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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

15 November 1976

MEMORANDUM FOR: The Director of Central Intelligence
FROM : William W. Wells
Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Combat with Enemy
Antitank Means in an Offensive Operation

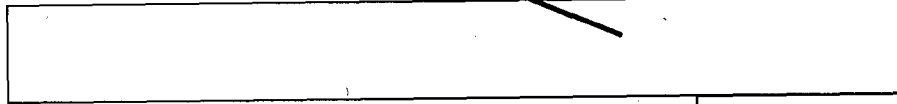
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article provides a brief analysis of the capabilities of US and NATO antitank weapons, including the helicopter-fired SS-11 missile, and antitank defensive tactics, in order to define the tasks and means of countering them. The author stresses the need for timely artillery and air reconnaissance and recommends concentration of artillery fire rather than dependence on nuclear weapons. The employment of smoke screens and illuminating shells also is considered a useful tactic. This article appeared in Issue No. 2 (84) for 1968.

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-1968

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DATE 15 November 1976

SUBJECT

MILITARY THOUGHT (USSR): Combat with Enemy Antitank Means in an Offensive Operation

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (84) for 1968 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is General-Major of Artillery A. Prudnikov. This article provides a brief analysis of the capabilities of US and NATO antitank weapons, including the helicopter-fired SS-11 missile, and antitank defensive tactics, in order to define the tasks and means of countering them. The author stresses the need for timely artillery and air reconnaissance and recommends concentration of artillery fire rather than dependence on nuclear weapons. The employment of smoke screens and illuminating shells also is considered a useful tactic.

End of Summary

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Combat with Enemy Antitank Means in
an Offensive Operation

by
General-Mayor of Artillery A. Prudnikov

Under present-day conditions army and front operations will be conducted with the belligerents widely employing new means of destruction and particularly nuclear, chemical and bacteriological weapons. In exploiting the results of nuclear strikes, ground forces will rapidly break through to the operational depth and conclude the defeat of the opposing enemy. The tank troops will play a leading role in this. However, the successful advance of tank large units on the axis of the main attack draws the special attention of the enemy. Besides the delivery of strikes with nuclear and chemical weapons, the enemy, in combating tanks, employs artillery, tanks and a large number of special antitank means, the combat capabilities of which are continually increasing. These weapons first of all must include antitank guns, antitank guided missiles, recoilless guns, rocket grenade launchers and various man-made antitank obstacles. Almost all of these are highly effective in destroying armored targets at various ranges (see table).

Antitank armament for helicopter aviation is being developed and introduced into the ground forces of the United States, the Federal Republic of Germany and other capitalist states on an increasingly large scale. For example, the Alouette III (FRG), UH-34, Kaman, Bell (US), Wessex and Whirlwind (Great Britain) are armed with SS-11 missiles. The long-range plan is to arm the Bell UH-1B Iroquois helicopter with the new Shillelagh and Tow antitank guided missiles. Extensive research is being conducted to reduce the adverse effect of helicopter fuselage vibration on firing accuracy.

On the basis of the results of firing range tests and the combat employment of antitank guided missiles from helicopters, American specialists have concluded that their use is desirable in combat with tanks and various other armored targets. The tactic of firing them from the rear and flanks, when tanks move out into open terrain, is considered the most acceptable.

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Analysis of existing antitank means already allows us at this time to determine several trends in their further development. These may include: increasing the range of fire and armor penetration, as occasioned by the higher combat characteristics of modern tanks; expanding the range of combat utilization, especially of such means as antitank guided missiles, to destroy armored as well as other important small-size targets; increasing firing accuracy by increasing the flight speed of missiles and equipping them with new, more effective firing and detection devices; reducing the weight and dimensions of weapons as required to ensure high mobility and maneuverability on the battlefield, as well as maximally reducing the possibility of their detection and destruction; and, mass arming of helicopters and tanks with antitank guided missiles.

While developing new models and improving existing ones, the commands of the US and West German armies at the same time are continuing to improve the table of organization and equipment of units and large units, and to search for new tactical procedures and methods for utilizing antitank means in the battle and the operation.

At the present time an American mechanized division has more than 70 items of various antitank means, and a German motorized infantry division has about 150. Furthermore, we must not fail to take into consideration that subunits and units are heavily equipped with Panzerfaust-type antitank grenades. For example, a German division has more than two thousand of them, an American division about one thousand.

Significant strides recently were made in the area of developing the theory of employing these means to establish a powerful antitank defense. The command of the armies of our probable enemies recognizes the necessity of destroying the bulk of the attacking enemy tanks chiefly while they are moving forward, that is, before they approach the line of contact. In a defense it is considered desirable to situate antitank means to allow maximum utilization of natural obstacles and antitank minefields. The depth of an antitank defense is created first of all by drawing upon the antitank means of brigade commanders and the reserves of the large unit commander, and is based mainly upon the subunits and units concentrated on those axes which most probably will be threatened by tanks. NATO military leaders as a

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whole believe that a battalion, brigade and division of existing organization are capable of organizing a stable antitank defense with the antitank means they have.

Thus, even such a brief analysis of the combat capabilities and the number of antitank means in units and large units, and the views of the US and German army command on utilizing them, allow us to conclude that in an offensive operation, combat with enemy antitank means must be conducted continuously throughout the depth of the combat tasks. This combat cannot be considered isolated or divorced from the accomplishment of the overall tasks carried out by the army (front). It must be conducted with all the forces and means that attacking troops have at their disposal.

Continuous and timely destruction of enemy antitank means in an offensive is attained by: advance allocation of the necessary forces and means capable of conducting a battle successfully; timely allocation for destruction among units, large units and formations of identified antitank means and reserves; planning and accomplishment of the destruction of these means to the entire depth of the task, especially from the moment tanks approach their effective fire range (2.5 to three kilometers).

The basic means of defeating opposing enemy groupings, as well as destroying his antitank means, is nuclear weapons. But, as we know, the degree to which these weapons damage the enemy will not be the same everywhere. Antitank means deployed in the first echelon of a defending enemy in a number of instances will not be hit by nuclear strikes under conditions of close contact with our troops. They have to be neutralized (destroyed) by the fire of artillery and other means.

Furthermore, the high maneuverability and fire effectiveness of antitank guided missiles permits closing, with a small number of launchers and in a short time, the breaches made in enemy battle formations by our nuclear strikes, and the gaps between his large units and units into which our attacking large units are rushing. Therefore, artillery fire to neutralize antitank means should be planned and carried out not only by attacking defended areas (lines) but also allowing for possible maneuvering by troops with the objective of breaking out on the flanks and rear of the enemy. Mobile fire means such as self-propelled

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artillery, antitank guided missiles, as well as motorized rifle subunits equipped with infantry combat vehicles, can be of great assistance to tanks under these conditions.

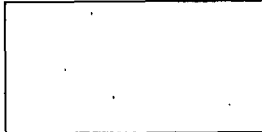
Carrying out these complex and crucial tasks first of all requires reliable and accurate reconnaissance data. Hence the efforts of all reconnaissance means must be directed toward obtaining information on enemy antitank means, especially antitank guided missiles and tanks, in a timely manner. It is important to learn their location, antitank fire system and the nature of man-made obstacles as well as the number of them.

An army (front), as is known, has various types of reconnaissance subunits in its T/O. However, some of them (radiotechnical, sound ranging, radar) possess quite limited capabilities for reconnaissance of enemy antitank means. The most accurate and complete data actually can be obtained from visual reconnaissance and the artillery photogrammetry service alone, which are capable of identifying small-size targets and determining their coordinates. A sufficiently dense network of observation posts can be set up in a combined-arms army zone to allow reconnoitering the antitank defense system of the battalions in the enemy's first echelon. However, they are not able to spot antitank means situated in the far depth.

The unavailability to the army (front) chief of rocket troops and artillery of helicopters and spotter reconnaissance aircraft reduces the capabilities of artillery reconnaissance for timely location of the antitank means of second echelons and reserves, which can have a considerable effect on tank actions in the depth of the enemy defense. In the meantime, therefore, this task must be levied upon combined-arms and air reconnaissance.

In the postwar years substantial changes have taken place in the development and improvement of conventional means of destruction. The mobility, firepower and striking power of tank and motorized rifle divisions have increased. The possibilities for combat against enemy antitank means while conducting combat actions without employing nuclear and chemical weapons have increased accordingly.

Artillery units have in service systems which are capable of firing at a range of up to 27 kilometers. The missile units of



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motorized rifle (tank) divisions are capable of launching both nuclear and conventionally-armed missiles at considerable ranges. Finally, an army (front) includes operational-tactical missile brigades, which often can deliver strikes against enemy troop concentration areas situated at a considerable distance from the line of contact. Aviation capabilities have increased significantly.

It is known that enemy antitank means will represent not group targets, but a large number of individual targets dispersed along the front and into the depth in the battle formations of forward-echelon subunits and beyond the areas they are defending. Targets situated in strong points have to be neutralized (destroyed) in the preparatory fire phase, and those located outside them both during preparatory fire and in the fire support phase -- by the concentrated fire of artillery from indirect fire positions and of direct-aiming guns, as well as by the fire of attacking tanks.

In favorable weather conditions it is advantageous to use smoke shells to lay a smoke screen and blind enemy antitank means in the final artillery strike of the preparatory fire phase. Calculations show that one 122-mm howitzer battalion in a flank wind up to five meters per second can reliably screen a sector up to two kilometers wide with smoke. Maintaining the smoke screen for eight to ten minutes (time for the attacking tanks to negotiate a distance equal to the range of antitank guided missile fire) requires expending about 80 to 100 shells per kilometer of front. It also is desirable to employ smoke screens as well as illuminating shells to blind infrared reconnaissance devices and the night sights of tanks and antitank guns in night offensive actions of army troops.

At the moment of attack and during the offensive, as before, it is very important to maintain close cooperation between tanks and motorized rifle subunits. Continuous fire activity, even of low density, significantly hampers firing, especially of antitank guided missiles, and reduces the fire effectiveness of other surviving antitank means, including grenade launchers.

A task of no little importance is combat with enemy artillery, which can inflict damage on attacking tanks by concentrated and barrage fire and, by approaching the direct fire

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range -- destroy them by direct-aiming fire, using armor-piercing and hollow-charge shells.

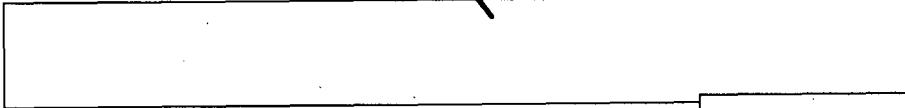
Enemy (particularly tank) reserves in concentration areas, on routes of advance and on lines of deployment to deliver counterattacks and counterthrusts are hit by air strikes, artillery fire and missiles throughout the operation.

Destruction and neutralization by artillery fire of enemy ground-based reconnaissance means and particularly of radar stations surveilling moving ground targets, are of great importance.

Combat with enemy antitank means is inseparably linked with fulfilling the basic tasks of the army rocket troops and artillery in an offensive operation. Therefore, the commander and staff of army rocket troops and artillery, in proposals for the combat employment of rocket troops and artillery in an operation, must:

- determine the targets and tasks of combat with antitank means;
- provide for destroying these means in the enemy reserves and in their concentration areas, and when the reserves are delivering counterattacks and counterthrusts;
- calculate the artillery and ammunition requirement, including the requirement for smoke and illuminating shells, of first-echelon divisions for combating antitank means;
- allocate reconnaissance means to divisions operating on the axis of the main attack;
- organize air and other types of reconnaissance to detect antitank means in support of divisions advancing on the main axis;
- provide for maneuvering of the army artillery and antitank reserve (reserves) to reinforce the artillery grouping on those axes where enemy antitank means

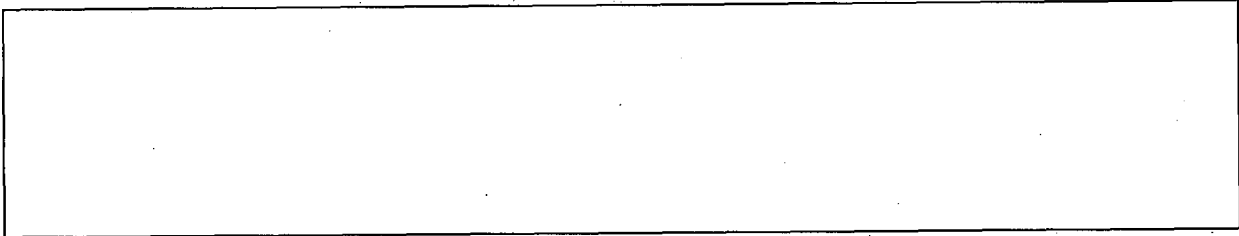
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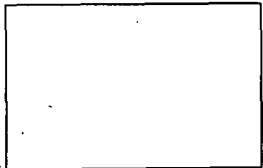
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represent the greatest threat to our troops.

All these steps are reflected in the plan for combat employment of army rocket troops and artillery, and are transmitted to executors when the combat tasks are assigned and while cooperation is being organized.



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Table

Tactical-Technical Specifications of Antitank Means

	Cobra (FRG)	Entac (France)	SS-11 (France)	Vigilant (Great Britain)	Milan (FRG-France)	Hot (FRG-France)	Shillelagh (US)	Maw (US)	TOV (US)	106-mm recoilless gun (US)	90-mm antitank gun (FRG)
Range of fire in meters	100-1,600	400-2,000	500-3,000	230-1,600	25-2,000	75-4,000	3,000	1,000	3,000	1,200	2,000
Launch weight of missile in kilograms	10	12	30	14	6.6	20	18	14.5	17.4	7.9	
Flight speed in meters per second	85	85	140	150	180	280	220		300		
Armor penetration in millimeters	500	500	600	600			500			380	390

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