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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

10 March 1977

MEMORANDUM FOR: The Director of Central Intelligence
FROM : William W. Wells
Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Organizing the
Supply of Topographic Maps to Formations
Advancing from the Interior

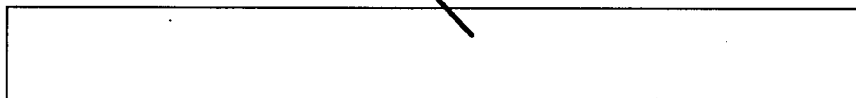
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article emphasizes the importance of the timely supplying of troops and staffs with topographic maps, particularly when a reserve front is moving forward over great distances for commitment to an engagement. The considerable work and time involved in delivering the great number of maps required necessitate increasing the capabilities of the front topographic map depot by setting up depots at full wartime T/O strength and mobile reserves in military districts. The matter of the availability and safekeeping of map reserves at central and military district depots also is discussed. This article appeared in Issue No. 2 (81) for 1967.

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

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Intelligence Information Special Report

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COUNTRY USSR

DATE OF INFO. Mid-1967

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DATE 10 March 1977

SUBJECT

MILITARY THOUGHT (USSR): Organizing the Supply of Topographic Maps to Formations Advancing from the Interior

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (81) for 1967 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is General-Leytenant N. Volodin. This article emphasizes the importance of the timely supplying of troops and staffs with topographic maps, focusing on the supply procedures in a reserve front during a movement forward over great distances and commitment to an engagement. The considerable work and time involved in delivering the great number of maps required necessitate increasing the capabilities of the front topographic map depot. For this it is proposed to set up depots at full wartime T/O strength and mobile reserves in military districts. The matter of the availability and safekeeping of map reserves at central and military district depots also is discussed. End of Summary

[REDACTED] Comment:

The author also wrote "The Operational Training of Generals, Senior Officers and Staffs" in Issue No. 1 (89) for 1970 [REDACTED]. 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. [REDACTED]

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Organizing the Supply of Topographic Maps
to Formations Advancing from the Interior

by
General-Leytenant N. Volodin

Among the measures to increase the combat readiness of formations for conducting operations in the initial period of a war, as a number of authors have already noted,* an important place belongs to the timely supplying of troops and staffs with topographic and specialized maps, as well as with catalogs of coordinates for geodetic and gravimetric points. Neither the preparation for an operation or battle nor the actual conduct of combat actions is conceivable without this.

Of course, the organization of topographic support and the topographic service capabilities must, now in peacetime, be made to conform to the operational assignment of formations and to the nature of their possible actions. As regards troops of military districts, on the basis of whom reserve formations will be formed, the supplying of them with topographic maps must be organized taking into account the following specific conditions.

1. For commitment to active combat actions, the troops of a reserve front, for example, must carry out marches of many days over considerable distances, due to which the need arises for topographic maps not only of the area of the operation, but also of considerable territory where the forward movement of units and subunits will be carried out. In addition, as a result of extensive destruction and radioactive contamination of vast areas caused by enemy nuclear strikes, great detours will have to be made which deviate from previously planned routes. Therefore, large units and units will need topographic maps covering the new routes. Resupplying troops and staffs with topographic maps during the march may be necessary as a result of these supplies being destroyed by nuclear strikes. The fulfilment of these tasks is achieved by setting up minimum reserves of topographic maps in advance directly in the staffs and troops and also by having maps available in the staffs of armies.

* Collection of Articles of the Journal "Military Thought", No. 2 (78), 3 (79), 1966.

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2. The line and area of the commitment of reserve formations to an engagement cannot be precisely determined in advance. They will depend entirely on the results of the operations of first-echelon fronts. The directive for committing a reserve front to an engagement (excluding possible combat actions directly from the march) may arrive two, or, at most, three days before this happens. This is the length of time the front topographic service will have for obtaining topographic maps from the center and for delivering them to all levels of command, from the staff of the front to the platoon commanders (tank crews). The volume of this work is considerable; altogether, for the complete support of a front offensive operation, from 12 to 18 million copies of topographic maps of various scales are needed, depending on the combat strength of the front.

Much has been done in recent years to enable the topographic service to handle such a great work load. Specifically, the preparation of depot personnel and loading-unloading equipment is carried on continuously so as to accomplish the tasks of operational support of staffs and troops with topographic maps and coordinate catalogs. Steps are taken to reduce and simplify operational-accounting documentation and to organize the mechanized accounting of maps using punch-card calculators.

However, individual problems are still unsolved. Specifically, it is very important to expand the capabilities of the front topographic map depot and to ensure the safekeeping of map reserves at central bases and military district depots. We shall examine this in more detail.

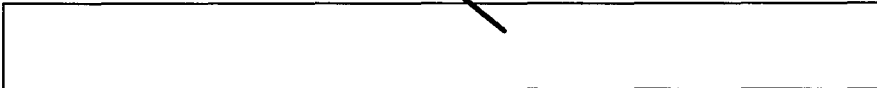
Capabilities of a front topographic map depot in supporting troops. Current regulations stipulate the following plan for supplying troops with maps. Center-front-army (corps)-division-regiment-battalion. The primary supply organ which obtains maps for the front directly and delivers them to staffs and troops according to the above plan is the front topographic map depot located in the vicinity of the forward front rear services base, that is, at a distance of 200 to 250 kilometers from the first-echelon troops.

Let us assume that the center delivers the necessary maps to the forward base area by the time the combat task is handed down to the front. Will the front topographic map depot be able to deliver them to the troops within 48 hours according to the above plan?

An analysis of the T/O structure, numerical strength and transport means of a topographic map depot which is set up to support a reserve front and of the actual volume of work which must be carried out in an extremely limited period of time shows that such a task for the front topographic map

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depot is excessive.

The overall work volume -- unloading maps needed for the support of front operations from railway cars or air transports, delivering them to the depot deployment area, packing and arranging them in the prescribed order according to scale and nomenclature, putting together a set of maps for each army, large unit and unit subordinate to the front and, finally, loading them onto vehicles or aircraft for delivery to the troops -- when figuring by means of current norms, comes to a rated output per man-hour of about 2,200, or in terms of each depot worker, approximately 85 hours, that is, three and a half days of continuous work. Even under conditions of the top-priority support only of first-echelon armies and large units, the collecting and delivery of maps to army depots cannot be accomplished in less than three days, not counting the delivery time from army depots directly to the troops.

The time expended for receiving and delivering maps at the army-battalion level, as can be seen from the table below, totals an additional period of about 36 hours.

	Map acquisition time, in hours	Time for making up map sets, in hours	Map delivery time, in hours
Army	7	6	2
Division	8	3	1
Regiment	2	2	1
Battalion	1	1	-
Totals	18 hours	12 hours	4 hours



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Thus, the total time for delivering maps to the troops, which includes their acquisition by the front depot from the center, comes to more than four days, that is, by the time the combat actions of the reserve front begin, there will not be a sufficient number of maps. It must be kept in mind here that the listed data on labor hours are somewhat low due to the fact that the norms used in the calculation had been formulated from the experience of personnel who had worked at depots for a number of years. But front and army depot personnel, brought up to strength with soldiers and noncommissioned officers from the reserve during completion of mobilization, will not possess such experience and, at first, may be used primarily for loading and unloading work.

The most practical way to reduce the time it takes to deliver maps to troops, in our opinion, may be to set up in advance, in peacetime, in military districts which are deploying reserve fronts, front topographic map depots manned at full wartime table of organization strength, and to set up mobile reserves there of maps depicting the most probable operational axes for reserve front actions.

The availability and safekeeping of reserves of topographic maps at central bases and military district depots. The troops of military districts, on the basis of whom reserve fronts will be formed, have only stationary depots, the majority of which are located in areas which may be subjected to nuclear strikes as early as the first days of a war. The destruction of these depots will put the military district in an extremely difficult position. Therefore, upon subsequently receiving a specific operational task, troops of a formation, not having the necessary mobile reserves of topographic maps, may be unprepared for conducting combat actions. In order to prevent this and to ensure the safekeeping of maps, it is advisable to move them beforehand, during peacetime, to a safe area and place them right on the ground.

However, calculations regarding the carrying out of work involving the rebasing of map reserves (when maximum use of depot personnel as well as the allocation of additional manpower and motor transport equipment are taken into consideration) show that seven or eight days are required. Moreover, even when the depot has been successfully rebased within this time limit, an additional three or four days will be needed to arrange and prepare the maps for issuing at the new location.

Thus, at the most critical period, when it will be necessary in a short time to supply a great number of topographic maps to the troops of the military district, as well as provide operating first-echelon fronts

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with these maps as directed by the center, depots will be virtually inoperative and will not be able to carry out the tasks assigned to them.

All of this confirms that reserve topographic map depots must be set up and minimum reserves must be transferred to them in advance leaving at the main depots only those maps needed for the combat training of military district troops. Reserve depots should be located in areas against which enemy nuclear strikes are unlikely to occur.

The establishment of such depots does not require great expenditures of materiel or any increase in the table of organization since any unheated building may be used for map storage provided that it is sturdy and dry and has dimensions of from 1,000 to 1,200 square meters and is equipped with the necessary shelving; these depots will be maintained by personnel of operating military district depots.

The availability in military districts making up the reserve fronts of topographic map depots, which are fully equipped in accordance with the wartime table of organization and maintained in a state of constant readiness, as well as the proper location of them, create conditions for supplying troops with topographic maps in the shortest possible time.

Let us take, as an example, a case where the military district has a mobile front depot which includes 16 ZIL-164 transport vehicles with two-axle trailers, each of which can carry a consignment of approximately 350,000 map copies (this totals more than five million maps). With this organization, and considering the availability of map reserves in army and large unit staffs, approximately 60 percent of the front's requirement for topographic maps used for conducting an offensive operation can be met.

Having the indicated mobile reserves of maps on hand, the front depot will be able to proceed with the support of first-echelon armies within three or four hours after the front has been assigned its combat task and can deliver maps to the troops in approximately two days. The movement forward of depots together with the main forces of the front permits the rapid and uninterrupted supplying of troops with necessary maps to be implemented at any time. Moreover, the depot, having arrived without reducing its state of combat readiness at the area of the forward front rear services base, will be prepared for the rapid handling of maps sent from the center to support further actions.

The plan for supplying a reserve front with topographic maps, organized with due regard for the above-mentioned observations and

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proposals in the various periods will be as follows.

The deployment and complete mobilization of a front. All staffs, large units and units are supplied in advance with "emergency reserves" of topographic maps of local areas, which will enable them to support the organization of troop movements to the departure areas and to conduct all projected measures.

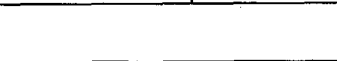
The movement forward of front troops over great distances and their commitment to an engagement from the march. All staffs are supplied with maps on scales of 1:200,000 and 1:500,000 for any area of the movement forward in the Western and Southwestern theaters of military operations and with maps on a scale of 1:100,000 for some of the most important areas. Staffs which have lost topographic maps as a result of enemy nuclear strikes are rapidly resupplied from the reserves of the mobile front depot. Units and large units which join the front from other military districts are supplied with maps in the form of previously prepared sets of the emergency reserves which are stored in a military district reserve depot. The complete supplying of maps to first-echelon troops committed to the engagement from the march is also accomplished from mobile reserves from the front topographic map depot.

Commitment of the front to an engagement. All staffs and troops are provided with a minimum necessary map reserve in the form of their available emergency reserves. At the time the commander makes his decision for carrying out the combat task, the troops of the front are supplied from the mobile reserves of the front topographic map depot with 50 to 60 percent of the required number of maps. A complete supplying of maps up to the full requirement is carried out before or during the operation on the basis of maps received from the center.

In conclusion, it should be emphasized that supplying the troops of a reserve front with topographic maps at the beginning of a war by obtaining them from the center or stationary depots of other military districts through whose territory the front is moving forward, cannot be guaranteed under conditions of the enemy's massed employment of nuclear weapons.

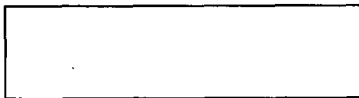
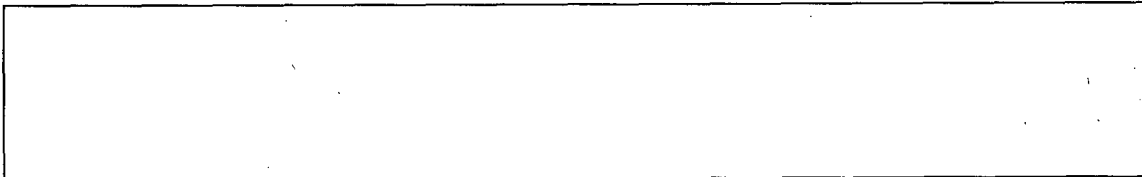
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In our opinion, in order to reliably support all actions of the reserve front, from its mobilization expansion through its commitment to the engagement, it must have autonomous reserves of topographic maps and coordinate catalogs of geodetic points kept as "emergency reserves" in all staffs and troops having combat assignments and also as mobile reserves in the front topographic map depot which are established in peacetime in accordance with the wartime table of organization and kept in a state of constant readiness.



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