used frequently throughout the remainder of the original Russian edition, but will be given in this English translation in expanded form—U.S. Ed.]

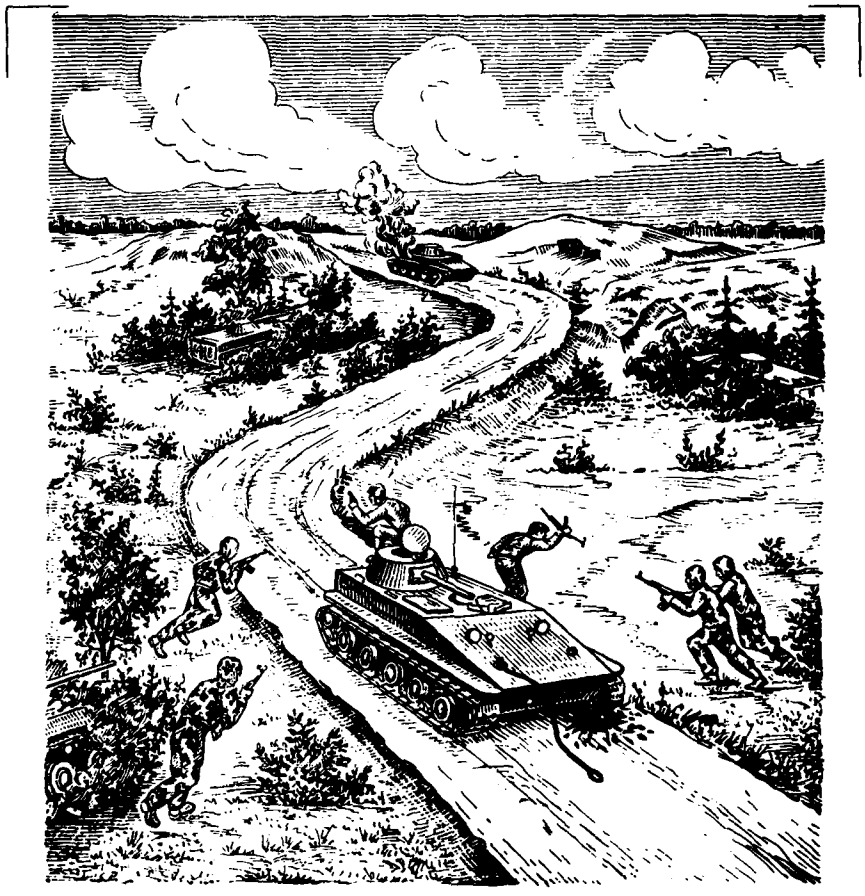

Figure 12. Capture of a Prisoner From Ambush by an Independent Reconnaissance Patrol While Carrying out Reconnaissance.

The leader appoints observers, an assault team, and fire support teams; he determines the order of assault on the objective and indicates the signals for opening and ceasing fire.

The observers position themselves in combat vehicles or outside them, camouflage themselves carefully, carry on continuous observation in the directions indicated, and report everything noted to the reconnaissance element leader.

Tanks and combat vehicles are used as a striking force and as fire weapons. On signal from the subunit leader, they open fire and support the actions of the assault team. Under cover of this fire, the assault team approaches the enemy in combat vehicles or on foot and takes the surviving officers and men prisoner.

It should be kept in mind that actions from ambush are less effective if fire is opened prematurely, the more so the farther one is from the enemy at this moment. Moreover, the premature opening of fire places the scouts at a disadvantage and in danger and makes it possible for the enemy to detect the ambush and take appropriate measures. Let us confirm this by an example. [142]

The leader of an independent reconnaissance patrol in position for an ambush gave the signal "Prepare for action." A motor vehicle with two enemy soldiers was approaching along the road. The vehicle had just come into sight around a curve when the scouts opened fire. Soon an armored personnel carrier with enemy infantry arrived at the ambush point. Returning fire on the run, the scouts with great difficulty ran to their combat vehicles and disengaged themselves from the enemy, losing two men, however. [143]

Reconnaissance element personnel waiting in ambush must wait patiently for the enemy and take no action whatsoever before the leader's signal, maintaining calm and self-control the whole time. Here is one example of such action.

In the summer of 1944 on a section of the Karelian Front, an independent reconnaissance patrol led by Sgt. Abudykhin had penetrated the enemy disposition and reached a road, along which they noted the movement of soldiers and vehicles. The sergeant decided to set up an ambush here. He left two scouts 50 meters from the road with orders to cover the actions of the ambush from the rear, and he positioned the rest of the force on both sides of the road. The scouts were well hidden in bushes adjacent to the road. After some time an enemy motor vehicle appeared. It was carrying seven men and a driver.

About 200 meters from the ambush point, the enemy vehicle got stuck. The soldiers got out and began pushing it, trying to help the driver get past a demolished section of the road.

At first glance this was a favorable moment to attack; the enemy was nearby. All they had to do was to take him prisoner. However, the scouts felt that the vehicle was still too far away. Moreover, some of the soldiers were beginning to bring brushwood to put under the wheels of the vehicle and two of them had gone for logs. In this situation, fire could not be greatly relied on. It was impossible to approach the enemy unnoticed. All they could do was wait without revealing their presence. That is just what the scouts did.

Fifteen minutes later the enemy soldiers had extricated the bogged-down vehicle and were moving along the road. Just as the ve-

hicle drew even with the ambush, the scouts opened fire. Four soldiers trying to offer resistance were killed, and three were taken prisoner.

When one is in ambush, it is always necessary to bear in mind that when the enemy is being attacked, help may come to him unexpectedly. In the course of an engagement, therefore, it is necessary to keep a watch at the same time on the surrounding terrain and on the leader's signals. Observers have an especially responsible role during this period. They must not only watch the actions of friendly scouts, but must spot the approach of new enemy forces to the ambush point in time and report this to the reconnaissance element leader.

Nor can one allow actions to become stereotyped; depending on circumstances, they should be varied in order [144] to mislead the enemy. In one case, mines should be installed in the road along which the enemy is expected to travel, so as to capture prisoners and documents when vehicles are disabled. In other cases, roadblocks and other obstacles and demolitions should be prepared, in the face of which the enemy will have to halt his vehicles. Here is one typical example of such an action from experience in the Great Patriotic War.

An independent reconnaissance patrol led by Lt. Andreyev, reconnoitering a sector of the front, reached the small Orlyanka Brook, Here the scouts observed that a column of enemy infantry was moving up to the front line. The patrol leader reported this by radio to his superior and was ordered to take a prisoner.

Slipping past the column, the scouts came to a bridge, removed several boards and then hid nearby in the bushes. After a while, an enemy vehicle with ammunition approached. The driver saw that the bridge was out of order and stopped the vehicle; he got out of the cab and walked to the bridge. The scouts then attacked him silently and took him prisoner.

It can also happen that the enemy will detect the ambush and try to take the scouts prisoner or kill them. In this case they must engage him boldly and withdraw under the cover of fire from their combat vehicles.

If circumstances permit, corpses and wrecked vehicles should be removed from the road and camouflaged so that the enemy will not detect the traces of an attack.

Captured prisoners must be interrogated. In the interrogation the information required by the reconnaissance element leader must be obtained from them. If the scouts include personnel who speak the enemy's

language, then the interrogation can be more complete. At the first opportunity prisoners are delivered to the next-higher commander. The information obtained as a result of their interrogation must be reported by radio.

Ambushes in town are best set up at the outskirts, at street intersections, at the exits of buildings, in the buildings themselves (mainly on the lower floors), and in parks and public gardens. The assault team should be positioned outside buildings (structures)—preferably in road ditches, front yards, courtyards, or around the corners of houses. Fire support teams, depending on the circumstances, can be placed in buildings and behind various forms of cover (fences, stone walls). **[145]** For firing they can utilize windows, holes in walls and fences, etc.

The enemy's approach is observed from the attics (roofs) of high buildings, from water towers, watch towers (fire towers), or trees.

For moving the subunit (party) out to the ambush point, openings and gaps in buildings and fences are utilized as well as passage yards, gardens, and parks.

A subunit assigned to an ambush in a town must be small in numbers. During the Great Patriotic War, the most successful ambushes were ones set up by parties of five to ten men with an experienced officer or NCO in command.

The actions in an ambush by an independent reconnaissance patrol of the 61st Tank Brigade of the 10th Tank Corps on 13 January 1945 in the Petrokovitse area are instructive.

The enemy, offering negligible resistance to our advancing forces by remnants of the 68th Panzer Division that had been routed in previous engagements, was withdrawing westward.

The 61st Tank Brigade was pursuing the enemy in the direction of Podles'ye, Luga, Petrokovitse. For the timely determination of the approach of enemy reserves, it sent out an independent reconnaissance patrol consisting of a platoon of tanks and two submachine gun squads. Toward 1700 hours on 13 January 1945, the patrol reached the eastern edge of Petrokovitse and observed enemy columns or motor vehicles and tanks moving out along the road linking Chmielnik and Petrokovitse.

The independent reconnaissance patrol leader, after arranging for observation of the enemy, reported the intelligence by radio to the brigade commander.

At 1715 hours, one kilometer from Petrokovitse, two enemy armored personnel carriers appeared. They were traveling confidently at high speed toward the town.

Quickly assessing the situation, the patrol leader made a decision: By utilizing certain demolished houses in Petrokovitse to hide his tanks, he would organize an ambush and take prisoners.

So that the actions of the scouts in taking the prisoners would not be detected by the main column of enemy forces, it was decided to set up the ambush in the middle of town.

As soon as the enemy armored personnel carriers reached the ambush point, on signal from the commander, our tanks cut them off from the front and rear; the submachine gunners simultaneously attacked from two directions.

The actions of the scouts were so sudden that **[146]** the enemy armored personnel carrier crews lost their heads and allowed themselves to be taken prisoner without resistance. They were from the 39th Tank Regiment of the 17th Tank Division, which was carrying out a march into the Malyshevo area for a subsequent counterattack on our advancing units. Owing to a decision correctly made by the leader of an independent reconnaissance patrol to organize an ambush, and owing to the bold actions and the initiative of the scouts, the approach of the enemy's 17th Tank Division and its mission were ascertained in time.

Extensive use is made of *ambushes in mountains*. In mountainous terrain the enemy cannot set up a continuous defense. There will be considerable gaps and unwatched sectors of terrain within his battle formations. This creates favorable conditions for scouts to penetrate his position.

The hard-to-negotiate terrain and the restricted number of roads and paths as a rule force the enemy always to use the same routes, which considerably simplifies the choice of place for setting up an ambush.

The extremely rugged terrain, with numerous natural folds and hiding places, with dense vegetation and an abundance of rocks, facilitates the concealed actions of a small subunit (party), making it possible to approach the enemy closely and carry out a sudden surprise attack on him, even without opening fire.

Ambushes in mountains are more favorably sited on roads and pathways passing through narrow valleys or gorges or across wooded tracts and through canyons. However, for safety's sake, one should not use

the roads and pathways to move the subunit out to the ambush point, since the enemy will also be setting up ambushes near them. For covertly approaching the place chosen, it is best to select hard-to-negotiate sectors of terrain.

A subunit (party) assigned to set up an ambush must frequently operate on foot. Personnel must, therefore, master the procedures and methods of negotiating terrain in mountains and must be furnished with special equipment for overcoming various mountain obstacles.

Ambushes in mountains may be used in all sorts of combat, and the missions they accomplish may go beyond the bounds of pure reconnaissance missions to capture enemy prisoners or documents. Very often they are carried out to kill withdrawing enemy personnel or [147] in order to compel him to abandon combat equipment and, as is especially important, his offensive nuclear weapons.

When an ambush in mountains is organized, success in the scouts' actions depends not on numerical superiority over the enemy, but mainly on suddenness of attack and coordinated and skillful actions in the difficult conditions of the mountainous terrain. Experience in the Great Patriotic War testifies to this.

Thus, at dawn one August day, a scouting party of 13 men led by Senior Sgt. Petrichenko came to a mountain path in the enemy's rear area. At one point the scouts observed the fresh tracks of cleated boots of the type customarily worn by German soldiers. The leader decided to set up an ambush. Positioning themselves alongside the path, the scouts took it under observation.

A tedious wait ensued. Finally, they heard the snapping of twigs, the tread of feet, and the clatter of falling stones. The enemy soldiers had barely approached the ambush point when the scouts opened fire on them and hurled grenades. As it turned out later, this was a party of 38 men proceeding under the command of an officer to the rear of friendly forces. As a result of the daring attack, 20 enemy soldiers were killed and one was taken prisoner.

During the Great Patriotic War, most of the ambushes in mountains were set up within the enemy's disposition.

In mountains, ambushes can be set up day or night. The best time for penetrating the enemy disposition is at dawn and as twilight is falling. Daylight makes it possible to operate with more coordination and confidence. As for concealment, this is simplified by the mountainous terrain itself, which affords an abundance of various hiding places.

Night ambushes require particularly careful training of scouts. They involve difficulties of orientation on moving out to the ambush point and operational difficulties in taking prisoners and withdrawing.

The success of an ambush in the mountains, as under ordinary conditions, depends on the concealment of its position, on the ability to conduct accurate fire, and on the resolution and stamina of all personnel and their skill in action.

Ambushes in northern regions were used widely during the Great Patriotic War. The focal nature of the defense and the presence of open flanks and of gaps between [148] strongpoints and defense areas forced the enemy to send out patrols consisting of small subunits or parties for inspection and security and to check their obstacles. Such groups were convenient objectives for assault from ambush. Some of the ambushes were set up in "no-man's-land," on the probable routes of movement of enemy reconnaissance or in his rear area.

An ambush carried out using a propeller-driven sled is of some interest

From the observation of one of our reconnaissance detachments, it was learned that from Khed-Ostrov a road led over the ice toward Kuzaranda. Along this road, small enemy transports and infantry parties sometimes traveled during the day.

It was decided to organize an ambush in the area of Lipovskiye Island, using propeller-driven sleds for this purpose.

Continuous observation was established from a peninsula north of Lipovskiye Island.

Two days later, in the middle of the day, it was noted from the observation post that two enemy soldiers were traveling on skis along the road to Kuzaranda. The signal was given to begin actions. Two minutes later, six scouts on three propeller-driven sleds were racing at 60 km/hr to intercept the skiers, and 10 minutes later they overtook them. The frightened soldiers were lying on the ice. The scouts jumped from the sleds, silently disarmed the unresisting enemy soldiers, pushed them onto a sled and raced back again. The success of the ambush was made possible by surprise, speed, and a fortunate choice of means and methods of action that so frightened the enemy that he could not offer resistance.

The time of year and weather conditions play a part in carrying out an ambush. Favorable conditions for an ambush occur after a blizzard,

especially at night and in twilight, when the enemy must check his minefields and warning devices, clear snow from combat structures and administration buildings and roads, and make ski paths between strongpoints and the sites of combat outposts and observation points. This helps in choosing an objective for assault.

When an ambush is organized, special attention must be paid to the scouts' clothing. Relatively high atmospheric humidity increases the body's heat emission and can result in frostbite. To avoid this the scouts must be dressed in warm but light moisture-repellent clothing and camouflage capes. The clothing must be fitted [149] and buttoned up so that, when one is crawling and during blizzards, snow will not get into the sleeves, under the collar, or into pockets and boots.

The success of an ambush in winter greatly depends on advance study of the routes of movement of small enemy parties and a knowledge of the enemy's behavior patterns (at what time intervals and where he will appear and what he will be doing). With such knowledge, the subunit (party) leader can accurately determine the time to be spent in ambush and prepare for protection from the cold.

Reconnaissance in Force

Reconnaissance in force is one method of troop reconnaissance. It is carried out with the resources of the troops in the field and is conducted mainly by the method of offensive combat. It is usually employed in cases where other methods of reconnaissance cannot provide the command element with the necessary information about the enemy or when there is no possibility of getting such information by other methods.

Reconnaissance in force was widely used in the Great Patriotic War and as a rule had very positive results.

Nor has reconnaissance in force lost its importance at the present time. However, under the conditions of nuclear warfare certain problems associated with organizing and carrying out reconnaissance in force are being resolved in a new way. The increasing capabilities of modern reconnaissance means, especially the technological ones, make it possible in many cases to obtain adequate information about the enemy by other methods. Reconnaissance in force, as we know, entails losses of personnel, weapons, and combat equipment as well as considerable expenditures of materiel. Moreover, under certain circumstances it can reveal our intentions and enable the enemy to take steps directed toward disrupting our plans. Therefore, in cases where the necessary information about the enemy can be obtained by other means and methods, the use of reconnaissance in force is inadvisable.

Reconnaissance in force can be carried out during the preparation for an offensive and on the defensive. During preparations for the offensive, it enables us to determine the enemy's grouping or to discover possible changes therein, to learn the details of his system of engineer preparation of the ground and of his fire plan, and to determine the true shape of his FEBA as well as to avoid making nuclear strikes and carrying out fire preparations against abandoned or weakly defended positions. It is not always [150] possible to solve these problems by other methods of reconnaissance. Great Patriotic War experience in the testifies to this.

In December 1942, for example, before the beginning of our massive offensive actions on the Don River in the Novaya Kalitva, Krasno-Orekhovoye sector, we succeeded in discovering—solely by reconnaissance in force—that on the bank occupied by the enemy, not far from the river, there was a long, continuous fighting trench very skillfully camouflaged with brushwood, twigs, and earth. Before this, while our troops were not operating actively, signs of the existence of this trench had not been noted. At the beginning of the infantry attack (during the reconnaissance in force), the trench was found to be occupied by enemy machine gunners offering strong resistance with their fire. Other methods of troop reconnaissance and aerial photography were unable to detect the trench. When an offensive is being prepared, reconnaissance in force must be carried out periodically in various sectors and at various times of the day and night in order to deceive the enemy with respect to the intentions of our forces, keep him in a state of tension, and get fuller information about him.

During the Great Patriotic War, reconnaissance in force was widely employed on the defensive as well. It was carried out under various combat conditions. The most typical ones were as follows.

The first was when an enemy offensive was expected, but the enemy's grouping and the method and time of his going over to the offensive—as well as the axis of his main attack—were unknown or needed to be known with greater precision, but their determination by other means and methods of reconnaissance had not been successful. Under these conditions the reconnaissance was conducted in order to obtain information enabling us to determine the enemy's numerical designation, forces, composition and grouping, and his methods of going over to the offensive and the axis of his main attack; and to eliminate the possibility of his taking the offensive by surprise.

The second was before the start of our counterpreparations, when our intelligence on the makeup of the main enemy grouping and the strike objectives were insufficient. In this case, reconnaissance in force had the purpose of avoiding striking secondary enemy objectives with

our fire weapons. As a result of such reconnaissance, we were able to determine (or make more exact) the grouping of the enemy forces that was in direct contact with the defenders and was subject to fire damage. [151]

The third situation was during or after our counterpreparation. The purpose of this reconnaissance in force was to determine accurately the fighting efficiency of the enemy grouping and also to introduce confusion into his forces who were poised or deploying for the offensive.

Reconnaissance in force in all cases compelled the enemy to reveal his fire weapons and the grouping of his forces, while the subunits penetrating into his disposition increased their knowledge about his fire plan, his grouping, the nature of the positions occupied, and the numerical designation of forces. They also took prisoners and obtained documents from those killed.

Thus, in April 1944 the enemy's grouping and his intentions in advance of the defense front of the 1st Rifle Corps were unclear. From observations and monitoring, a coming and going of subunits and small enemy parties, a change in the method of fire, and the frequent appearance of ground reconnaissance parties at his forward edge were noted. Over a period of two weeks neither raids, ambushes, nor the actions of reconnaissance parties in the enemy rear had succeeded in discovering the essential nature of the measures being taken.

In the assessment of the enemy, various opinions were stated. Some believed that he was carrying out a regrouping and replacement of units of the 95th and 6th infantry divisions, while others thought that he was covertly preparing to carry out offensive actions in the given sector.

It was decided that reconnaissance in force would be carried out in three sectors. For this purpose one rifle company each was allocated from the 306th, 204th, and 179th rifle divisions. Three days were taken to prepare for the reconnaissance in force.

As a result of the actions carried out, we succeeded not only in ascertaining a regrouping of the fascist forces, but were also able to study the newly created enemy grouping and discover his fire plan and intentions. We also were able to capture seven prisoners and kill some 100 officers and men.

A motorized rifle or tank battalion (company) may be selected for the reconnaissance in force. The necessary support weapons are attached to it and its actions are supported by artillery fire, antitank guided missiles, and other fire weapons and sometimes by air strikes.

For capturing prisoners, documents, and samples of weapons and equipment—and also to conduct artillery and engineer reconnaissance—it is advisable to include in the battalion (company) parties of three to five men [152] each as well as scout-gunners and combat engineers.

The organization of actions for carrying out reconnaissance in force is conducted in conformity with the attack of a battalion (company) on the prepared defenses of an enemy from a position of direct contact. A battalion assigned to reconnaissance in force is given its immediate and subsequent objectives, while a company is given only the immediate objective and the axis of subsequent advance.

If a battalion (company) from the second echelon (reserve) is assigned to carry out reconnaissance in force, then it will occupy its departure position covertly, usually the night before the actions are to begin. In this case, it must be allowed sufficient daylight time to get acquainted with the terrain, the enemy's disposition, and the assault objectives.

The battalion (company) begins its attack usually after a brief fire preparation. Under cover of artillery and mortar fire and other fire weapons, the subunits attack the enemy swiftly, break into his disposition, penetrate in depth, and capture and reinforce the lines (objectives) indicated to them, discovering by engagement the grouping of enemy resources. The guns, tanks, and other fire weapons attached to the battalion (company) occupy positions and get ready to repel possible enemy counterattacks. By stubborn defense on the captured line, the battalion (company) repels the enemy counterattack; discovers his forces and composition; and captures prisoners, documents, and samples of weapons and combat equipment. If the enemy counterattack is carried out with superior forces and it does not appear possible to hold the captured line (objective), the battalion (company)—by order of the commander organizing the reconnaissance in force—may be withdrawn to its original departure point.

If the enemy withdraws, the battalion (company) commander continues the attack and reports his actions and his decision to the next-higher commander.

If the battalion (company), owing to stubborn resistance, has been unable to break into the enemy disposition, it will consolidate at the line reached, suppress the enemy with fire from attached and supporting weapons, and—by order of the commander organizing the reconnaissance in force—repeat the attack. If the second attack fails but the necessary information about the enemy has been obtained, the battalion (company) may be withdrawn to the departure point. [153]

In a reconnaissance in force, all commanders of units and subunits in whose sectors it is being carried out will be in their observation (command observation) posts and will personally study the enemy and his position and fire plan. Also called on for observation are the officers of the staffs and of the reconnaissance subunits, the subordinate, and the attached subunits, and various resources are employed.

Today the opportunities for studying the enemy in the course of reconnaissance in force have increased immeasurably. It is now possible to employ successfully radar, radio and electronic, radiation and chemical reconnaissance equipment as well as the more sophisticated instruments and other artillery, engineer, and aerial reconnaissance equipment.

Moreover, observation of enemy actions is conducted by the observation points of the units and subunits of all combat arms. For detailed study of the enemy, observation points are assigned narrower sectors (zones) and sometimes individual objects for observation. If certain sectors of the terrain in the area where the reconnaissance in force is carried out are not covered by the existing system of observation, additional observation points (observers) are set out. By order of the commander organizing the reconnaissance in force, helicopters may be used for observation of enemy actions.

The formation staff works out the procedure for employing reconnaissance resources and for their cooperation in carrying out reconnaissance in force. It determines the makeup of the reconnaissance resources called in, the time and place of their deployment, their missions and mode of operation, as well as the times and procedure for reporting the information they have acquired about the enemy.

Reconnaissance parties will be included in the subunit carrying out reconnaissance in force. Operating in the battle formations of the attackers, they determine the density of enemy manpower and fire weapons at the strongpoints; keep a watch on the locations of his nearest reserves; determine the strength of his defensive installations; and capture prisoners, documents, and samples of weapons, combat equipment, and ammunition. On the basis of experience in the Great Patriotic War, two or three reconnaissance parties of three to five men each are allocated per subunit.

Motorized rifle and tank subunits in the first echelon will pinpoint, during reconnaissance in force, the location of enemy strongpoints and fire weapons. Artillery reconnaissance resources will discover and determine in detail [154] the positions of artillery and mortar batteries, the enemy fire plan, and also the position of his personnel and combat

equipment. Some of the radars will be moved out to temporary positions near the area where the reconnaissance in force is carried out.

Aerial reconnaissance monitors the battlefield and determines in detail the disposition of enemy tactical reserves, offensive nuclear weapons, artillery, and tanks.

Engineer reconnaissance, by observation and by the actions of combat engineer reconnaissance parties, determines the nature of the engineer preparation of the ground.

After completing the assigned mission, the subunits carrying out the reconnaissance in force withdraw to a designated area on signal from the commander. Their disengagement from combat and their withdrawal is supported by the fire of resources defending in direct contact with the enemy and by artillery-mortar fire and air strikes.

The information obtained about the enemy as a result of the reconnaissance in force is studied, summarized, and reported to the higher headquarters.

The actions of a battalion from the 191st Rifle Division may serve as an example of skillful organization and execution of reconnaissance in force during the Great Patriotic War.

In advance of the front of the 191st Rifle Division, raids and ambushes over a considerable period of time had not succeeded in capturing a prisoner or verifying the enemy's composition and grouping and the nature of the movements he was carrying out.

On 2 June 1944 the division commander decided to carry out reconnaissance in force with troops of the 2nd rifle battalion, which was in the second echelon of the 552nd Rifle Regiment. The division commander ordered the chief of staff and the intelligence officer to organize reconnaissance of the enemy by observation, technical means, and the actions of small scouting parties within the battle formations of the subunits carrying out the reconnaissance in force. A network of officer observation posts and points was set up to observe the enemy's position and the terrain ahead of the front of the 2nd battalion and on the flanks as far as the line Dubka, hill 105.7, Slana. To carry out the observation of the enemy, officers were called in from the staff and from the left-flanking regiment.

The organization of the reconnaissance in force included the following measures: the decision to carry it out; assignment of the combat mission to the battalion commander and to the supporting fire weapons;

organization of cooperation of the battalion with the supporting artillery, mortars, antitank [155] weapons, and machine guns and with the fire weapons of the 552nd Rifle Regiment; drawing up of a plan for carrying out the reconnaissance in force; organization of control and communications; organization of reconnaissance by various resources during the execution of the reconnaissance in force; combat and political support; preparation of the battalion and the supporting fire weapons for combat; engineer support of the reconnaissance in force; organization of the movement of the battalion to the departure point; and verification of its preparedness to perform its mission.

The 2nd battalion was reinforced by a machine gun company, a company of 82mm mortars, two platoons of antitank guns, a field artillery platoon, a platoon of combat engineers, and a squad of antitank rocket launchers. In addition, for fire support of the battalion actions, four artillery divisions, a battery of 120mm mortars, and 12 guns for direct fire were allocated.

When one analyzes the number of reinforcing and support weapons allocated to support reconnaissance in force during the Great Patriotic War, it may be noted that they were several times greater than for a normal offensive by equivalent rifle and tank subunits. This is quite understandable, since the subunits participating in reconnaissance in force were operating in isolated, disconnected sectors with their flanks exposed.

The mission was assigned to the battalion commander on the ground by the commander of the 552nd Rifle Regiment. By a swift attack under cover of artillery and mortar fire, the battalion was to take possession of the Dolgaya, Niva line and hold it until further orders. It was to learn in detail the nature of the enemy's defense and his fire plan and to capture prisoners and documents.

After the mission had been assigned, the division commander organized cooperation and ordered division staff operations, the intelligence officer, the artillery officer, and the division engineer to draw up a plan for carrying out the reconnaissance in force.

This plan dealt with the following matters: goal and missions of the reconnaissance in force; resources required; preparatory measures for the reconnaissance in force (additional study of the enemy in the area of the impending engagement, construction of a supplementary network of observation posts and points, organization of reconnaissance by technical means); time for the battalion to occupy the departure point and for the artillery and mortars to occupy fire positions; cooperation procedure and signals; organization of communications; sequence in which

the subunits [156] called on for the reconnaissance in force were to perform their combat missions; procedure for turning over prisoners and documents; deception measures; and time for beginning the reconnaissance in force.

After analyzing the mission, the battalion commander estimated the time, issued the necessary orders, organized a study of the area of impending actions, conducted commander's reconnaissance, and made the decision.

In the commander's reconnaissance he briefed the leaders of the subordinate and supporting subunits on the terrain, designated reference points, and familiarized the officers with the combat mission.

The battalion commander then made his decision and issued the operation order.

The drilling of the battalion with the commanders of the attached and supporting weapons was carried out in the friendly rear area. Special attention was paid to surprise actions, swiftness of attack, and working out problems of cooperation between the battalion subunits and the supporting fire weapons.

The battalion included two reconnaissance parties from the reconnaissance company of the division, each consisting of three scouts and one combat engineer. These parties were to take prisoners and remove documents from the dead. One party was intended to operate in the battle formations of the 1st rifle company; and the other, in those of the 2nd rifle company.

The regimental commander undertook the immediate preparation of the battalion to carry out the reconnaissance in force, while the questions of organizing and conducting reconnaissance during the period of actions of the battalion were dealt with by the division intelligence officer. The final drills were conducted by the division commander personally.

By 0500 hours on 11 June 1944, the artillery and mortars had taken up their fire positions. On the night of 11–12 June the battalion covertly occupied the departure point for the offensive.

After a 10-minute artillery barrage at 1805 hours on 12 June the battalion subunit began its attack and 30 minutes later gained possession of the inhabited locality of Dolgaya and an unnamed hill to the north of it. At this line the further movement of the battalion was halted by enemy fire and subunits arriving from the Dubka and Slana sectors. At 2200

hours on 12 June, the battalion, its mission accomplished, withdrew to the departure position under cover of fire.

The reconnaissance in force revealed 10 artillery and 8 mortar batteries, a number of antitank defense guns and one six-barrelled mortar. Two artillery and three mortar batteries, the six-barrelled mortar, [157] and 12 light machine guns were destroyed; about 200 fascist officers and men were killed, and 12 were taken prisoner. The grouping and numerical designations of enemy subunits and units, his fire plan, and intentions were determined in detail.

The Patrol Squad (Patrol Crew)

The patrol squad (patrol crew) is sent out from subunits (combat reconnaissance patrols, independent reconnaissance patrols) conducting reconnaissance and from march security, advance guard subunits, and companies operating in isolation from their main body for the inspection of terrain and terrain features, for the timely location of the enemy and his obstacles and demolitions, and also for local security purposes. The patrol squad (patrol crew) carries out reconnaissance, depending on the nature of the terrain and the time of day, over distances of 400–1500 meters. It performs its missions in authorized combat vehicles and sometimes on foot as well.

The patrol squad (patrol crew) as a rule operates off the roads, moving from one convenient point for observation to another. The rate at which the reconnaissance is carried out must be such that it does not delay the movement of the subunit coming behind it. The patrol squad performs observation of terrain and inspection of terrain features from a combat vehicle on the move or making brief stops.

Special attention is paid to places in which concealed disposition of the enemy is possible and from which he could suddenly attack from ambush.

In particular, the patrol squad carries out the inspection of a hill by observation at a distance. If the enemy is not detected on the hill, the squad proceeds to inspect its back slopes. For this purpose, the patrol squad (crew) stops at a point where the top of the vehicle is at a level with the height of the slope. Observation should not be conducted from the top of a hill, because the silhouette of the combat vehicle will be sharply outlined against the background of the sky and the enemy can easily detect its presence. If the enemy is not detected on the back slopes of a hill, the patrol squad leader marks the next point for observation and moves to it, circling the hill at its foot or along one of its slopes.

A patrol squad (crew) begins reconnoitering a wood by studying the edge of it from a distance; if possible, from an elevated point at a range where the enemy's presence or absence can be determined from reconnaissance signs. [158] These are some possible signs: frequent flights and cries of birds, combat equipment tracks turning off the road into the wood, smoke from campfires, the noise of running vehicle engines, trees with broken branches and stripped bark, glare from metal parts of equipment.

If the enemy is not detected in the wood by observation, the patrol squad, approaching covertly, moves to the edge of the wood.

As a rule, one moves within a wood along roads, footpaths, and cuttings. An exceptionally careful watch here is kept on the entrances to ravines, hollows, and glades, and the exits from them as well as corduroy roads, bridges, and other places where ambushes are possible.

When emerging at the opposite edge of the wood, the patrol squad (crew) must turn to the side of the road, move out along the edge, stop, and inspect the terrain lying ahead. Caution is exercised and measures are taken to camouflage the vehicles. If the enemy is not detected, the patrol squad (vehicle) leader reports this to his subunit leader and continues to perform his mission.

A patrol squad also begins reconnoitering an inhabited locality with preliminary observation of it from a distance. Special attention is paid to the roofs of tall buildings, bell towers, gardens, vegetable patches, ravines, thickets, and isolated structures in which enemy observers, ambushes, or security may be situated.

These are possible signs of the presence of the enemy in an inhabited locality: noise of running vehicle engines; absence of inhabitants on streets or in vegetable patches and fields—especially during the time they would be working in the field; unusual silence; the intensified barking of dogs; and flocks of flying pigeons, crows, and jackdaws.

If the presence of the enemy is not detected in an inhabited locality, the patrol squad moves to the outskirts with all possible speed, where it quickly inspects the nearest structures and interrogates the local inhabitants.

If no enemy is found, the leader of the patrol squad reports this to his commander and with his permission moves to the opposite edge of the inhabited locality. The movement is made without stopping and in readiness at all times to repel a surprise attack by the enemy. Taking cover behind the outermost buildings, the patrol squad thoroughly in-

spects the terrain lying ahead. If no enemy is detected, the squad leader [159] gives the "road clear" signal and continues to perform the assigned mission.

If the enemy is sighted, the patrol squad leader immediately reports this to his commander and, operating covertly, continues to carry out observation. In the event of a sudden meeting with the enemy, the patrol squad opens fire on him.

At night and at other times when visibility is restricted, night vision devices are used for observation. In addition, the patrol squad (crew) may stop periodically to determine by monitoring whether the enemy is nearby.

The Combat Reconnaissance Patrol

Combat reconnaissance patrols (BRDs) are dispatched from first-echelon battalions and companies during combat in the absence of direct contact with the enemy and in cases where personal observation of the enemy's actions by the battalion (company) commander is difficult to achieve.

A combat reconnaissance patrol carries out reconnaissance ahead and on the flank of the battle formation of its own subunit at distances that ensure surveillance of its actions and support by fire. Depending on the situation, it may also operate at a considerable distance. The patrol performs its missions by observation, by ambushes, and, when unavoidable, by combat.

A motorized rifle (tank, paratroop) platoon is usually detailed as a combat reconnaissance patrol. Where necessary, it may include combat engineers and chemical warfare troops or specially trained squads (crews) with equipment for reconnoitering the enemy's mixed minefields and instruments for radiological and chemical reconnaissance. The leader of a combat reconnaissance patrol must be furnished with reliable radio communications equipment.

The main missions of a combat reconnaissance patrol are as follows: timely detection of advancing enemy reserves; discovery of fire weapons, especially antitank weapons, and of strongpoints and hidden approaches to them; identification of poorly defended sectors and gaps in the enemy's battle formations and also his obstacles and demolitions. The mission of a combat reconnaissance patrol is assigned personally by the battalion (company) commander in the field. He indicates information concerning the enemy; the composition of the combat recon-

naissance patrol; the reconnaissance sector; the mission; the commencement of the reconnaissance (the departure point and the time for passing it); the procedure for maintaining communications and reporting the results [160] of reconnaissance; and, where necessary, the method of operation and the control, warning, and cooperation signals.

As an example, we may cite a mission assigned by the 3rd motorized rifle battalion commander to the 1st motorized rifle platoon of the 7th Motorized Rifle Company, which was assigned as a combat reconnaissance patrol.

"Enemy, showing strong resistance, withdrawing northward and at same time moving reserves up from rear in order to delay attack of our units on Luga River line.

"1st motorized rifle platoon—combat reconnaissance patrol—move into hill 147.6, Kubayskiy Farmstead, Surovo sector with orders to carry out reconnaissance of approaching reserves, to pay special attention to approaches of Luga River and to its opposite bank. There, by 1430 hours in sector hill 142.4, isolated mound, determine nature of 'enemy' defense, his fire plan and obstacles, and existence of any unoccupied or poorly defended sectors of terrain and find places suitable for a hasty water obstacle crossing.

"Departure point is northern outskirts of Orlovka; pass there at 1150 hours.

"Communication: by radio. Give report after 20 minutes; report any meeting with enemy immediately."

When he has analyzed the mission and assessed the situation, the leader of the combat reconnaissance patrol leads the subunit to the departure point and issues an order in which he indicates information about the enemy, the composition, mission, and axis of actions; the mission and direction of movement of the patrol squad; the movement procedure and missions of the other subunits; the control and warning signals; the methods of communication; his own position and his deputy.

After verification of the extent to which the subordinates have correctly understood their missions, the combat reconnaissance patrol, at the appointed time and in the battle formation established by the order, passes the departure point.

Skillfully adapting to the terrain, not engaging the "enemy" subunits, and taking advantage of breaks and gaps in his battle formations, the combat reconnaissance patrol quickly and covertly moves out into

the indicated sector or area. A patrol squad is dispatched ahead within range of visual communication, and continuous surveillance is established over it. The main forces of the combat reconnaissance patrol must be ready to support it with fire at any moment.

The combat reconnaissance patrol leader and all personnel conduct all-around observation of the terrain, [161] terrain features, and the enemy, both on the move and with brief halts. As halting places, shelters are chosen that ensure the widest possible view. For each crew, an observation sector is established for which it bears responsibility.

In cases where it is impossible to conduct observation of the enemy from a tank or from an infantry fighting vehicle, the combat reconnaissance patrol leader organizes observation dismounted. In this case, his tank (infantry fighting vehicle) takes cover, and the crew remaining inside it conducts observation of the terrain and of the leader's signals, ready to support him with fire.

Movement to a new place of observation is carried out in accordance with the situation and the rate of advance of the battalion (company) attack. All information obtained by the combat reconnaissance patrol is immediately transmitted to its subunit leader.

To obtain the necessary information, the combat reconnaissance patrol will, in certain cases, invite enemy fire on itself. Thus, in one tactical exercise, combat reconnaissance patrol leader Lt. Ivanov, having determined by observation the boundaries of a strongpoint and the presence of a mixed minefield in advance of the FEBA, decided to establish the disposition of the fire weapons. For this purpose he ordered flanking squads to open fire on the strongpoint; the "enemy" replied in kind. It was revealed that the strongpoint held a tank in an emplacement, two machine guns, and a party of soldiers.

On discovering offensive nuclear weapons, a combat reconnaissance patrol must, if circumstances permit, destroy them and only thereafter continue to perform the mission.

In the course of performing its mission, a combat reconnaissance patrol, depending on the circumstances, should set up ambushes to capture prisoners and documents. The combat reconnaissance patrol leader makes his decision to set up an ambush on the basis of the intelligence obtained by personal observation.

The patrol engages in combat only in the event of a sudden meeting with the enemy and when it is impossible to perform the assigned mission by other methods. However, there must be no set pattern to the actions

of a combat reconnaissance patrol. In all cases the combat reconnaissance patrol leader must show intelligent initiative and resourcefulness.

Here is an example of such actions.

In May 1944 the enemy, routed at the Chernyshovka-Zuyevo line, was withdrawing hastily in a westerly direction. Lt. Burov's platoon was at this time operating [162] as a combat reconnaissance patrol. At 0500 hours on 11 May 1944, reaching the inhabited locality of Vyazovo, the platoon leader organized observation of the road between Kresta and Surki. At 0600 hours two enemy infantry companies, eight tanks, and ten armored personnel carriers were moving along this road toward Surki. Situated not far from the road and using his binoculars, Lt. Burov observed patches resembling leaves on the soldiers' arms. He had never before seen this type of emblem on the enemy. The patrol leader decided to set up an ambush so as to take a prisoner and learn what this emblem meant.

Observing camouflaging measures, the combat reconnaissance patrol made its way in dashes from one hiding place to another, moving parallel to the enemy column. On reaching Vyazovo, the enemy column halted. Lt. Burov's platoon hid in some bushes not far from the village. Soon the members of the patrol reported two Hitlerites coming their way. As a precaution one of the Hitlerites fired a burst from his automatic weapon into the bushes. However, the scouts in no way revealed themselves. Choosing a suitable moment, one of the squads, on a signal from the lieutenant, silently took an enemy lance corporal and a soldier prisoner.

The patrol leader assigned three soldiers to escort the prisoners back to headquarters. With the remaining scouts he himself continued to carry out observation of the enemy and surveillance of the road.

From the statements of the captured lance corporal, it was established that he belonged to the "Oak Leaf" assault battalion formed from S.S. commando units to fight partisans. The battalion had just suffered considerable losses and was now withdrawing to one of the rear defensive lines.

Let us cite another example of the actions of a combat reconnaissance patrol reconnoitering a river during a tactical exercise.

The 3rd motorized rifle battalion, in the second echelon, was ordered to advance in the direction of Orlovka, Surovo, to make a hasty crossing of the Luga River and take possession of the Surovo, hill 153.6 line. To reconnoiter the river, the battalion commander dispatched a combat

reconnaissance patrol consisting of the 1st motorized rifle platoon of the 7th Motorized Rifle Company under the command of Lt. Gryazev.

Reaching the approaches to the Luga River, the patrol observed the enemy strongpoint on hill 153.6. After reconnoitering it and reporting the result to the battalion commander, Lt. Gryazev decided [163] to bypass the strongpoint and find a passage to the river. An attempt to outflank the strongpoint on the left failed. The patrol vehicle dispatched, coming under heavy fire, had to turn back. The combat reconnaissance patrol leader then dispatched a second patrol vehicle with orders to find a way around this strongpoint to the right. The squad leader soon reported that there was no "enemy" east of hill 153.6. The platoon leader, driving over to the patrol vehicle, personally checked the reliability of his observation and gave the command to proceed to the river.

The crews began reconnaissance of the river by first inspecting its banks from a distance, paying special attention to places where there might be "enemy" troops, fire weapons, and obstacles.

Lt. Gryazev, following in the third armored personnel carrier, carefully observed the actions of the patrol vehicles and the terrain ahead. Personnel were ready to give fire support to the scouts ahead.

Some 80–100 meters from the water's edge the armored personnel carriers halted in places of concealment. Except for the drivers and gunners, their crews, hiding in the thicket along the banks, approached the river, carefully observed the banks, and found places suitable for driving the vehicles into the water. Directed by a combat engineer instructor, they checked for mines and other obstacles. They then studied the opposite bank, trying to find areas where armored personnel carriers could emerge from the water onto the land. During this time, machine gunners from the armored personnel carriers kept a close watch on the approaches to the river from the enemy side, ready at any moment to support the actions of the dismounted squads with fire.

The combat reconnaissance patrol leader was 150–200 meters from the water's edge.

After inspecting the bank of the river, the scouts set about determining the river's width. This is usually done on a map by the method of intersection or equal triangles, or if time and maps are unavailable, then by visual estimation.

Lt. Gryazev determined the width of the river on a map.

For training purposes, he told the 1st squad leader to do this by the

intersection method; the 2nd squad leader, by the matching triangles method; and the 3rd squad leader, visually with binoculars. The results obtained were almost identical. They then determined the speed of the current and the depth of the water obstacle. To determine the speed of the current they threw a piece of wood into the water and measured the time in seconds that it took to travel 10 meters. They measured the depth **[164]** with a pole bearing several graduations.

While the patrol vehicle was crossing, the others remained on the departure bank ready to support it with fire.

On the opposite bank, the scouts in the patrol vehicle, except for the driver and a machine gunner, dismounted and reconnoitered the terrain nearby. From a convenient point the squad leader inspected the approaches to the water obstacle from the "enemy" direction. Detecting no signs of enemy troops or fire weapons, the sergeant reported this to the reconnaissance patrol leader. The armored personnel carriers now crossed over one by one, already under the protection of the patrol vehicle.

The combat reconnaissance patrol leader updated the mission for his subordinates and, after dispatching another patrol vehicle, continued reconnoitering on the axis Surovo, southwest edge of "Corner" Wood. He was trying not only to determine the position of the "enemy" strongpoints, but also to detect in time the approach of enemy reserves and to determine their composition and the nature of their actions.

After the battalion had crossed the river and taken possession of its indicated line, the leader of the combat reconnaissance patrol was ordered to rejoin his company.

These examples clearly show that a combat reconnaissance patrol can operate successfully in various forms of combat and various circumstances and that it can carry out reconnaissance not only by observation, but also by ambushes and, if necessary, even by combat.

The Independent Reconnaissance Patrol

The independent reconnaissance patrol (ORD) is dispatched to conduct reconnaissance of the enemy and terrain on the march, in anticipation of a meeting engagement and during it; in the course of an offensive or in pursuit; or on the defensive, to reconnoiter the enemy coming up from the rear (in the absence of direct contact) or advancing on an open flank. It is also employed during an airborne or seaborne assault landing by the enemy as well as in a number of other cases during the conduct of maneuver actions.

As a rule, a motorized rifle (reconnaissance, tank, paratroop) platoon, reinforced with combat engineers and chemical warfare scouts, is assigned to independent reconnaissance patrol duty. The leader of the independent reconnaissance patrol is furnished with reliable communications and secret control documents (encoded map, call signs, signals tables). **[165]**

In the Great Patriotic War, during actions in armored personnel carriers and on motorcycles, a platoon assigned to an independent reconnaissance patrol was often reinforced by two or three tanks, or a tank platoon would be reinforced by motorcyclists and a rifle subunit made up of one or two squads. Where necessary, an independent reconnaissance patrol included combat engineers, chemical warfare troops, and artillerymen.

The distance an independent reconnaissance patrol moves from the security subunits of friendly forces depends on the mission received, the kind of combat actions, the composition of the patrol, the nature of the terrain, and the possibility of maintaining steady communication with it.

In the last war, independent reconnaissance patrols dispatched from a formation or unit in armored personnel carriers (tanks) carried out reconnaissance at a distance of about 20 kilometers and more or, if operating on foot, about 8 kilometers.

To conduct reconnaissance, the independent reconnaissance patrol is given an axis or a specific objective to reconnoiter. It can inspect individual sectors of the terrain in a zone 2–3 kilometers in width by visual observation and by sending out patrol squads (tanks).

The independent reconnaissance patrol performs the following missions: it discovers the enemy in the given area and determines his composition and the nature of his actions; it searches out offensive nuclear weapons, obtains the coordinates of their locations, and, if conditions are favorable, destroys them; it discovers the locations of the enemy's fire weapons, defensive installations, obstacles and demolitions; it determines any terrain sectors that are contaminated by radioactive and poisonous substances, and looks for possible routes by which they may be crossed or bypassed; it determines the passability of the terrain.

The main missions of the independent reconnaissance patrol are to find the enemy's offensive nuclear weapons; determine the main grouping of his troops, especially the tanks; determine the nature of the enemy's actions; and also to take prisoners, documents, samples of enemy weapons, combat equipment, and obstacles.

As a rule, the above missions are performed by an independent reconnaissance patrol in sequence as it moves along the indicated axis, by observation, monitoring, setting up ambushes, inspecting terrain and terrain features, and, in certain cases, by combat. It may engage in combat only when its mission cannot be accomplished by other means, during a sudden encounter with the enemy, and also on discovering missile **[166]** launchers and other offensive nuclear weapons that are to be destroyed immediately.

Experience gained in combat and on exercises shows that successful actions by an independent reconnaissance patrol, like those of other reconnaissance elements, depend largely on the preparedness of the leader and personnel for the performance of the assigned mission and also on the covertness of their actions.

The utilization of favorable terrain conditions for a covert approach to the enemy is one of the necessary preconditions for successful independent reconnaissance patrol actions. Constant observation of the terrain and its correct assessment is very important.

In all cases, an independent reconnaissance patrol must act quickly and decisively, without undue delay for observation of terrain and inspection of terrain features.

The mission is assigned to the independent reconnaissance patrol by the chief of staff or the intelligence officer.

When the mission is assigned, the patrol is shown: information on the enemy on the axis of impending actions or in the area of the reconnaissance objective; the composition of the independent reconnaissance patrol; the reconnaissance sector or objectives; what information to obtain and by what time; the departure point and the time for passing it; the time of completion of reconnaissance and the sequence of actions after the mission has been performed; the method of maintaining communication and of reporting the intelligence information obtained; and ways of identifying friendly troops. In addition, where necessary, it is given information on adjacent subunits and ones operating ahead, conducting reconnaissance; the order of crossing the front line by our troops; the password, reply to challenge, and warning, control, and cooperation signals.

As an example we may cite a mission assigned to independent reconnaissance patrol leader Lt. Firsov.*

*Voyennyy vestnik, 1977, No. 1.

At 0615 hours on 21 May, the chief of staff summoned Lt. Firsov and gave him the following mission (figure 13).

"Enemy has suffered defeat in Dacha, Glukhovo, Fed'kino area and is conducting holding actions while withdrawing to previously prepared line: southern slopes of hill 135.6, 'Round' Hill. At same time, is moving up reserves from rear. At 0520 in area of hill 149.9, aerial reconnaissance observed concentration of special vehicles, and spotted engineer works in Rusevo, Pustovo sector. [167]

"2nd motorized rifle platoon with chemical reconnaissance squad and two combat engineers is independent reconnaissance patrol No. 2.

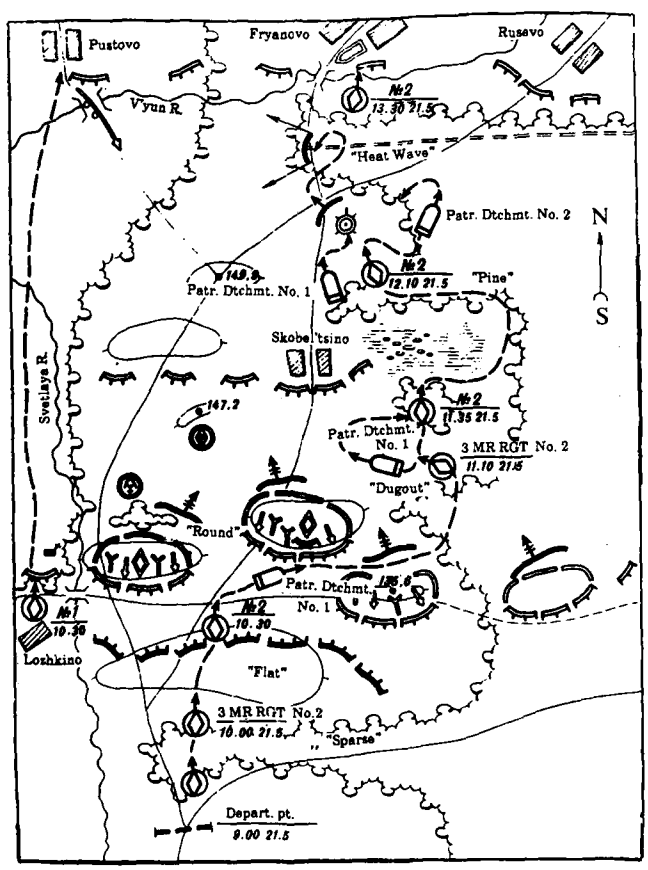

Figure 13. Independent Reconnaissance Patrol Actions.

Carry out reconnaissance on 'Flat' Hill, Skobel'tsino, Fryanovo axis, performing following missions:

"By 1100 hours on 21 May, determine boundaries of strongpoints in hill 135.6, 'Dugout' Hill area;

"By 1200 hours determine precisely fire positions of artillery **[168]** southwest of Skobel'tsino; by 1240 hours determine subordination of special vehicles in hill 149.9 area;

"By 1500 hours determine presence of enemy on Rusevo, Fryanovo line, then keep watch on approach of reserves from rear; pay special attention to Skobel'tsino, Fryanovo axis.

"There are no adjacent units on right; to left on Lozhkino, Pustovo axis, independent reconnaissance patrol of 5th Motorized Rifle Regiment is conducting reconnaissance.

"Departure point—fork in road. Pass at 0900.

"Complete reconnaissance by 1830 hrs on 21 May and join up with attacking subunits at north edge of 'Heat Wave' wood.

"Communication by radio. Report passage of departure point and meeting with enemy.

"Identification signal with adjacent units—two green flame flares; for aviation—three red smoke flares.

"Password—'Grenade launcher'; reply to challenge—'Terrible.'"

After receiving his mission, the independent reconnaissance patrol leader must clearly ascertain what intelligence information has to be obtained by what time and where and what must be given special attention during the reconnaissance. He must also determine what measures have to be carried out to prepare the subunit for the reconnaissance and when. He will then acquaint personnel with the mission and issue the necessary orders.

In assessing the situation, the independent reconnaissance patrol leader determines, on the basis of available information: where the enemy is and in what sector or what area a meeting with him is most probable; when and in what areas it is necessary to conduct reconnaissance of defensive installations and artificial and natural obstacles; the passability of the terrain; the conditions of observation, camouflage, and orientation; the most favorable traffic route; and the methods of over-

coming natural obstacles or ways of bypassing them. He also selects suitable approaches to the reconnaissance objectives and makes a time estimate.

If the reconnaissance patrol is to operate at night, a more careful study is required of terrain features that can be distinguished when visibility is limited, and azimuths for movement must be prepared, depending on the reconnaissance assigned.

The leader of the independent reconnaissance patrol, after analyzing the mission and assessing the situation, makes his decision. After having it confirmed by his superior, he issues the necessary orders to a subordinate to carry out the mission. If time is available, he monitors the preparation of the subunit for the actions and checks the state of the combat equipment, **[169]** weapons, equipment, and clothing; he takes steps to furnish personnel with camouflage equipment and reviews the basic methods of reconnaissance action with the men.

During this time the independent reconnaissance patrol personnel inspect and check the good working order of their combat vehicles, reconnaissance equipment, and weapons; eliminate any defects; and make adjustments to clothing and personal equipment.

At the appointed time, with the permission or by the order of his superior, the leader of the independent reconnaissance patrol leads the subunit out to the departure point where he organizes observation, orients his subordinates on the terrain, and issues the operation order.

In his óperation order the independent reconnaissance patrol leader indicates: information about the enemy; the composition, mission, and axis of actions of the independent reconnaissance patrol; information about the actions of adjacent subunits; the composition, mission, and direction of movement of the patrol squad; the sequence of movement and the missions of the other subunits; the control and warning signals; the methods of communication; and the deputy leader. If necessary, he also gives the password and reply to challenge, methods of mutual recognition, and the routine and operating procedure for night vision devices.

As an example we may cite the operation order issued by the leader of an independent reconnaissance patrol, Lt. Firsov, in a tactical exercise.

After receiving information about the enemy and the independent reconnaissance patrol mission (figure 13), Lt. Firsov ordered as follows:

"2nd squad—patrol squad No. 1—move along independent reconnaissance patrol route within range of visual communication with mission of preventing surprise attack on main forces of patrol and carrying out reconnaissance of enemy and terrain. Report everything noted by signals and by radio. Your call sign is 23.

"3rd squad—patrol squad No. 2—travel behind armored personnel carrier of chemical warfare scouts ready to conduct reconnaissance at my direction. Cover independent reconnaissance patrol from rear. Carry out observation to right and in rear. Your call sign 24.

"1st squad travel at head of platoon, ready to support by fire patrol squad actions. Conduct observation in front and to left.

"Chemical reconnaissance squad move behind infantry fighting vehicle No. 122; it will carry out radiological and chemical reconnaissance. Your call sign 25.

"Organize all-around observation in squads. Control and warning signals—regulation. Keep radios on receive. **[170]**

"I will be in infantry fighting vehicle of 1st squad; my deputy is Senior Sgt. Fomin."

After issuing the order, the leader of the independent reconnaissance patrol makes sure that his subordinates have correctly understood their assigned missions and gives the signal to start moving.

The leader of the independent reconnaissance patrol personally conducts reconnaissance of the enemy and terrain. He sends out patrol squads (tanks) for local security and observation of the terrain and terrain features, with a view to the timely discovery of the enemy and his obstacles and demolitions in the direction of movement and on the flanks of the route.

Behind the advance patrol squad (tank) comes the main complement of the independent reconnaissance patrol, maintaining continuous visual contact with it. Lateral patrol squads (tanks) are dispatched only when they are needed to inspect terrain features flanking the main route. After performing the missions assigned, they rejoin the main forces of the independent reconnaissance patrol.

The leader of the independent reconnaissance patrol follows, as a rule, at the head of the main forces. If necessary, he moves out to one of the patrol squads (tank) and updates the situation on the spot. The

crews of the other vehicles keep watch on the actions of the leader. ready at any moment to provide him with fire cover.

In areas where there is little probability of meeting the enemy, the independent reconnaissance patrol travels at top speed, halting from time to time to inspect terrain features on the main axis or nearby on the flank.

In an area where a meeting with the enemy is possible, the independent reconnaissance patrol travels covertly, overland, in quick dashes from one hiding place to the next. For covert movement, ravines, hollows, gullies, thickets, and other natural concealments are utilized. Open sectors of terrain are traversed at high speed without stopping.

Lone enemy soldiers, individual vehicles, and small subunits are taken prisoner or, if this is unsuccessful, are killed from ambush. In this case it is necessary to act as noiselessly as possible. Disabled vehicles and also dead officers and men are searched; objects and documents taken from them are sent back along with a report to the senior-level officer.

When encountering a superior enemy, the leader of the independent reconnaissance patrol establishes by observation his composition and the nature [171] of his actions, reports this to his superior, and then continues to perform the assigned mission. Engaging in combat in this case is not recommended.

If it is impossible to bypass the enemy covertly, the independent reconnaissance patrol opens fire, attacks boldly and suddenly and, exploiting the confusion, takes prisoners and then disengages. After breaking away from the enemy, the independent reconnaissance patrol again moves out to its own reconnaissance sector and continues to perform the previously assigned mission.

Let us now consider an example of an independent reconnaissance patrol's actions (figure 14).

An independent reconnaissance patrol consisting of a platoon in infantry fighting vehicles reinforced by a radiological and chemical reconnaissance squad and combat engineer scouts, led by Lt. Volkov, with a patrol squad in front, was operating in the Firsanovo, Znobino, Merenkovo sector. At 0600 hours on 15 July, when approaching Firsanovo, patrol squad No. 1 came under enemy fire and withdrew into a thicket east of the village that the main forces of the independent reconnaissance platoon were approaching. Halting his vehicles not far from the thicket, Lt. Volkov moved covertly to the patrol squad and

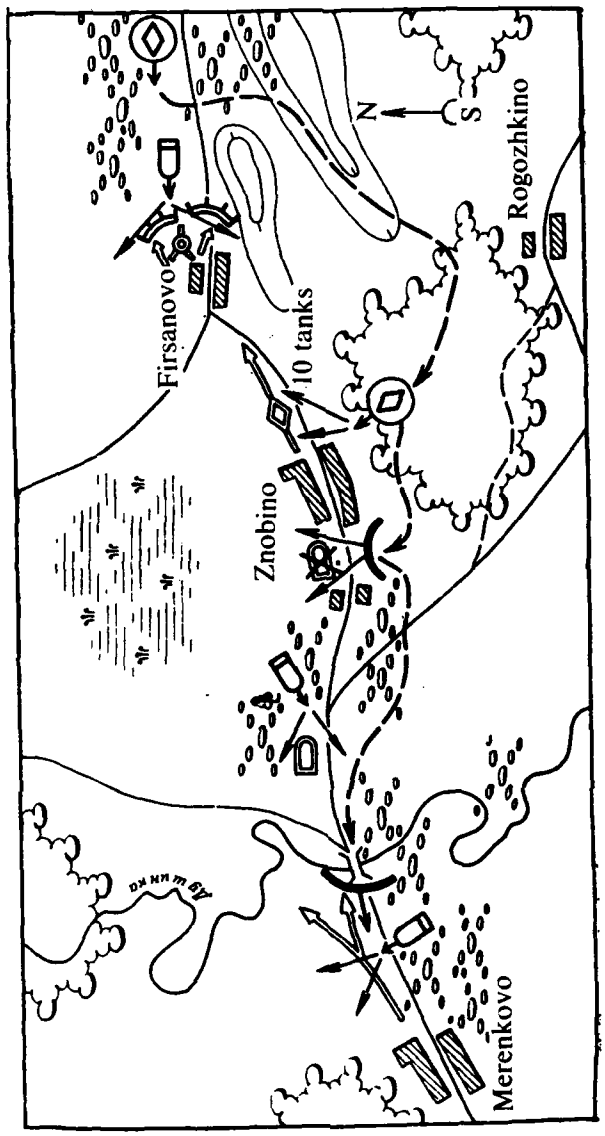

Figure 14. Independent Reconnaissance Patrol Actions in the Znobino Area. [172]

established by observation that the village of Firsanovo was occupied by the enemy and that a strongpoint was being prepared at the eastern outskirts.

To determine exactly the southern boundary of the strongpoint and to find a way around it, the leader of the independent reconnaissance patrol dispatched patrol squad No. 2 in the direction of a thicket north of the edge of a small wood south of Znobino. Meanwhile the leader himself, together with the leader of patrol squad No. 1, continued the observation. Reporting the results of the reconnaissance to his superior and receiving a "road clear" signal from patrol squad No. 2, Lt. Volkov decided to bypass Firsanovo to the south covertly, through a hollow.

On reaching the northern edge of the small wood, the scouts noted about 10 enemy tanks traveling east along the road from Merenkovo toward Firsanovo. Lt. Volkov hid the subunit in the edge of the grove south of Znobino, set up observation, and reported the information obtained to his leader. When the enemy tanks disappeared from view the independent reconnaissance patrol, continuing to carry out its reconnaissance, moved out toward the western edge of Znobino. At this time the leader of patrol squad No. 1 reported the movement of an armored personnel carrier with infantry from the direction of Merenkovo. The leader of the independent reconnaissance patrol decided to set up an ambush and [173] capture a prisoner. The armored personnel carrier was knocked out and the scouts took three soldiers prisoner and killed the rest.

Reaching the Dushinka River, the independent reconnaissance patrol discovered that at the eastern edge of Merenkovo about a platoon of enemy motorized infantry was dismounting with two antitank missile launchers. By order of the leader, the enemy was attacked and destroyed.

This example confirms that there must be no set pattern in the actions of an independent reconnaissance patrol. In the performance of the mission, its leader must display creative thinking and intelligent initiative, as Lt. Volkov did. Thus, on encountering an enemy of superior strength who had previously taken up a defensive position at the eastern outskirts of Firsanovo, he did not enter into combat but bypassed it to the south through a hollow. He acted in the same way on encountering about 10 enemy tanks. Engaging in combat with them would be dangerous, since the enemy had superior forces. Under these conditions an independent reconnaissance patrol may suffer great losses and fail to perform the mission assigned to it. On encountering a lone armored personnel carrier with infantry, the patrol leader set up an ambush.

Superiority of force, favorable conditions for camouflage, and the fact that the enemy had not observed our scouts guaranteed surprise in the action and its success.

Finally, in Merenkovo the independent reconnaissance patrol was forced to attack the enemy and engage him. This came about as follows. The enemy was few in numbers, was not expecting a meeting, and had not succeeded in preparing for combat. Because of the river, Merenkovo could not be bypassed. Crossing it elsewhere could have resulted in failure to accomplish the mission assigned.

In performing its mission, an independent reconnaissance patrol should set up an ambush to capture prisoners and documents and should carry out an inspection of the terrain and terrain features. The decision to set up an ambush, as is evident from the example considered, is made independently by the leader of the independent reconnaissance patrol in line with the situation at hand. Ambushes are most favorably set up in places where combat vehicles can be concealed and well camouflaged.

Inspection of the terrain and terrain features is usually carried out from a combat vehicle on the move or with brief halts. The places of observation must ensure a good view of the terrain ahead and concealment and camouflaging of the vehicles. For more detailed inspection of certain terrain features, the leader may dispatch foot patrols, which are kept under continuous observation. **[174]** During this time the combat vehicles are kept under cover and are camouflaged, but personnel are ready to give fire support to patrols.

If the foot patrols have not detected any enemy, the senior patrol member gives the signal "road clear" and the independent reconnaissance patrol moves on.

On discerning obstructions or obstacles, the leader of the independent reconnaissance patrol determines by observation whether they are defended by the enemy, and then dispatches a patrol squad (tank) for a detailed examination.

If the obstruction (obstacle) is defended by the enemy, the independent reconnaissance patrol bypasses it without engaging in combat. If the obstacle (obstruction) is not defended and if there is no way around it or, if searching for one would take too much time, the independent reconnaissance patrol leader prepares to negotiate it. He halts the combat vehicles in hiding and organizes observation. Several scouts dismount and together with the combat engineers clear a passage in the obstacle and mark it with signs. In no case must an attempt be made to negotiate an obstruction (obstacle) without having reconnoitered it, since it may be mined.

If mixed minefields are encountered on the way, the independent reconnaissance patrol must reconnoiter and mark them and must also seek out and indicate ways of bypassing these obstacles. Special attention should be paid to signs revealing the presence of nuclear mines. When the location of a nuclear mine is discovered, the independent reconnaissance patrol leader will make a raid on its guard and dismantle or destroy the nuclear mine.

Reconnoitering of sectors contaminated by radioactive or toxic substances is carried out by the radiological and chemical reconnaissance squad attached to the independent reconnaissance patrol. When contaminated terrain is detected, personnel put on personal protective equipment. On orders from the leader of the independent reconnaissance patrol, the radiological and chemical reconnaissance squad measures the level of radiation (determines the kind of toxic agent), marks the front and rear limits with boundary markers, and determines the least dangerous sector for negotiating the contaminated sector. Contaminated sectors of terrain are traversed at high speeds. Afterwards the leader of the independent reconnaissance patrol reports the results of the reconnaissance to his superior and orders his subordinates to remove dust from weapons, vehicles, and clothing. If [175] necessary, preliminary personal cleansing of personnel and special decontamination of combat vehicles are carried out.

If an independent reconnaissance patrol is given the mission of determining the boundaries of a contaminated sector, it dispatches patrol squads to the right and left of the main axis of movement to mark these boundaries with warning signs.

When reconnoitering a nuclear blast area, an independent reconnaissance patrol first of all determines if the enemy is there. If the enemy is not detected, it carries out an inspection of the area of the nuclear explosion, searches out barriers and fires, and measures levels of radiation. A patrol squad is dispatched on the axis of possible enemy approach. If radiation levels permit, the scouts note down conventional signs on vehicles and damaged enemy equipment and remove documents from the dead to determine the subordination of the subunits in the nuclear blast area.

On approaching a wood, the leader of an independent reconnaissance patrol occupies a position providing a good view and carries out observation personally. If he detects no signs of the enemy in the wood, he dispatches a patrol squad ahead. Utilizing concealed approaches, they advance to the edge of the wood. The remaining personnel of the independent reconnaissance patrol move nearer to the wood and halt behind cover in the immediate vicinity (300–400 meters away), ready to support the patrol squad with fire.

If during the approach to the wood indirect signs of enemy presence are detected, the patrol squad may, with the permission of the independent reconnaissance patrol leader, open fire on suspicious places in order to elicit an enemy response. If the enemy is not detected, the independent reconnaissance patrol advances to the edge of the wood, inspects it more carefully, and then moves along a road or cutting into the heart of the wood behind the patrol squad.

When they move through the wood, the distance between the patrol squad and the main forces of the independent reconnaissance patrol is reduced so as to maintain visual contact. They move as quickly as possible, along the shady side of the road. The column carries out all-around observation and fire weapons are kept at the ready to open immediate fire. Roads, cuttings, and paths branching off from the direction of movement are inspected to the maximum possible distance. Where necessary, patrol squads may be dispatched along them to the limit of visual contact and will return to the main forces of the [176] independent reconnaissance patrol after completing their mission. Natural clearings and edges of a wood where enemy offensive nuclear weapons may be placed are subjected to particularly careful scrutiny.

On reaching the opposite side of the wood, the patrol squad, without emerging from the wood, observes the terrain ahead. If the enemy is not detected, they report to the leader of the independent reconnaissance patrol and continue to advance, while the main forces of the independent reconnaissance patrol also emerge from the wood behind them.

The reconnoitering of an inhabited locality should be carried out in the same sequence as the inspection of a wood. During the observation special attention must be paid to gardens, vegetable patches, ravines, the roofs of high buildings, isolated structures, and undergrowth, where enemy ambushes and security may be situated. A patrol squad performs these missions. After inspecting the outlying houses and structures, if the enemy is not detected, the patrol squad leader gives the signal "Road clear" and, with the permission of the independent reconnaissance patrol leader, moves at high speed to the opposite end of the inhabited locality. It is recommended that they move without stopping, ready to quickly repel an enemy attack. The patrol squad leader inspects the terrain ahead from cover. If no enemy is detected, he reports this to the leader of the independent reconnaissance patrol.

While the patrol squad is in action, the main forces of the independent reconnaissance patrol stay under cover outside the inhabited locality ready to support it with fire. After receiving the signal that the enemy is not in the inhabited locality, the whole independent reconnaissance patrol advances into it.

If the patrol squad detects the presence of enemy in the inhabited locality, it moves to the outskirts by the shortest route and signals the leader of the independent reconnaissance patrol. In this case the independent reconnaissance patrol leader takes action, depending on the circumstances and the mission received. However, engaging in combat with the enemy in an inhabited locality is not advisable. Under such circumstances it is better to bypass the locality and report this to the senior-level officer.

When operating in a large inhabited urban locality (a town), an independent reconnaissance patrol may be assigned to reconnoiter a single street. In this case combat vehicles follow each other at distances of 40–50 meters, and the crews remain constantly on the alert to support the vehicle ahead with fire against attack from the enemy. During observation, special attention is paid to upper-story [177] windows, balconies, and attics of buildings where enemy fire weapons and personnel may be located.

An independent reconnaissance patrol begins reconnaissance of a river by inspecting the approaches to it. The scouts determine the passability of the valley and the flood plain for troops and the presence of fortified bridgeheads, and they determine whether they are defended by the enemy.

If there is a fortified bridgehead occupied by the enemy on the approaches to the river, the independent reconnaissance patrol leader, after reporting this to his superior, sets up observation of it and, by capturing a prisoner, determines in detail the enemy strength, the nature of the defenses, and the places favorable for crossing.

If there is no enemy on the approaches to the river, the independent reconnaissance patrol leader tries to reconnoiter it over a broader front. For this purpose he dispatches a second patrol squad in addition to the advance patrol squad, while he himself, with the rest of the forces, observes the opposite bank of the river and the actions of the patrol squads.

The patrol squads examine the opposite bank of the river from as close a distance as possible and search for undestroyed bridges (crossings).

After locating a bridge (crossing) and failing to detect the enemy on the opposite bank, the patrol squads advance to the bridge and inspect it carefully. If the bridge is mined, the combat engineers disarm the mines and determine the load-carrying capacity, length, and width of the bridge.

After inspecting the bridge (crossing), the patrol squad crosses to the opposite bank and, occupying a convenient point for observation, secures the crossing of the bridge for the main forces of the independent reconnaissance patrol.

If there is no crossing, the patrol squads determine the nature of the water obstacle and set up fords or places suitable for underwater tank crossings and for setting up ferry crossings and bridges; they also determine the presence of obstacles on the banks and in the water obstacle itself. Then, at the command of the independent reconnaissance patrol leader, they cross to the opposite bank and continue to perform their mission. The independent reconnaissance patrol leader and the rest of the forces cross behind the patrol squads.

If the river is defended by the enemy, the leader of the independent reconnaissance patrol determines the enemy's composition, the nature of his actions, and the presence of engineer fieldworks and mixed minefields and he searches for sectors unoccupied by the enemy. Then, utilizing concealed approaches, the independent reconnaissance patrol advances to the river, reconnoiters it, crosses to [178] the opposite bank, penetrates the depth of the enemy position, and continues to perform the assigned mission.

In cases where the independent reconnaissance patrol is unable to cross the river, the leader reports this to his superior and acts according to his instructions.

Today the independent reconnaissance patrol can be widely and successfully employed in all types of combat.

On the offensive an independent reconnaissance patrol may be dispatched at the same time that the motorized infantry and tanks go over to the attack or during combat actions in the depth of the enemy defense.

Before the beginning of the attack, the independent reconnaissance patrol occupies a departure point behind the advance subunits being prepared for the offensive. The start of its penetration into the enemy disposition is determined by the situation. If there are gaps in the enemy's battle formations or if his defense has been suppressed reliably, an independent reconnaissance patrol storms forward at the same time that the motorized rifle and tank subunits go over to the attack. However, if the enemy's defenses are inadequately suppressed and there are no gaps in his battle formations, the independent reconnaissance patrol follows the attacking subunits of the first echelon, ready at the first opportunity to penetrate the enemy disposition and carry out its assigned mission.

After penetrating through the front line, the independent reconnaissance patrol advances farther into the depth of the enemy defense, striving to put the required distance between itself and the attacking subunits as quickly as possible. The crews carry out observations during this time from combat vehicles on the move, paying special attention to areas where offensive nuclear weapons may be emplaced. On discovering enemy offensive nuclear weapons, the independent reconnaissance patrol leader determines their type, number, and coordinates and immediately reports to his superior. The independent reconnaissance patrol can destrov offensive nuclear weapons only with the permission of the commander (chief) who dispatched it on reconnaissance. However, under favorable conditions—and especially where these weapons should be destroyed immediately (when they are prepared for launching, on the move, or poorly guarded)—the independent reconnaissance patrol leader may make the decision on his own to destroy them, carry it out, and then report.

On discovering enemy strongpoints or defense areas, the independent reconnaissance patrol determines their [179] size; the configuration of the forward edge; the number, type, and location of fire weapons; the existence and nature of defensive installations and obstacles and obstructions. The patrol looks for unoccupied sectors of terrain and boldly penetrates the depth of the enemy defense.

Operating in the depth of the enemy disposition, the independent reconnaissance patrol locates his reserves and determines their strength, composition, direction of movement and concentration areas or lines of deployment.

This is how an independent reconnaissance patrol led by Lt. Firsov acted on the offensive during a tactical exercise (figure 13).

At the appointed time, our forces went over to the offensive. The independent reconnaissance patrol moved up behind the subunits of the first echelon in the 2nd motorized rifle battalion. As soon as the attackers took possession of company strongpoints, the platoon leader, taking advantage of the fact that the terrain provided camouflage and that there was a large gap between "enemy" strongpoints, dashed forward.

Continuing in the direction of Skobel'tsino, the leader of patrol squad No. 1 discovered artillery in fire positions and reported this to Lt. Firsov. The officer at once verified the information personally and determined that in some bushes south of hill 147.2 there were six self-propelled howitzers in fire positions. Quickly he determined their coordinates, reported the information to his superior, and continued to perform the assigned mission.

On approaching Skobel'tsino, the independent reconnaissance patrol leader ordered the patrol squad to inspect the outskirts of the inhabited locality. It was established by observation that the "enemy" here was hastily going over to defense. After reporting this information to his superior, Lt. Firsov decided to bypass the inhabited locality on the right.

The independent reconnaissance patrol advanced to the vicinity of hill 149.9. Some special "enemy" vehicles had been noted here earlier by aerial reconnaissance, and so Lt. Firsov set up reconnaissance of the area with special care. He updated the patrol squads' missions, and he himself—with the rest of the personnel—began moving in the direction of a clearing. At the northern edge of the "Pine" wood he discovered a launch area containing launching equipment with a missile ready for firing.

The officer decided to destroy this dangerous target, especially since the terrain favored successful performance of [180] the mission. He reported this to his superior and received permission to carry out his plan.

The leader of the independent reconnaissance patrol assigned missions by radio to the squad leaders and indicated the cooperation procedure during the assault on the objective, the direction of withdrawal, the time of the alert, and the signal for the attack.

After making sure that the squads had occupied the departure point for the charge, Lt. Firsov gave the signal. The gunner-operators of the infantry fighting vehicles opened fire on the launcher, while the riflemen fired on its crew. With a few accurate rounds the launcher and missile were put out of commission.

On approaching the "Heat Wave" Wood, the leader of the advance patrol squad, Senior Sgt. Fomin, established by personal observation that the "enemy" was not in the wood and gave the prearranged signal to traverse it, to intensify observation, and to get all fire weapons ready to open fire immediately.

At 1330 hours patrol squad No. 2 advanced to the northern edge of the wood and determined by observation that a motor vehicle was traveling along the road from Fryanovo. Lt. Firsov quickly assessed the resulting situation and decided to set up an ambush at the end of an opening onto the road. He ordered the squad leader to keep the vehicle under observation while he led the main independent reconnaissance patrol forces to the place selected for the ambush, assigned the mission to his subordinates, got the vehicles into position, organized the fire

plan, appointed an assault party and two support teams, and established signals for covering the road, attacking, and withdrawing.

Lt. Firsov needed only a few minutes to organize the ambush. His actions were clear-cut; his commands terse and clear. This contributed in no small measure to the successful performance of the mission.

When the "enemy" vehicle approached the ambush point, the independent reconnaissance patrol leader's infantry fighting vehicle emerged onto the road and blocked the way. An infantry fighting vehicle of the other squad cut off its withdrawal. The assault party took prisoners and withdrew rapidly to the edge of the wood. From statements of the "prisoners" and the identification insignia on the vehicle, Lt. Firsov determined the subordination of the "enemy," which he immediately reported to his superior.

During pursuit of the enemy, the most favorable conditions are created for reconnaissance by independent reconnaissance patrols. Under these conditions an independent reconnaissance patrol may be dispatched in the direction in which the enemy is being pursued or toward an open flank of friendly forces in order to establish the direction and order of the enemy's withdrawal, **[181]** determine the forces and composition of the covering subunits, discover reserves moving on the open flank and determine their composition and direction of movement, and discover the preparation and occupation by the enemy of a defense in depth.

An independent reconnaissance patrol conducts reconnaissance of a withdrawing enemy, as a rule, along a route parallel to the route of movement of the enemy's main body. It is inadvisable for the patrol to move along the roads by which the enemy is withdrawing, because his security and reconnaissance subunits will be operating on them, and various obstacles and demolitions will be set up on them. All this will make it difficult for the independent reconnaissance patrol to operate and will not permit it to reach the main body.

The leader of the independent reconnaissance patrol dispatches patrol squads ahead and toward the enemy. The independent reconnaissance patrol moves ahead at maximum possible speeds, in leaps from one favorable point of observation to the next. It does not engage in combat with covering subunits, but bypasses them along parallel routes; emerges on the flank of the main body's column and determines their composition, the existence of offensive nuclear weapons, and the direction of their withdrawal. In all cases an independent reconnaissance patrol must not lose contact with the enemy and where possible must take prisoners, documents, and samples of weapons.

An independent reconnaissance patrol dispatched to the side of the open flank of a unit conducts reconnaissance in the direction of possible movement of enemy reserves or of the enemy's withdrawal from a neighboring sector of the front. After discovering the enemy's movement, the leader of the independent reconnaissance patrol establishes his composition and direction of movement, and sets up ambushes in order to capture prisoners.

On the march in anticipation of a meeting engagement and during a meeting engagement, independent reconnaissance patrols can successfully perform the following main missions: detect the enemy's main body and determine its composition and the structure of the march formation; determine the direction and route of movement, the line and the start of deployment for the meeting engagement; and discover the location of enemy offensive nuclear weapons, artillery, and tanks.

On the march in anticipation of a meeting engagement, it is advisable to dispatch an independent reconnaissance patrol long enough before the start of the advance of the security subunits to enable it to put the required distance between itself and these subunits. Until it reaches the line of presumed meeting with the enemy, the independent reconnaissance patrol moves along the roads at the greatest [182] possible speed. In the area of probable meeting with the enemy, it advances covertly, behind the patrol squad, from one point to another, observing the terrain and, where necessary, examining terrain features. Roads along which the enemy may move must be kept under continuous observation.

On discovering enemy reconnaissance or security subunits that are superior in strength, the independent reconnaissance patrol will bypass them or, taking cover behind terrain features, let them pass, trying by observation and on the basis of recognition signs to determine their composition and subordination. Under favorable conditions, it may also take prisoners. On encountering individual soldiers and small enemy parties, the independent reconnaissance patrol will take them prisoner or, in case of resistance, kill them.

On meeting with the main body of the enemy, the independent reconnaissance patrol determines their numerical strength, composition, and direction of movement and sets up continuous observation of them. The leader of the independent reconnaissance patrol reports this to his superior and, depending on the situation at hand, updates the mission for the advance patrol squad. Where necessary, he dispatches an additional squad.

For continuous observation of the advancing main body of the enemy, the independent reconnaissance patrol, on instructions from the

senior-level officer, may move parallel to their advance as far as the line of deployment. After establishing the start of the enemy's deployment for a meeting engagement, the leader of the independent reconnaissance patrol determines the position and nature of the actions of his subunits, their subordination and composition, and the disposition of offensive nuclear weapons, artillery, and control posts and reports this to his superior. Thereafter the independent reconnaissance patrol acts according to his instructions.

During a meeting engagement, an independent reconnaissance patrol may carry out reconnaissance on one of the flanks or in the depth of the enemy's position in order to determine: the locations of offensive nuclear weapons, the composition and direction of advance of enemy reserves (second echelons), and also any maneuver by the enemy to break into the flank or rear of our forces. The independent reconnaissance patrol may perform other missions as well.

In a defense not involving direct contact with the enemy, the independent reconnaissance patrol is dispatched to conduct reconnaissance ahead of the forward defense area or on the open flank. **[183]**

For the reconnaissance, it is given an axis or small area intercepting one of the probable axes of a possible enemy advance.

After moving into the indicated area and not encountering the enemy, the independent reconnaissance patrol sets up in a covered place and carries out observation of the probable enemy routes of advance. On detecting small enemy groups, the independent reconnaissance patrol, with swift actions from ambush, takes them prisoner or kills them.

On the approach of the main body, the independent reconnaissance patrol determines its composition and direction of movement. Thereafter, depending on the mission assigned, it can stay in the previous area to reconnoiter approaching reserves or continue reconnaissance of the enemy's advancing main body. For this purpose, moving along routes parallel to the enemy movement, the independent reconnaissance patrol goes from one suitable point for observation to another without losing contact with the enemy.

From the start of combat the independent reconnaissance patrol continues to carry out reconnaissance of the security on the open flank or in the gaps between enemy units and subunits. Alternatively, depending on the circumstances, it returns to the friendly disposition.

In the course of a defensive engagement the independent reconnaissance patrol may be dispatched in the direction of the open flank or

into an area subjected to an enemy nuclear strike. It may also be sent into the area of an enemy airborne assault landing or one where our forces are making a counterattack.

During actions in mountains an independent reconnaissance patrol may carry out reconnaissance on foot or in combat vehicles. The main principle of actions by an independent reconnaissance patrol in mountain regions must be covert movement in the given direction from one place of concealment to another, with the necessary halts for careful observation of the enemy and reconnaissance of terrain features. If the enemy is some distance away, mountain roads can be utilized and the patrol can travel at maximum speed.

The independent reconnaissance patrol reconnoiters, to the greatest possible distance from posts favorable for observation, all roads, paths, and ravines leading off to the side from the direction of movement. Particularly careful inspection will be given defiles, wooded areas, and other places where the enemy may be. Patrol squads will be dispatched periodically to observe them. In some instances patrol members on foot will be designated for reconnaissance of terrain sectors that are inaccessible to combat vehicles. **[184]**

On the approach to a ravine or defile, special attention must be paid to the reconnoitering of hills situated on either side. Before one enters ravines or defiles, they must be carefully examined. These places must be negotiated at maximum speeds, but not by all personnel of the independent reconnaissance patrol at the same time, since the enemy may set up an ambush in these places.

When a mountain pass is reconnoitered, the roads through it must be avoided, for the enemy usually organizes careful observation of these roads. It is wiser at first to go along the slopes of heights bordering the pass, inspect the pass and the closest approaches to it, and then advance covertly into the pass itself.

Stable radio communications with the reconnaissance elements are more difficult to maintain in mountains. For communications, therefore, very simple visual signals must be established. The distance of patrol squads from the main forces of the independent reconnaissance patrol is reduced.

During actions in deserts, the independent reconnaissance patrol can carry out reconnaissance successfully only if the special features of the natural conditions of desert areas are carefully taken into account in preparing missions and carrying them out.

First, the almost complete absence of natural places of concealment in deserts must be taken into account. This makes it more difficult to camouflage combat vehicles, especially from air observation. All combat equipment must therefore be painted a color that will correspond to the color range of the area of impending actions.

The openness of desert terrain favors visual reconnaissance. The good field of vision makes it possible to inspect objects from great distances. However, it must be kept in mind that frequent sand hazes drastically limiting the possibilities of observation, and also mirages, are typical of deserts. Scouts must be able to distinguish a mirage from the true object.

The possibility of off-road movement in any direction and the difficulty of camouflaging make it more difficult to organize ambushes, since it is difficult to determine in advance what route an enemy will follow.

The very limited number of sources of water, and the increased consumption of fuel due to off-road movement with the negotiating of difficult terrain sectors, make it necessary for scouts to be furnished with water reserves and the combat vehicle **[185]** with supplementary fuel supplies, which may require a special container.

Because of the absence of clearly defined reference points in deserts, the independent reconnaissance patrol frequently moves on a bearing. The course is determined before setting out on reconnaissance.

In desert terrain, the distance of patrol squads from the main independent reconnaissance patrol forces is increased. Reconnaissance is carried out almost without halts. The terrain is inspected from the combat vehicles.

The possibility of off-road movement in deserts and the existence of large gaps in the enemy battle formations permit penetration into his open flanks and movement deep into his rear area.

During actions in northern regions, independent reconnaissance patrols must carry out reconnaissance in high-mobility vehicles well prepared for actions under conditions of low temperature, deep snow cover in winter, and boggy terrain in summer. An independent reconnaissance patrol operating in combat vehicles in winter must be furnished with skis and camouflage robes. The combat vehicles are painted white.

The special conditions of conducting reconnaissance in northern areas call for single-mindedness in the combat and political training of personnel. Special attention is paid to the specific nature of the condi-

tions in which reconnaissance is conducted, which may have a positive or negative influence on the methods of conducting reconnaissance as well as on personnel, combat vehicles, and reconnaissance equipment.

For penetration into the rear of the enemy defenses, independent reconnaissance patrols utilize the gaps in his battle formations, open flanks, concealed terrain sectors, lakes, rivers, and frozen bogs as well as periods of darkness and other conditions of restricted visibility.

The focal nature of defense in northern regions, the concentration of efforts along roads, and the existence of considerable gaps and open flanks create favorable conditions for dispatching independent reconnaissance patrols into the depths of the enemy defense even before the start of an offensive.

Chapter 3. The Assembly, Processing, and Dissemination of Intelligence Information

[186] The final stage of the reconnaissance activity of commanders and staffs at all levels is the assembling and processing of intelligence information for making (updating) an optimum decision for the engagement and also, on the basis of all this, preparing reports to the higher command element and providing necessary reconnaissance data to the commanders and staffs of subordinate, supporting, and cooperating subunits and units.

Intelligence information includes all information that in any measure characterizes an actual or probable enemy as well as the terrain and the weather in an area of impending (possible) actions.

Intelligence information does not always give a complete picture of the enemy, his composition, his location, and the nature of expected actions and of the most important objectives. Often intelligence information about one and the same objective but acquired by various reconnaissance elements, or obtained simultaneously from various sources, may be contradictory or unreliable; sometimes even doubtful or false. Therefore all acquired intelligence information is assembled together and must be processed by the commander and staff.

Processed intelligence information is traditionally called *intelligence*. In other words, intelligence is reasonable information based on assembled, evaluated, and correctly interpreted facts set forth in a certain order (in writing or orally) and giving a clear presentation of some specific matter. Intelligence may relate to a narrow question, for example, the appearance of a new type of weapon in the enemy's arsenal; or such a broad matter as, for example, the general composition and grouping of the enemy in the entire zone of advance of a subunit (unit) and the possible nature of the enemy's actions.

Besides the terms "intelligence information" and "intelligence" there is a concept "reconnaissance information" [*razvedyvatel'naya in-*

formatsiya, otherwise not used in this book, as opposed to *razvedyvatel'nyye svedeniya,* which is what "intelligence information" represents throughout the book—U.S. Ed.], which embraces both of the [187] above terms. That is, it [*razvedyvatel'naya informatsiya*] can be used either in the sense of "intelligence information" or "intelligence."

The essence of the work of assembling and processing intelligence information consists in assembling, analyzing, and bringing into juxtaposition individual, uncoordinated facts and comparing them with the intelligence already in the possession of the commander and the staff, so that well-founded conclusions may be drawn, revealing in their entirety a true picture of the developing circumstances and the substance of various measures being taken by the enemy. In other words, the work of assembling and processing intelligence information amounts to converting the acquiring elements' "raw" material into a finished product that must respond to the needs and interests of the commander and enable him to make the most suitable decision and to employ his weapons effectively.

Often, however, information may be acquired that cannot possibly be verified and compared with other facts. For example, information obtained about enemy offensive nuclear weapons constituting an immediate threat is reported to the commander directly after decoding it, entering it on the map and studying it briefly. In such cases the following principle is paramount: It is better to report not entirely accurate information on time than to report absolutely accurate information late.

The time factor is of primary importance not only in the process of acquiring intelligence information, but also in processing and reporting it.

Thus, the acquisition of intelligence information covers only one aspect, although a very important one, of the reconnaissance activity of commanders and staffs at all levels. Another, no less important and laborious part of this activity consists in assembling and processing the intelligence information.

The assembling and processing of intelligence information was a very difficult field of reconnaissance activity in past wars. Under the conditions of modern warfare, when combat actions have become highly dynamic with frequent and abrupt changes of circumstances, they have become even more complex.

However, the difficulty and complexity of the work of commanders and staffs associated with assembling and processing intelligence information is not an insuperable obstacle. Experience in the Great Patriotic

War testifies to this. [188] It tells us, in particular, that wherever the work of assembling and processing intelligence information was given due importance, useful intelligence flowed even from the meagerest information, enabling a commander to make an optimum decision. On the other hand, some commanders and staffs with valuable information at their disposal were unable to derive the necessary intelligence from it, and as a result found themselves confronted with surprise actions on the part of the enemy.

For example, the intelligence-gathering elements of one Leningrad Front formation, which was defending in the Tosno area in November 1941, established the following: small groups of enemy infantry were moving up and concentrating 2 kilometers from the FEBA; during the day, artillery, which had not been recorded earlier, carried out a ranging from fire positions; ground reconnaissance parties were appearing at the enemy FEBA; at night, tank engines were heard. Through ignorance of enemy tactics, and on the basis of a superficial assessment of the information obtained, the command element incorrectly concluded that a new unit had come to this sector of the front to replace the one previously operating. Actually the enemy was preparing to counterattack and since the morning he had built up his forces to two infantry battalions and 50 tanks, supported by artillery. As a result of a surprise attack, the enemy succeeded in considerably improving his position.

The efforts of all commanders and staffs to get information about the enemy will yield positive results only if all the information acquired by the reconnaissance elements or obtained from other sources gets to the staff promptly and continuously, if it is analyzed in depth and generalized, and if well-grounded conclusions concerning the enemy's grouping and concept are reported to the commander.

Information not received on time, or reported late, not only may lose its value but may even have a disastrous effect on the course and outcome of combat actions. To avoid this, the assembling of intelligence information must be organized during its acquisition, and the information must be processed as it arrives.

Modern combat, typified by complex and rapidly changing circumstances, makes severe demands on the assembling and processing of intelligence information and on its acquisition. The principal demands are as follows: purposefulness, [189] timeliness, and efficiency in assembling and processing intelligence information; dissemination of the necessary information to the command element, troops, and staffs; objectivity of approach in evaluating and accuracy in analyzing the acquired information; planned quality, continuity, and aggressiveness.

The work of assembling and especially processing intelligence information must be conducted on the basis of Marxist-Leninist principles of research, which examine all phenomena in the light of their dependence, interdependence, continuous movement, and change.

The Assembly of Intelligence Information

The assembly of intelligence information consists in its timely receipt from the various sources. This is achieved by the efficient organization of assembly at all command levels of the military organism, and especially by persistence, vigor, and initiative on the part of commanders and staffs in the timely receipt of intelligence information from numerous sources.

The term "source," in connection with reconnaissance, has two meanings.

The first of these has to do with objects affording a possibility of yielding intelligence information. Such sources include: personnel of the enemy forces and their actions that can be observed by our reconnaissance elements as well as prisoners, defectors, and captured documents; electronic equipment in operation; articles of enemy weaponry and combat equipment as well as shell, bomb, and rocket fragments and craters; areas contaminated by radioactive and poisonous substances, and so on.

The second meaning relates to the reconnaissance elements sent out by the commander to subordinate, cooperating, and adjacent subunits and to the higher headquarters from which intelligence information reaches the leader of the subunit or unit. It also includes local inhabitants and our own troops who have been on enemy territory, seen the enemy with their own eyes, or heard about him.

Prisoners, defectors, and local inhabitants as well as captured enemy documents, samples of combat equipment, weapons, and ammunition are sources of information not only for intelligence-gathering elements, but also directly for the leaders of subunits (units) and staffs. More fully than can an active reconnaissance element, a staff is able to interrogate prisoners and question defectors and local inhabitants, assess [190] the reliability of their statements, and study captured documents and samples of ammunition. It can thus extract valuable information, which acquiring reconnaissance elements cannot do.

Subunit and unit commanders, staff officers at all levels, and especially those specifically involved in assembling and processing intelligence information, must have a thorough knowledge of the potentials

and the strengths and weaknesses of each source and must base their work on this. For each source has certain objective and subjective features. These are determined by the potentials of the source the quickness of its actions, its reliability, the degree of authenticity of the information obtained thereby, the accuracy of determination of the coordinates of objectives (targets), and also its vulnerability to enemy counteractions, how it may be affected by the time of day, weather conditions, and other factors.

The potentials of the acquiring elements and their methods of operation were examined in the previous chapter. Here, therefore, we will deal with the importance only of sources of intelligence information not previously dealt with.

Prisoners of war are one important source of intelligence information. Their interrogation may yield information about the numerical designation, grouping, fighting efficiency, and political-moral state of enemy troops and about their weapons and their contemplated actions as well as information about their combat experience, the personal qualities of commanders, their engineer fieldworks, and other important information of a military, political, and economic nature. Prisoners of war often have personal documents with them, and sometimes official ones, which, when compared with other documents, can yield new facts about the enemy or confirm facts already in hand.

Defectors can give the same intelligence information as prisoners of war. When information obtained from defectors is reported, the source is indicated, and the troop elements completing defector interrogation reports must annotate them with "statements of defector." This is because defectors may express opinions that are not typical of the majority of enemy forces personnel. Moreover, they may include individuals specially dispatched by the enemy.

Captured documents are any documents that have been in enemy hands. They include primarily documents that identify enemy military servicemen (personal documents) and operations documents [191] (orders, instructions, reports, etc.). They may contain information on the effective combat strength and numerical strength of the enemy's forces, his offensive nuclear weapons, his plans of combat actions, the state of his equipment, and so on.

Despite its great reliability, information obtained from captured documents must be carefully analyzed, compared with information obtained from other sources, and revised, since the enemy's actions may be changed especially if he learns that his plans are known to us. Moreover, documents can be concocted in order to misinform.

Documents taken from prisoners of war are forwarded to the higher echelon together with the prisoners so that the content of the documents can be checked in the course of interrogation. When documents obtained in other ways are forwarded to higher headquarters, it must be stated where, when, and in what circumstances they were captured (acquired).

Documents captured by subunits and units on the battlefield must stay with them for the minimum time necessary for them to obtain the intelligence information (intelligence) of immediate interest to the unit (subunit) involved.

Local inhabitants coming from enemy-occupied territory may give valuable intelligence information about the enemy's grouping, his objectives, and the terrain. However, the information obtained from local inhabitants is carefully checked in all cases. This is because, firstly, local inhabitants, lacking the professional skills of observers, are usually unable to give accurate information about the position of enemy forces and the time of their own observations; and secondly, as the experience of the last war shows, there may be hostile agents among people crossing a front line.

The first interrogation of local inhabitants is carried out in the subunits and the staffs of the units in whose sectors they have been apprehended, in order to obtain intelligence information for the benefit of an engagement in progress or in preparation.

Further interrogation of local inhabitants, to the extent necessary, is carried out by the appropriate staff elements of the higher echelons.

Enemy weapons and combat equipment captured on the battlefield are sources of intelligence information on the combat characteristics of the kinds of weapons and combat equipment involved. [192]

Shells, rockets, bombs, or fragments of them are also a source of information on the types and calibers of fire weapons employed by the enemy.

Captured weapons and combat equipment are studied by qualified experts from the pertinent combat arms, combat service support troops, and support services in order to devise effective ways and means of dealing with them. Subunits and units study captured enemy weapons and combat equipment mainly in order to employ them in combat.

The very nature of the sources from which intelligence information is obtained shows that none of them by itself can clarify all matters necessary to a commander. Therefore, a basic principle of action in the

assembly of intelligence information consists in the combined exploitation of all sources from which the required information may be obtained in a given situation.

Subunit leaders and staffs receive intelligence information in the form of an oral briefing, a report by radio, writing, or diagrams and also with various means of communication.

A platoon leader receives information on the enemy's numerical strength, actions, and losses of men and combat equipment from his observer and from squad (crew) leaders when they report the performance of their assigned missions. The platoon leader checks and revises the assembled information against his personal observation from his own observation post. Then he reports to the company commander on progress in carrying out the combat mission, or as the commander requires.

The company commander gets intelligence information from platoon leaders, combat reconnaissance patrols, observers, the observation points of senior-level officers, forward artillery observers, the observation posts of the commanders of artillery and mortar subunits in the battle formations and on the flanks of the company, and also from prisoners captured by the company. In addition, the company commander, as do the platoon leaders, personally conducts observation of the enemy.

Obviously, even at the company level it is possible to assemble intelligence information from many different kinds of sources and to assess, consolidate, and report this information to the battalion commander (chief of staff).

Company commanders are closer to the enemy than battalion commanders or staff officers. They personally observe **[193]** the enemy, and therefore the information they get has greater value. Consequently, it must be carefully explained to company commanders how important it is for their superiors to obtain information from them about the enemy, including information about his losses.

No special documents recording the intelligence information are kept at the platoon and company level. All items of intelligence information acquired are entered on the commander's working map. In cases where a subunit is in contact with the enemy on the same line (in the same position) over a long period of time, for example in defense, when the information becomes obsolete less rapidly, it may be entered in subunit leaders' notebooks.

The assembly of intelligence information in the battalion is carried out by the chief of staff. As directed by the commander, he organizes

the receipt of information from the battalion observation points and the combat reconnaissance patrol; from subunits (parties) conducting raids and setting up ambushes; from the leaders of subordinate, attached, and supporting subunits and adjacent forces; and from higher headquarters as well as the reconnaissance elements of the senior-level officer that are operating in the battalion battle formations. Important information may be obtained from prisoners during their interrogation on the battlefield immediately after capture. They can point out the locations of their subunits and the positions of fire weapons and other objectives right on the spot. After a brief interrogation of prisoners in the battalion (company), they are quickly evacuated to the rear, so as to reduce the time from the moment of their capture to the start of interrogation by experienced officers.

The chief of staff enters all the intelligence information obtained on the working map, assesses it, consolidates it and reports it to the battalion commander, who makes the final evaluation of this information. Important information is reported to the battalion commander and to the unit staff immediately, after which its verification is arranged. The chief of staff and battalion commander check this intelligence information primarily by personal observation from their observation post and by consulting with subunit leaders and the unit staff and comparing the information with data in hand and with data obtained from other sources. Because the battalion obtains intelligence information from many sources and because they must make it more precise, determine its reliability, and consolidate it, a record of this information should be maintained. **[194]**

The consolidated information about the enemy and about his losses and combat equipment is reported personally by the battalion commander in every briefing of his on progress in carrying out the combat mission, or as his superior requires. In addition, important information is reported immediately.

Important intelligence information may be included in the action reports and briefings of subordinate commanders and staffs.

So that intelligence information will be received continuously and on time, the following are necessary: timely assignment of reconnaissance missions to those who are to carry them out; systematic monitoring of the presentation, at fixed deadlines, of reconnaissance reports and briefings; provision of necessary assistance to the reconnaissance elements and subordinate commanders (staffs); organization and maintenance of stable and uninterrupted communications with the observation points, subunits, and parties conducting reconnaissance, with subordinate, adjacent, and cooperating commanders (staffs), and with the higher

headquarters; reception of intelligence information transmitted by aircraft and helicopters; and continuous exchange of information about the situation.

For the reception of information from reconnaissance subunits, special brevity code charts and coded maps are drawn up. The brevity code charts must be convenient to handle under any circumstances, day or night, must be moisture resistant, and must enable conversations to be carried on by radio in the rain.

Stable direct communications must be set up with all intelligence-gathering elements. In particular there must be such communications with observation points, combat reconnaissance patrols, and other reconnaissance elements. For this, standard-issue wire and radio equipment are used, and visual signals can also be established as a backup system. To obtain intelligence information from subordinate, cooperating, and adjacent staffs (subunit leaders), the radio net and lines of the commander and staff may be used.

The assembly of intelligence information takes up a considerable part of the working time of the commander and staff, especially during combat, when the situation is changing rapidly and reports are arriving more frequently from the sources. [195]

The Processing of Intelligence Information

Intelligence information obtained from many sources is usually of varying reliability, accuracy, and completeness. It is often fragmentary, unsystematic, and sometimes even contradictory. It must be carefully processed and checked. If not, very important information may lose its value and fail to be exploited at the time it is needed.

As it is processed, the significance of the information obtained is determined, intelligent interpretations are made of events occurring on the battlefield, and appropriate conclusions are drawn concerning the enemy's composition and position and the nature of his actions and intentions. Assessment of the enemy is the ultimate aim of the entire business of processing. It is the basis for drawing conclusions that are reported to the commander and higher headquarters and for compiling information for the benefit of subordinate and cooperating subunits and adjacent forces.

The processing of intelligence information consists in studying, recording, and analyzing it, then consolidating it and formulating conclusions. The work of the commander and staff in processing normally takes the following order: familiarization with the substance of the in-

formation and determining its urgency and value; entering the information on the working map, indicating the source and time of its receipt; entering incoming information in a register; filing (classifying) information in terms of content or objectives (nuclear weapons, grouping of tanks and motorized infantry, control posts, etc.); registering everything new contained in reports; analyzing the systematized intelligence information, comparing its items with those from other sources on the given subject, and determining their degree of reliability; consolidating the information and formulating conclusions based on it for briefing one's own command element and higher headquarters and also for informing subordinate subunits and adjacent forces; and determining items to be verified or corrected.

However, the sequence and order of processing intelligence information may vary, depending on the relative importance and urgency of the items. If an officer, after entering information on the map and briefly studying it, has found that it is important and urgent, he must immediately report it to the commander and inform all special officers and staffs having an interest in it. After this, the information is taken into consideration and subjected to complete processing. **[196]**

For example a combat reconnaissance patrol leader reports to headquarters by radio: "1530, 20 August, at the western edge of a wood (315721), observing a missile battery setting up in launching position." Such information must be reported to the commander immediately.

On commencing the study of items of information, one must know the time at which they were acquired, when they reached the staff, the reliability of the source, the situation in which they were obtained, and the extent to which they conform to the situation. Without knowing these matters, it is impossible to assess the intelligence information correctly, compare it with other information, or determine its reliability and usefulness.

Let us consider the processing of intelligence information in greater detail.

The initial study of intelligence information. The initial study of intelligence information begins with acquainting oneself with its content, in the course of which one determines the level of importance of the information received and decides accordingly on the order in which it will subsequently be dealt with. The importance of information received depends in turn on the nature of the enemy installation or action involved and especially on the degree to which it affects the combat missions our subunit or unit is to perform.

Obviously, information about the enemy's offensive nuclear weapons is more important than, say, information about artillery employing only conventional ammunition. However, this generally correct principle is not always a guide to action. Everything depends on the conditions of the specific situation. Let us assume that a commander or staff has received a report indicating that a concentration of a battery of enemy free-flight rocket launchers or guided missile launchers has been observed at a point 100–120 kilometers from the front line. Simultaneously with this, information has been received that in the immediate vicinity of the line of contact a 155mm howitzer battery is being deployed in fire positions. It is obvious that in these circumstances information about the enemy artillery is more important for the commander of a subunit (unit) conducting an offensive than the report about the enemy's missile launchers. Only after the importance of the information has been determined can conclusions be drawn concerning its priority.

All intelligence information, even incomplete information, is subject to processing. Experience in the Great Patriotic War shows that conclusions about the enemy reached on the basis [197] of uncoordinated information and used for timely decisionmaking are often more effective than waiting for comprehensive information, since the latter course may lead to inaction. This circumstance is even more urgent under the conditions of modern warfare, characterized by the highly dynamic nature of combat actions. While they are being conducted, information about the enemy, and especially about his mobile objectives, becomes obsolete quickly. This, in turn, demands a high level of proficiency with respect to its initial study and subsequent processing.

The recording of intelligence information. The recording of intelligence information is the stage of processing that covers the entering of the assembled information in a certain order graphically on a map or in the form of written entries in a register and also its appropriate classification by subject. Information, often acquired at the expense of great effort, must not be allowed to escape processing. That is why information, including items that in the initial study appear to be of low value, redundant or obsolete, must be recorded. Such items are needed not only for subsequent processing, but also for evaluating the reliability of the sources themselves.

Experience in the Great Patriotic War testifies to the fact that well-organized recording makes it possible to prepare the information for briefing a commander quickly and more completely and also to build up, as necessary, reference and accountability documents on the enemy. On the other hand, a careless attitude toward the recording of intelligence information leads to undesirable consequences. Some commanders and staffs were in possession of certain items of information about the enemy,

but because of poor recording forgot about them and could not pass them on to interested commanders and units (subunits). This detracted from the efficiency with which they employed their resources on the battlefield.

For recording intelligence information, a working map, a intelligence information register, and a intelligence information classification log are kept.

The working map is the principal document on which all the intelligence information reaching the staff is depicted graphically.

If intelligence information cannot be represented graphically—as in the case of, for example, the noise of engines, tracks made by enemy combat equipment, items of everyday use, and so on—then explanatory notes are made about them. **[198]**

From the processing of all intelligence information, the working map must clearly show the enemy grouping, especially nuclear weapons, artillery, and tanks and must depict other information needed for briefing the commander.

The position and state of enemy forces is shown on the working map in more or less detail, depending chiefly on the size of the military unit (company, battalion), the type of combat action, and the quantity and completeness of the intelligence information.

During preparation of an offensive, the following, both at the forward edge and in depth, are entered on the working map: machine guns, antitank guns and antitank guided missile launchers, mortars, tanks, nuclear artillery guns, and the defensive system of the enemy down to and including the platoon strongpoint.

The grouping of enemy forces in the depth of the defense is shown precisely down to the company and the artillery or mortar battery (platoon); offensive nuclear weapons, to the gun (launcher); reserves, to the company or battalion; command posts (command observation posts), from company or battery down to and including the division.

Besides enemy subunits, the map is marked with the outlines of positions, engineer preparation of strongpoints, engineer antitank obstacles, antipersonnel mixed minefields, and nuclear bomb launching sites.

Information on the enemy in front of adjacent forces on the right and left is entered before their entire front.

The working map is continuously maintained using the accepted conventional symbols. It is replaced as required whenever an additional entry of a new circumstance would make the map difficult to read. This situation may arise in instances where the combat actions of the belligerents have continued for a long time in one locality and the map is overloaded with obsolete and no longer useful information. When a map is replaced, any information about the enemy and about friendly reconnaissance elements that has not lost its significance is transferred to the new map.

If the forces, as they move forward in the course of an offensive or receive a new combat mission, pass beyond the limits of the terrain shown on the working map, new sheets can be pasted onto it.

The intelligence information register is a working notebook ruled in a certain way. **[199]** All the intelligence information received from friendly reconnaissance elements: aerial reconnaissance; the leaders of subordinate, attached, and supporting subunits; higher headquarters; adjacent forces; and other sources is entered in the register in chronological order as it comes in. In the appropriate columns of the register, the serial number of the information (report); the date, hour, and minute of its arrival; the content of the report; the time at which this information was acquired by the source; and a source designation are entered.

Making this kind of notation in the register while at the same time entering it on the working map will be quite adequate for recording intelligence information during preparations for an offensive or on defense when there is no active combat. As newly received information is processed, earlier descriptions of a given reconnaissance objective can easily be found, the two can be compared, and they can be assessed.

At the start of an offensive or when an enemy attack is being repelled in a defense, information will be coming in more frequently. A large amount of information may come in even in the course of a few hours of combat. Information may be received about one and the same objective from various sources. For example, information on the presence of enemy reserves in a given area, their composition, and the start of their movement may be obtained from combat reconnaissance patrols, from the commanders of artillery subunits, from adjacent forces, and from other sources. If a large quantity of information is to be processed quickly and easily, it must be classified by content or subject. In this way its completeness, reliability, and accuracy can be brought out, contradictory information can be determined, and everything that is new can be noted. For this purpose, an intelligence information classification log is kept in addition to the register.

The intelligence information classification log may be the same in form as the register. It is kept in the same way, although the information regarding particular objectives is not recorded sequentially, but in appropriate sections. Depending on the nature of the combat actions and the existence of objectives in the enemy disposition, this log may contain the following sections: nuclear weapons, artillery and mortars, tanks, reserves, command posts, engineer preparation of the enemy defenses, nature of the terrain, anything new in the enemy tactics, camouflage methods, and so on. Each section of the intelligence information classification log will have the same columns as the register. There will also be [200] another column giving the number under which the report is recorded in the register. This makes it possible to find the complete record of the report, if needed, when information is processed.

Whereas the entire content of a report (information on several subjects) from a source is recorded in one place in the register, in the classification log the items are entered in different sections, in each of which only the information on a particular objective is dealt with. Obsolete information and items of little value are not entered in this log.

The originals of all reports of reconnaissance elements must be preserved until the combat mission has been completed.

A well-constructed record of intelligence information is conducive to rapid analysis of this information from every angle and the preparation of well-founded conclusions concerning each objective and the enemy as a whole.

Analysis of intelligence information. The next processing step is analysis of intelligence information, carried out in order to draw correct and well-founded conclusions concerning the composition, grouping, actions, and intentions of the enemy forces. The analysis process embraces the following: study of the content of the information and the conditions under which it was acquired; comparison and contrasting of this information with other data regarding this or that enemy installation or action; assessment of the information with respect to its reliability, importance, urgency, and usefulness. Here the importance of the information analyzed is determined by its significance in revealing or clarifying the composition, position, and state of opposing enemy forces and the nature of their actions and also by the effect it may have on the performance of combat missions by friendly subunits. The urgency of the processing depends directly on this importance, is derived from it, and is determined by quick reaction on the part of the commander and staff to the information received.

Experience in the Great Patriotic War and postwar exercises testifies to the fact that the results and the quality of analysis of intelligence information depend directly on the level of an officer's training and on his personal skills acquired by experience.

In order to analyze intelligence information in depth and from every angle, an officer must have mastered the Marxist dialectical method of acquiring knowledge and must have a firm grasp of the following: the nature of modern combined arms combat; the organization, weapons,and logistic and technical servicing of the enemy forces; the combat **[201]** characteristics of his weapons and also the tactics of subunit and unit actions in various kinds of combat activities; the level of training of the enemy forces, their national traits and their morale in the relevant period of combat actions; the capabilities of friendly operating reconnaissance elements and their experience; where the forward edge (front line) passes; the nature of enemy and friendly actions at the time the information is received from the source.

When analyzing intelligence information, an officer must take into account the reliability of the source and the objective conditions in which the information was obtained (the nature of the enemy's actions, the terrain, the time of year, time of day or night, and the weather conditions in the area of action of the reconnaissance element).

When analyzing intelligence information, one must avoid haste and refrain from seizing on isolated facts from reports with a view to forming generalized conclusions based on them. The information received is studied and compared with information received at a different time or at the same time from other sources. This method of analyzing intelligence information makes it possible to distinguish new information from items acquired earlier, to confirm the correctness of the new items, and to determine the degree of their dependability and importance.

A situation may arise in which the staff (commander) receives information about a new subject from a single source about which there has previously been no intelligence information. For example, it has been learned that there is a missile battery in launching position in a certain area. There is no time to verify or amplify the information through another reconnaissance element; the battery may launch its missiles and then move to another area. Therefore the final conclusion about whether there actually is a missile battery in the area in question must be based on analysis of this information alone. Such situations may occur quite often in modern combat. In determining the reliability of the information obtained it is necessary to consider the reliability of the source along with available information about the enemy and the situation; what unit

(formation) is operating in that sector of the front, whether it has such missiles in its armament and, if not, whether it is receiving them for reinforcement; how far from the forward edge (front line) and from other previously discovered objects has the launching area been detected; what is the nature of the combat actions of the belligerents, and can the enemy in accordance with his viewpoints establish a missile battery in launching [202] position in that area under existing circumstances. The decisive factor here, of course, will be the reliability of the source, and its ability to acquire such information and to distinguish decoy objectives (dummies) from real ones.

All our reconnaissance resources as well as the established reconnaissance elements are completely reliable. However, their potential for acquiring intelligence information is in many respects dependent on the level of military and political training and combat experience of the commanders leading the reconnaissance element, and on other conditions.

Reliable sources include aerial photographs, enemy orders, plans, and other operations documents captured during the destruction of headquarters or in attacks by scouts on messengers and staff officers.

When intelligence information obtained from any source is analyzed, the conditions under which this information was acquired should be taken into account. Thus, even a well-trained aircraft or helicopter crew, for a number of reasons, cannot always distinguish between a decoy objective (for example, dummy missiles, launching equipment, tanks, artillery) and a true one. Enemy camouflaging and measures to mislead our reconnaissance are clever and plausible. Aerial photographs and operations documents cannot always give a true picture. In an aerial photograph it is difficult to distinguish mock-ups of combat equipment from the real thing, and documents may be false ones deliberately developed in order to misinform.

Moreover, even authentic documents in many cases may not reflect the enemy's grouping and concept at the given moment, since, after being issued, a decision may be revised, changed, and disseminated to the troops by other means, and their grouping and actions will no longer correspond to an authentic document issued earlier.

Obviously, information about the enemy acquired by reliable sources may not always be reliable, either. Therefore it is not always possible to draw a final conclusion on a matter of interest to a staff, or even on the enemy's grouping and the nature of his actions as a whole. However, careful study of all the information received by the staff, as well as analysis of the situation in depth, enables an experienced officer to make

assumptions that are sufficiently close to the truth and that are based on facts and calculations. Such assumptions (conclusions) are made (drawn) in determining the possible enemy actions for the very nearest future. [203]

An objective approach to the assessment of intelligence information is one of the most important demands made of the officers involved in its assembly and processing.

All information whose reliability raises doubts during its processing must be verified by all possible means.

Thus, at the end of 1944, on the Sokal axis of the 1st Ukrainian Front, aerial reconnaissance had for several days observed the approach of small columns of seven or eight tanks each to the front line, where they were concentrating in a certain area and being camouflaged. After a time, communications reconnaissance picked up the operation of a type of radio in this area that was being used in the tank divisions of the Hitlerite army. Information from both sources could be considered reliable—both of them, at first glance, had discerned true enemy objectives. Moreover, communications reconnaissance in essence confirmed the information from aerial reconnaissance. However, doubts arose in the minds of the officers processing these items of information. It was not clear how this number of tanks would show up in the Hitlerite forces at this sector of the front. Reconnaissance in depth had nowhere previously noted tank units and formations.

The staff of one of the formations was given the mission of verifying the information from aerial and communications reconnaissance. When military scouts penetrated the area of concentration of the supposed enemy tank division they observed there a large number of wooden mock-ups of tanks. Thus a false tank division concentration area was discovered. Somewhat later higher headquarters succeeded in establishing that dummy tanks were being turned out in a furniture factory in the city of Rava-Russkaya. These dummies were being joined together by ropes in groups of seven or eight at intervals of 30–40 meters and were towed in daylight by a battle tank to the above area of concentration. The reconnaissance aircraft crews had not been able to make this distinction.

In terms of the degree of reliability, intelligence information may be graded as reliable, probable, doubtful, or false.

Information is considered *reliable* if it is confirmed by several sources or repeatedly by one reliable source. Documents acquired from the enemy that are fully in line with the past and present situation and that do not give cause for doubt are also considered reliable. [204]

Information is considered *probable* if it is in line with the present situation and with data already in hand, but has been received from only one source or from several sources and requires verification.

Information is considered *doubtful* if it contradicts already available information obtained from other sources. Such information calls for additional checking, revision, and confirmation.

Information is considered *false* if it does not correspond to the present situation and contradicts information obtained from other sources, and if there is irrefutable proof of its falsity. Nevertheless, even false information must be considered and studied with a view to learning the methods of deception employed by the enemy.

Conclusions about the degree of reliability of intelligence information are drawn without haste and very carefully, taking the following matters into account:

—from what source was the information received and how dependable is this source;
—generally speaking, is the given fact or event possible;
—is the report self-contradictory;
—is the information received confirmed by other sources;
—to what extent is the information received in line with the present situation and with information on hand;
—if items of information received are not in line with the situation and with information from other sources, which of them can be considered the most reliable.

Reliability is also determined by comparing certain items of intelligence information with others. The information compared must originate from various sources and different information-acquiring elements. However, it also happens that intelligence information originating from one and the same source comes to the staff through different channels. In such a case it is necessary to investigate and determine how and why the same information has come to the staff by different routes.

Whatever its source, the reliability of intelligence information must be checked without fail. A higher headquarters has more sources at its disposal and is in a better position to check the reliability of intelligence information than a lower-level staff with fewer sources at its disposal. The next-higher commander (staff), [205] as a rule, also takes into account the training and experience of the commander (staff) passing information to him.

The degree of reliability of intelligence information is graded numerically in the following order: 1—confirmed (by other sources or ele-

ments); 2—completely reliable; 3—possibly reliable; 4—reliability doubtful; 5—reliability improbable; 6—reliability impossible to establish.

When intelligence information is evaluated, the degree of dependability of a source and the degree of reliability of the information are indicated. The intelligence information indices are entered on the working map (plan) and are also shown in the reconnaissance reports, resumes, and information sheets. For example, if items of information are graded with the indices S–2, it will be clear to everyone that they have been acquired by a dependable source and are completely reliable.

This system of evaluating intelligence information, even though it leads to a stereotype, nevertheless enables all officers and staffs to judge its dependability and reliability in the same way.

The determination of reliability and the analysis of information received is carried out not from case to case or periodically, but continuously as the items arrive. Comprehensive and thorough analysis of intelligence information from all angles must enable the commander and staff to discover the enemy's concept and to determine his strengths and weaknesses. This contributes to making well-founded decisions and anticipating the possible unfolding of events in the course of combat actions.

Generalizing intelligence information. Individual analysis and evaluation of each item of information or fact received gives an idea mainly about specific objectives and reveals the significance only of a given fact or, at best, of facts connected with it. In other words, at this stage in the processing of intelligence information, a complete, clear picture of enemy positions and of the nature of probable enemy actions as a whole does not emerge. Such a picture is attained only in the final stage of processing: the generalizing of the intelligence information. This consists in summarizing all the data on the nature of the enemy's actions and on his grouping and his most important objectives. On the basis of the summarized information the staff draws conclusions concerning the enemy with the necessary calculations for briefing the commander where the following are determined: the enemy's concept of action, especially with respect to his employment of nuclear weapons; the strengths and weaknesses [206] of the opposing enemy; and important objectives whose destruction may result in a significant reduction of the enemy's combat capabilities.

The Intelligence Information Briefing

The generalized intelligence information, with the conclusions, is reported to the commander and the chief of staff. The briefing is made

orally with reference to the working map, with a short and clear summing up of conclusions and assessment of the enemy, along with the necessary data and calculations.

The briefing map must be carefully prepared. Important enemy objectives on it should be highlighted with pencil more clearly than others. Principal inhabited localities, terrain features, and hills that are mentioned in the report more often than others should be neatly colored in without obscuring the map.

Depending on the circumstances, the amount of information, and the time available, the briefing may be expanded (detailed) or short. An expanded briefing presents the generalized information obtained as a result of processing the information received by the staff from various sources.

The presentation must be short, clear, precise, and supported by the relevant data and calculations. Regardless of how complete the content of the briefing may be, it must reflect specific conclusions from an assessment of the enemy.

An expanded briefing will usually include four points, and the order of presentation might be approximately as follows:

I. The enemy's overall composition and nature of actions on the front opposite the subunit (unit) and the adjacent forces. Under this heading the overall composition of the enemy's resources opposite the subunit (unit) and the adjacent forces are determined, and brief conclusions are presented about the actions he has recently been undertaking. The quantity and power of the nuclear ammunition employed by the enemy (if this has taken place) are indicated.

II. The enemy's effective combat strength, grouping, fighting efficiency, and the nature of his actions in the zone of the subunit (unit) in question. Under this heading generalized information on the enemy operating at the front directly opposite one's own subunit (unit) is set forth.

III. The probable nature of enemy actions. Here the following are reported: the purpose of impending combat actions; the general concept of enemy actions, probable missions and order of employment of his resources to carry out [207] this concept, the time of their deployment, and other matters.

IV. The main reconnaissance missions and the measures taken to accomplish them. Under this heading the main reconnaissance missions and the measures taken to accomplish them are considered.

All the data in the briefing must be confirmed by the necessary calculations and reference to sources. All doubtful and false information is reported to the commander, expressing the appropriate reservations, and the times and sources from which it has been obtained are indicated.

In an oral briefing, one should avoid giving the locations of objectives in map grid coordinates. It is better to do this by using inhabited localities, hills, wooded areas, and other terrain features colored in on the map and well known, with directions given by cardinal points. For example: "about a company of tanks concentrated at the edge of the wood 3 kilometers west of Podguzhe; a battery of 155mm howitzers in fire position on the western slopes of hill 180.3." These objectives must be indicated with a special pointer or, if unavailable, with the sharp end of a pencil.

The more complete and reliable the information set forth in the briefing, the easier it will be for the commander to come to a well-founded decision, to foresee the possible development of the engagement, and to organize firm control of the subunits.

If there is insufficient time, especially in the course of combat actions, a briefing may be short rather than detailed. In a short briefing the following are indicated: in what quantities and how the enemy is employing nuclear weapons, artillery, and mortars; what is new in the grouping and effective combat strength of the enemy forces, and the axes of the enemy's main attacks; offensive nuclear weapons discovered and the possibility of their being used; the composition and location of reserves, and the probable nature of the enemy's actions in the immediate future.

In many cases, instead of a briefing, a commander may require only the answers to questions that interest him.

Certain data are reported to the commander and the chief of staff immediately. These include:

—enemy preparations for an attack;
—the discovery and locations of enemy nuclear weapons;
—nuclear attacks by the enemy or his employment of other means of mass destruction;
—the enemy's appearance anywhere that he has not previously been seen; **[208]**
—an abrupt change in the nature of enemy actions (start of an offensive, counterattack, withdrawal, etc.).

Intelligence is reported to the higher headquarters by communications equipment, by the presentation of written (graphic) reports, and orally. Intelligence reported to the higher headquarters, and transmitted to subordinate and cooperating subunits by communications equipment or in person, must be recorded in the log of orders and reports.

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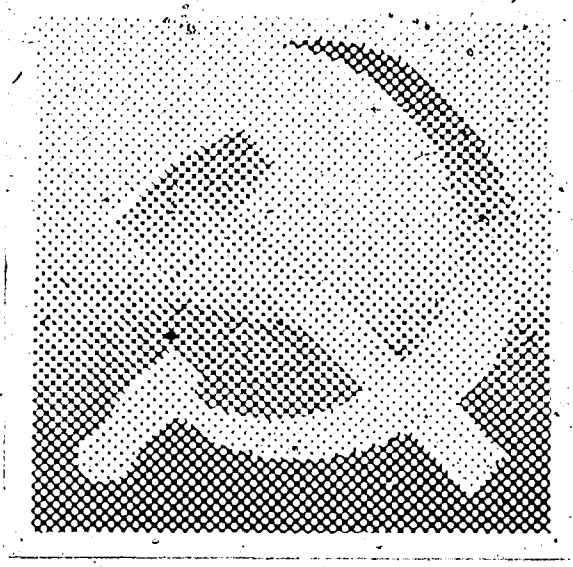

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