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30 November 1978

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MEMORANDUM FOR: The Director of Central Intelligence  
FROM : John N. McMahon  
SUBJECT : MILITARY THOUGHT (USSR): Movement of  
Front (Army) Troops Over a Great Distance  
and Commitment to an Engagement from the  
March in the Initial Period of War

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article summarizes the main points discussed at a Belorussian Military District military science conference: the methods of moving troops, dwelling on movement by organic means; the grouping of front troops and the width of the zone of movement; the length of a day's march by organic means; crossing of radioactively contaminated zones, which requires the development of combat vehicles affording radiation protection; the organization of road traffic control service; the procedure for committing troops to an engagement, stressing preparatory fire and reconnaissance of nuclear strike targets; and movement planning and troop control, focusing on modernizing staff work and staff organization and on improving inter-Warsaw Pact communications. This article appeared in Issue No. 3 (64) for 1962.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned [redacted]

John N. McMahon

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## Intelligence Information Special Report

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COUNTRY USSR

DATE OF  
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30 November 1978

SUBJECT

**MILITARY THOUGHT (USSR): Movement of Front (Army) Troops Over a Great Distance and Commitment to an Engagement from the March in the Initial Period of War**

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (64) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The authors of this article are Lieutenant Colonel Yu. Yakunin and Lieutenant Colonel B. Vashchenko. This article summarizes the main points discussed at a Belorussian Military District military science conference: the methods of moving troops, dwelling on movement by organic means; the grouping of front troops and the width of the zone of movement; the length of a day's march by organic means; crossing of radioactive contaminated zones, which requires the development of combat vehicles affording radiation protection; the organization of road traffic control service; the procedure for committing troops to an engagement, stressing preparatory fire and reconnaissance of nuclear strike targets; and movement planning and troop control, focusing on modernizing staff work and staff organization and on improving inter-Warsaw Pact communications.

End of Summary

s Comment:

After 1962 the SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

Movement of Front (Army) Troops Over a Great Distance  
and Commitment to an Engagement from the March  
in the Initial Period of War

by

Lieutenant Colonel Yu. YAKUNIN  
Lieutenant Colonel B. VASHCHENKO

The Fourteenth Military Science Conference of the Belorussian Military District was devoted to an examination of one of the most complex problems of modern military art: the organization and execution of the movement of front (army) troops over a great distance and commitment to an engagement from the march in the initial period of war.

The report of General-Leytenant SHEVCHENKO and the presentations of the conference participants gave greatest attention to an examination of the following matters.

Methods of moving troops. In speaking of the capabilities of the different types of transportation that are to be allocated for carrying troops, the main speaker and others expressed the opinion that the role of rail transport has now decreased sharply in comparison with past wars. Suffice it to say that one surface nuclear burst of a medium caliber bomb on a railroad junction can interrupt through traffic for four to six days. Besides that, when carrying troops by railroad the troop concentration times are drastically increased and the continuous combat readiness of the large units and units at all stages of the movement is not ensured. For instance, the concentration of a tank army when moving up by organic means over 1,000 kilometers can be completed in four to five days, whereas when the heavy equipment is carried by rail, the army in a new concentration area can become combat-ready no earlier than after eight to ten days. Nevertheless, as most of the participants in the conference mentioned, rail transport up to now remains an important means for hauling equipment which has limited reserves of engine running time and limited cargo capacity and for which motor transport is lacking.

As for air transport, its capabilities are even inferior to those of rail transport. Thus, for instance, to lift a motorized rifle division

without its heavy equipment requires up to nine military transport aviation divisions. The speakers were correct in saying that at the present time transport aviation can be extensively used mainly to lift individual units and subunits, staffs, and wounded, as well as for transporting missiles and delivering the most urgent materiel reserves.

The most effective method of moving troops, in the opinion of the participants in the conference, is to have them move by organic means. The combat and transport equipment in service has a mileage reserve (mileage between overhauls) that enables it to move troops over a distance of 1,000 kilometers or more. However, as General-Mayor DIKIY said, the presently existing norms for emergency mileage reserves are obsolete, which considerably limits the march capabilities of the troops. The emergency mileage reserve of 800 to 1,000 kilometers for tracked equipment allows us to conduct only one offensive operation. This being the case, troops can be moved up only by transporting the tracked equipment by rail.

In the interests of increasing the combat readiness of troops, a review of the norms for the emergency mileage reserves of tracked equipment is required. On the average, it must not be less than 2,000 to 3,000 kilometers.

The capabilities of troops to move by organic means over a considerable distance also depend on the mileage reserve of the tracks of the equipment. Thus, the mileage of the T-54 tank between medium repairs is 6,000 kilometers, but a new track (90 track links) can ensure the vehicle a mileage in the range of 2,300 to 2,500 kilometers. The generals and officers speaking at the conference mentioned that the most drastic method of solving this problem is to employ tracks with enclosed or rubber and metal hinges, which increases the mileage of the vehicle by a factor of two, and in winter conditions by a factor of three. Until tanks with such tracks are developed, it was proposed that we have reserve sets of tracks in the depots in the probable zone of movement of front troops.

Considerable attention was devoted at the conference to the matter of ensuring the movement by organic means of missile and missile technical units, whose march capabilities also greatly depend on the mileage reserves of the combat equipment and the limitations on the transportation of missile warheads. Because of the limited mileage reserve of the launching units and tracked launchers, they have to be carried on heavy-duty trailers.

On the whole, as the participants of the conference mentioned, the problem of preserving the total mileage reserve of heavy tracked equipment can be successfully solved by the mass introduction in the troops of trailers with powerful prime movers.

Under modern conditions, in the opinion of conference participants, operational formations will carry out movement over great distances by the combined method, efficiently exploiting all types of transportation. In so doing, over distances of around 1,000 kilometers it is advisable to have the bulk of the troops move by organic means and to use rail, air, and sea transport as a supplementary means of moving cargoes and equipment with limited mileage reserves.

The grouping of front troops and the width of the zone of movement. In examining this matter the conference participants remarked that the grouping of operational formations will largely depend on the state of combat and mobilization readiness of the troops. The readiness times of different large units may range from a few hours to a few days. Therefore, for the purpose of gaining time, the movement of troops must be carried out in parallel with the completion of their mobilization.

In connection with this, the grouping of front troops when moving up may be as follows: forward security large units and units, the first echelon of troops together with the rocket troops, the second echelon of troops with later mobilization completion times. A time gap between echelons of from several hours to several days or more is possible. Large units and units will mainly proceed in a compact grouping.

As for the width of the zone of movement, based on the experience of a number of command-staff exercises and war games, for each first-echelon army a width on the order of 130 to 200 kilometers is proposed, and for a front, of 300 to 500 kilometers.

Length of a day's march for troops moving by organic means. On this matter the opinion of the participants in the conference was divided. General-Mayor BATALOV, Colonel MELNIK, and others consider that a day's march by tank large units and units may, depending on the situation, cover 350 to 400 kilometers. But most of the speakers spoke up for an average day's march not exceeding 250 to 300 kilometers, basing their point of view on the actual mileage reserve of the equipment in respect to fuel, as well as on a number of objective factors stemming from the conditions under which the troop movement will be carried out.

When tracked equipment is moving in division columns over dirt roads, the mileage reserve of medium tanks amounts to 250 to 300 kilometers (without expenditure of the emergency reserve of 0.2 of a fueling and including the supplementary two barrels on the tanks). The process of refueling combat vehicles during the march, as the experience of troop exercises shows, takes a great deal of time (1.5 to 2 hours for a tank regiment even with efficient organization of the work); therefore, the refueling of equipment during the march for the purpose of gaining time is very undesirable.

The depth of a day's march depends also on the physical capabilities of the drivers. When advancing 1,000 kilometers the troops will be required to make about three or four marches, and during this the drivers will have to work constantly for 12 to 16 hours per day. Therefore, to achieve high rates of troop movement it is imperative to find ways of training drivers. In the opinion of the conference participants this problem can be solved by teaching all the personnel of the crews (for tanks and armored personnel carriers) to drive. For the wheeled transportation of the troops, especially of border districts, it is advisable to set up an authorized assistant driver, which, incidentally, will make it possible to have a definite reserve of drivers in the large units for the restoration of the combat effectiveness of these large units.

At the conference many speakers spoke about the low average speeds and poor cross-country mobility of a considerable part of the combat and transport equipment, which does not satisfy the present-day demands placed upon troop mobility. In connection with this it was proposed that those districts located a considerable distance away from the probable theaters of military operations not have heavy tanks and certain other equipment whose march capabilities are inferior to those of medium tanks.

In order to substantially increase the length of a day's march, it is necessary to more quickly produce general-purpose combat vehicles with superior specifications (average movement speeds of 40 to 50 kilometers per hour, high buoyancy and cross-country mobility, large mileage reserve in fuel).

Negotiation by troops of zones with high levels of radiation. The selection of a particular method to negotiate zones of radioactive contamination, in the opinion of conference participants, will to a considerable extent depend on the timely and correct definition by commanders and staffs of the nature of the radioactive contamination. In connection with this, it was proposed that the forecast of the radiation

and chemical situation be done by specially trained groups, whose approximate size, as the experience of exercises shows, might be two to three men in a division, not less than five to six in an army, and 12 to 15 in a front. Organizationally these groups should be part of the operations organs of the staffs; they must be provided with communications means as well as with the necessary means of "minor" mechanization to rapidly produce estimates and reproduce graphic documents.

The conference participants also pointed out the need to develop as rapidly as possible automatic means of forecasting the radiation situation and introduce them in the troops. Such means must determine the ground zero, yield, and type of burst, and the speed and direction of propagation of the radioactive cloud. Electronic computers, after processing the data with respect to all factors, must produce maps depicting the zones of contamination.

The wish was also expressed to have in each large unit a squadron of helicopters, and in an army, a mixed air regiment (helicopters and aircraft) to refine the forecast results; and for conducting chemical and radiation reconnaissance on the ground, to have, instead of the BTR-40KhR and the BRDM-KhR, combat vehicles with a high factor of attenuation of the effect of radioactive substances on the crew and with more powerful radios. Furthermore, in large units it is advisable to use all the command tanks and part of the line tanks for these same purposes after equipping them with the appropriate instruments.

It is generally known that the capabilities of the troops, as they are presently organized, to negotiate zones of contamination are extremely varied and depend on the extent of their protection against the effect of radioactive radiation. At the present time, therefore, the matter of increasing the capabilities of troops to negotiate zones of contamination is extremely urgent. The solution of this problem, in the opinion of Colonel CHERNOV, must proceed along the lines of producing special combat vehicles equipped with fire means for the conduct of fire on the move by the personnel and with room for 10 to 18 men. This vehicle must be wheeled with centralized inflation of tires, amphibious, with eight to 15 millimeters of armor protection, absolutely airtight, and with a filtering ventilator. These same vehicles, specially equipped with means of communications and signalling, can be used for the control posts of units, large units, and armies.

Organization of road traffic control service. When troops are moving over a great distance, in the opinion of many speakers, it is advisable to

organize the road traffic control service according to the principle of dividing the zone of movement into belts, areas, and sectors, making it possible to use the entire road network available here to bypass destroyed and contaminated sectors and increase the rates of movement of the troops.

This principle for the organization of road traffic control service can be implemented if the front has at its disposal two to three road traffic control brigades and the army has two to three road traffic control battalions. But even with this, the main efforts of the road, road traffic control, and special units, as well as of the engineer troops, must be concentrated only in the most threatened areas and on the routes that make up the basic transportation lines.

Procedure for the commitment of front (army) troops to an engagement. Most of the speakers on this matter expressed the idea that, before the troops are committed -- especially tank troops -- to an engagement, a certain amount of time is still necessary to reorganize the columns in conformity with the concept of the battle, perform technical inspections, replace the tracks on a number of vehicles, as well as for rest and preparation of the personnel for combat actions. It was proposed that the areas in which all this work, as well as the unloading of troops, is to be done, depending on the situational conditions, be established at a distance of 150 to 300 kilometers from the front line, and that the departure areas for the first-echelon large units be designated 30 to 70 kilometers away from the line of commitment to the engagement. The movement of troops up to the lines of deployment must be so planned that the large units and units attack the enemy immediately following the first nuclear strikes at a high rate of speed and simultaneously.

The preparatory fire for the commitment to the engagement may consist of a series of successive nuclear strikes and artillery strikes. The maximum number of the front's missile large units and units, including also the missile brigades of the front's second-echelon armies and of the armies conducting combat actions in the front's zone of commitment to the engagement and on its flanks, must be allocated to participate in the preparatory fire.

Deserving special attention is the matter of organizing the reconnaissance of targets and installations so as to deliver nuclear strikes against them. Therefore, in both the main report and the presentations of conference participants (General DUDINSKIY, Colonels POLEZHAYEV and MIROSHNICHENKO) it was remarked that the presently existing system of detecting installations and targets to be destroyed with nuclear

weapons and transmitting the data to the troops clearly does not meet modern requirements. The reconnaissance forces and means available in armies and large units are small in number and their capabilities are extremely limited. In the opinion of the speakers, it is necessary to revise the organizational structure of reconnaissance organs, from regiment to army, as well as their weapons and technical equipment, and bring them into full conformity with the tasks entrusted to them. The front must have in its complement one or two operational air reconnaissance regiments and one or two tactical air reconnaissance regiments and the armies must have a reconnaissance squadron.

Planning the movement and troop control. The report and a number of the presentations touched upon many of the matters connected with support for the movement of troops on the territory of the member countries of the Warsaw Pact. For these purposes conference participants proposed having during peacetime, or at least in a period of threat, permanent representatives in the general staffs of these countries for the efficient resolution of such matters as coordination of the times for supplying rolling stock, prior preparation of crossings over all water obstacles, preparation of detours and bypass routes near major administrative and economic centers, organization of the road traffic control service and air defense, organization of materiel and medical support, allocation of communications lines and means, prior processing of mutual information on the radiation situation and on the weather service, etc.

At the conference, considerable attention was devoted to matters of the organization of communications and of troop control. Generals KREMENSKIY and BATALOV, Colonels MATVEYENKO and CHERNOV, and others discussed the pronounced backwardness of troop control methods relative to modern methods and forms of conducting combat actions. In spite of the enormous changes in the organization and equipping of the armed forces that have taken place in the postwar period, present-day organs of control and especially their technical equipment remain at the level of the Great Patriotic War period. In order to thoroughly improve troop control it is necessary to go in for decisive changes in the organizational structure of the present-day organs of control and for an improvement of their level of technical equipping.

Colonel General BURDEYNYY pointed out that the restructuring of control organs must take the path of increasing the mobility, cross-country capability, and armor protection of control posts; reducing the numerical strength of staffs and control posts and having them achieve high efficiency in their work, and widely introducing means of mechanization and

automation and dependable radio means into control. In the process, the front (army) commander and the commanders of large units must be freed from having to resolve numerous secondary matters. For this it is necessary to grant greater independence to the chiefs responsible for the organization of all types of combat and rear services support and to resubordinate some of the chiefs of directorates and departments to the chief of staff of the district (army) and to the deputy commander for the rear.

In a number of speeches it was mentioned that staffs are required as before to work out cumbersome and sometimes utterly unnecessary graphic and written documents. In compiling such documents, those staffs which work them out spend time unproductively; and in studying them, those to whom they are addressed also do this. It is necessary to more decisively reduce the number of documents to be worked out and to simplify their content and form. General KREMENSKIY proposed making maximum use of standard documents with prepared formats where only the necessary data have to be written in.

As for communications, in the zone of movement of front troops they will be based on the existing communications network (grid) over the circuits of the permanent overhead lines in the zone of movement. The front needs three or four communications axes interconnected by lateral lines every 150 to 170 kilometers.

To ensure control during movement on the territory of the member countries of the Warsaw Pact, the conference participants proposed the prior preparation on the territory of these countries of a developed network of auxiliary communications centers and command-and-observation posts suitable for use for military purposes, as well as the allocation of specific circuits and the availability of the necessary maintenance subunits to service and operate them.