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SUBJECT

Military Thought (Poland): "Conclusions Drawn from a Tactical Exercise of an Operational-Tactical Missile Brigade Conducted by the Rocket and Artillery Troops Command of the Pomeranian Military District"

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SOURCE

Summary

This tactical exercise was a three-phase, midsummer training operation held within a 50-to-60-kilometer area of the Pomeranian Military District in which an army operational-tactical missile brigade took the offensive during the opening stages of hostilities under threat of nuclear attack. The three phases, each of 24-hour duration, included a pre-operational compilation of emergency readiness plans, the nighttime deployment of the missile brigade from its barracks to a combat area, the delivery of missiles to the deployment area, two night redeployment exercises, and two daytime tactical exercises during which the brigade executed a total of 18 nuclear and chemical strikes. From a Number 3 state of readiness, it took the brigade nearly 1.5 hours to execute the first nuclear strike, a period which the authors considered absolutely unsatisfactory.

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Lessons derived from the training operation indicated a need for better communications equipment (such as substituting R-125 radios for the R-108 model) to permit more effective technical support, especially in the delivery of missiles; stricter attention to training and the application of specific techniques used under field-combat conditions in order to shorten the time required by the brigade to achieve a state of combat readiness; more effective use of data transmission systems; better camouflaging of units in exposed areas; and, finally, improvement of reconnoitering capabilities to include basic training in materiel and systems familiarization. The authors conclude that there is a need for annual combined training operations, preferably with division-level participation, and for improved brigade-level mobile communications equipment.

End Summary

Headquarters Comment:

This article appeared in issue number three for 1967 of Mysl wojskowa (Military Thought), a quarterly publication of the Polish Ministry of National Defense. The publication is classified Secret. For convenience, the paragraphs of the article have been numbered, although they were unnumbered in the original text. Where the exact meaning of a word or phrase is uncertain, the Polish wording is given in parentheses. The same word is used in Polish to mean "rocket" and "missile". Interpolations in the text are identified by square brackets. Underlining is of the original.

The following abbreviations appear in the text.

ABROT army operational-tactical missile brigade

APTBR army field missile-technical base

BROT operational-tactical missile brigade

drot operational-tactical missile battalion

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Kpz motorized rifle company

OPL antiaircraft defense

OW military district

paplot antiaircraft artillery regiment

PNN (probably) ground navigation points

POT (probably) technical support base

POW Pomeranian Military District

sp command post

SS launch site

SWL (probably) air coordination staff

WRiArt rocket and artillery troops

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CONCLUSIONS DRAWN FROM A TACTICAL EXERCISE OF AN OPERATIONAL-TACTICAL MISSILE BRIGADE (BROT) CONDUCTED BY THE ROCKET AND ARTILLERY TROOPS COMMAND OF THE POMERANIAN MILITARY DISTRICT

by Lt. Col. R. Szymborski and Lt. Col. St. Oblowski, Staff Academy Graduate

- 1. This was an exercise of the operational-tactical missile brigade of an army (ABROT) in support of that army during an attack in the initial stage of war while under threat of enemy weapons of mass destruction.
- 2. In phase one, the problems of the period of threat and increased defense readiness were worked out on the basis of instructions given the participating troops one week in advance. The brigade headquarters was charged with preparing documentation on the control and direction of fire, reconnoitering launch sites, assigning missions to the subunits, and preparing personnel and materiel support for the exercise. On the evening of 13 June [1967], the commander of the Rocket and Artillery Troops (WRiArt) of the Second Army inspected the brigade's preparations. The entire headquarters was briefed on the proposals of individual officers and the chiefs of services. Particular attention was given to organizing the brigade's movement from garrison to areas designated as launch sites, partypolitical work, preparation of the launch sites, organization of meteorological support, defense against weapons of mass destruction, and missile-technical support.
- 3. In view of the growing threat in the evening hours of 13 June, the brigade was alerted and moved to a concentration area not previously scheduled. Departure for the assembly points was orderly and was accomplished within the specified time limits. Inefficient traffic control in the barracks area caused unnecessary confusion and some subunits proceeded to the assembly points out of sequence.

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- 4. Upon reaching the assembly points, the brigade was ordered to occupy the concentration area. One and one-half hours after the alert sounded, the brigade formed columns and began a night march to the designated area. The headquarters did not dispatch a reconnaissance group; it confined itself only to designating the areas for the brigade subunits and to dispatching such a group for the limited purpose of selecting the command post. In this situation, several reconnaissance teams operated in the area designated for occupation. Even so, the occupation of the area exceeded the prescribed time limits. In addition, instructions were not followed in dispersing the subunits.
- 5. By 0400 hours on 14 June, an antiaircraft artillery (AAA) regiment arrived by rail to provide protective cover in the area in which the brigade was deployed. During the day, brigade reconnaissance teams reconnoitered an alternate area for launch sites and the brigade head-quarters coordinated with the AAA regiment commander on problems of cover in the event of brigade redeployment. The headquarters also assigned missions in connection with the occupation of an alternate area for launch sites.
- 6. Phase two of the exercise included occupation of an alternate launch site, the organization and launching of the first strike, and carrying out the missions of the first day of the operation.
- 7. In view of the growing threat, the brigade received orders in evening hours of 14 June to occupy the alternate area for launch sites, which was 80 to 100 kilometers from the designated border. Because of the threat, the movement was to be made by battalion. The entire force was moved at night because of the need to conceal the brigade's deployment area and the march route.
- 8. The "West" initiated military operations with conventional weapons during the night of 14 June. By

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the early morning hours of 15 June it had broken through [and penetrated] to a depth of 10 to 30 kilometers. Because of an unfavorable ratio of forces and the danger of the attack faltering, the "West" launched a nuclear strike against a concentration of "East" troops at 0900 hours on 15 June. It was to be supported by reserve units which were to push eastward. At 1000 hours on the same day, however, the rocket troops of the "East" Second Army struck "West" troop concentrations and nuclear weapons. As a result of the nuclear strike by the "East" and its subsequent exploitation by tactical units of the "East" Second Army, the meeting engagement was confined to the evening hours of 15 June and was decided in favor of the "East". During the day, the brigade had launched a total of nine nuclear and chemical strikes.

- 9. Phase three involved moving the brigade to a new area of launch sites and the conduct of a series of fire missions. Following orders from the commander of the rocket and artillery troops of the Second Army, the brigade headquarters staff conducted a reconnaissance of the new area during the afternoon. That night the brigade marched by battalion to the reconnoitered area. In order to strike the approaching reserves of the enemy First Army Corps (German), half of the army operationaltactical missile brigade was deployed from the line of march. During the day of 16 June, to delay the approach of the "East" reserves, the "West" carried out a series of surface attacks on road junctions and troop concentrations and contaminated the area in which the army operationaltactical missile brigade was deployed. After leaving the contaminated area, the battalion was decontaminated by brigade's chemical warfare platoon and was then ordered to continue the march to a previously reconnoitered area. During the day, the brigade launched nine nuclear and chemical strikes. During the evening hours of 16 June, the brigade regrouped and received the signal ending the exercise.
- 10. Two principles were observed during the exercise: first, the brigade did not remain in any area for more than 24 hours; second, troops movements took place only under conditions of limited visibility. The brigade made three movements (including the return to the barracks) in an area of 50 to 60 kilometers. Because summer nights are short, it was impossible to move both battalions under

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conditions of limited visibility. To avoid daytime marches, therefore, the battalion moving along another route was deployed from the line of march in order to execute unscheduled fire missions. While regrouping at night, the brigade moved along the highways at an average speed of 20 to 22 kilometers per hour. The rocket launchers were carried on semitrailers.

- 11. On the basis of the observations made, one must conclude that the brigade is capable of moving at a higher rate of speed. Since the brigade headquarters lacked an exact plan of march, there was no close control of column movement. In the battalions, it was observed that tactical intervals between batteries were not maintained and that too much time was consumed in forming the intervals between columns.
- 12. The maintenance of communications while on the march is a difficult problem, especially at night. Brigade and battalion headquarters capabilities permit the maintenance of communications on the march within a 20-kilometer radius. In order to maintain continuous or at least periodic communication on such networks or on the two-way radio links between such headquarters as those of the army Rocket and Artillery Troops and of the army operational-tactical missile brigade, or between the ABROT and the operational-tactical missile battalion headquarters, radio stations should be sent ahead to the short halt areas to establish communications and submit reports.
- 13. The headquarters of the Rocket and Artillery Troops of the Pomeranian Military District (POW) had as its goal the performance of certain experiments and field tests to streamline command and verify standards and theoretical assumptions. Following is a short narration of the tests and a summary of their results.
- 14. Experiences in organizing missile technical support. The basic mission of the rear echelons of the

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rocket troops during the exercise was to support the army operational-tactical missile brigade and the tactical missile battalions by delivering missiles from the front level through the army brigade to tactical missile battalion level and finally to the batteries at the launch areas. Front and army rear-echelon units (subunits) participated in the exercise; however, the necessary elements of the POT [probably technical support base] of the tactical missile battalions were deployed on line with the first-echelon divisions.

- 15. The exercise showed that the indices relating to missile supply did not deviate from accepted standards. However, because of the size and configuration of the trailers which were used, the missiles should be transported only under conditions of limited visibility. The exercise showed that especially during the attack, when the deployment areas of the army operational-tactical missile brigade and the tactical missile battalions are often known only in general terms, it is important to meet columns delivering missiles and direct them to the areas where the technical support subunits are deployed. During the exercise this problem was solved in the following manner: the subunits delivering the missiles and the recipients were informed of a precise time and place to meet the missile-transport columns. From there, the columns were conducted to the right area by the recipients. The designated supply point should provide [proper] meeting conditions and concealment, and should not restrict movement in the given area.
- 16. Evidently, the communications equipment (R-108 radios) of the delivering subunits of the army field missile-technical base does not insure complete continuity of control. Therefore, to maintain communications with the missile delivery columns and to effect possible changes in delivery routes or meeting points, these subunits should employ R-125 radios, which permit communication up to a distance of 20 to 40 kilometers. The vehicles on which these radio sets are mounted could also transport the column commanders.
- 17. Verification in practice of time schedules and of capabilities for launching the first strike under

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One of the basic problems of conditions of limited time. the above exercise was to launch the first strike under conditions of limited time for missile delivery. In this phase of the operation, the staff directing the exercise set as its goal the supply of all missile launchers (in compliance with the plan of the first attack), occupation by the brigade of designated launch sites, and the launch of nuclear strikes by all batteries in the launch area. Five batteries in the launch area participated in the first salvo; the sixth battery was on standby. There were two main parts to the primary goal of the exercise. The first concerned the modification of the system for equipping brigades with missiles delivered by the missile delivery battalion to the army field technical base, forwarded to the brigade's technical battery, and finally delivered to individual batteries in the launch area. Secondly, it was necessary to verify the actual time needed to launch the first attack with all batteries in the launch area (with the exception of those on standby) which were preparing to carry out the planned nuclear attack.

- 18. The ideal solution would be for the brigade to have at its disposal six combat-training missiles (rakieta szkolno-bojowa) for checking count-downs and the batteries' readiness to launch an attack. During the exercise, however, the brigade had three combat-training missiles and three training-aid missiles (rakieta szkolna). Since the district inspection team could inspect the count-down of only one battery, the exercise control officers and umpires were assigned to inspect the remaining batteries.
- 19. The battery was moved to the launch site (SS) upon the signal of the brigade commander. The exercise showed that during this period a very critical aspect was the proper organization of work at the POT [probably technical support base] of the battalions and strict observation of the principles of concealment during occupation of designated launch sites by the batteries. Next, the first nuclear strike was executed. After completion

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of a time analysis, it was established that the launching of the first strike, with the brigade in a Number 3 state of readiness, required about 1.5 hours. (The attack signal was transmitted at 0838 hours; the brigade was ready to fire at 1000 hours, or after 1 hour and 22 minutes.) This time was absolutely unsatisfactory.

- 20. Analysis of the exercise showed that particular attention must be paid to improving the level of combat training and to reducing the time required by the brigade to meach a state of readiness to launch massive strikes. Main emphasis should be on the following elements:
 - improving the efficiency of transmitting fire missions to the fire units;
 - improve the work of technical support bases by better organizing the receipt and transfer of missiles from the transport trailers to the missile launchers;
 - a very well-thought-out and efficient occupation of the launch sites, with the quickest possible attainment of readiness by batteries in the launch area; and
 - more attention given to concealing the movement of the launching batteries.
- 21. Field use of permanent computer centers to determine [the fire] effectiveness indices and properly to assign missions to the batteries of the brigade. In order properly to assign missions to the firing units, the permanent computer center of the General Staff Academy was used. After obtaining data on a given exercise situation from reconnaissance and encoding them according to the "Hurricane" (Huragan) method, the necessary data were telegraphed from the command post (SD) to the computer center, which was the source of indices in coded form.
 - 22. The experiment showed that under field condi-

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ditions it is difficult to maintain efficiently operated teletype communications. If teletype machines are not adjusted exactly, garbles are generated in the transmitted texts, rendering them useless. Experience showed that about three hours are required to obtain data on 20 targets; most of the time is used for encoding and decoding. To shorten data transmittal time and to facilitate quicker contact with the computer center, it would be advisable to transmit on a separate wavelength.

- 23. Effective support of the army operational-tactical missile brigade by an AAA regiment. The exercise did not confirm the need to include AAA subunits in the brigade's marching columns, chiefly because of the low effectiveness of manually directed fire, i. e., fire without use of radar. The AAA subunits should rather insure protective cover by maneuvering along the brigade route of march. AAA subunits should also be in a state of greater readiness during the execution of fire missions by battalions or individual batteries, because at this time they are more vulnerable to detection and attack by aircraft.
 - 24. The problem of antiaircraft cover for the army operational-tactical missile brigade can be improved by attaching self-propelled antiaircraft subunits capable of providing effective fire while the brigade is moving in column formation. It would also seem advisable to organize air observation and reporting posts on the brigade level.
 - 25. Verification of the operational capabilities of the brigade and of rear-echelon subunits of the rocket troops under conditions of intense air action. Operational aircraft were widely used in the rocket troops' exercise in order to train the crews in reconnoitering the means of nuclear attack and in combatting detected targets under realistic conditions. Air operations were directed by the SWL [probably air coordination staff]. After being summoned by radio, the aircraft entered the operational area without the help of PNN [probably ground navigation points], thus forcing the air crews to con-

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duct intensive orientation and reconnaissance. The exercise confirmed the high suitability of passive forms of antiaircraft defense (OPL), especially camouflage. In Western Pomerania, the operational aircraft crews found it difficult to detect the rocket troop deployment areas despite favorable atmospheric conditions and the absence of counteraction on the part of the detected targets. The participating subunits deserve special credit for their resourcefulness in the selection and camouflaging of the command and launch positions. Neither the brigade's batteries nor the batteries which are permanently on duty were detected during the launching of the first strike. On the other hand, the march columns and the AAA subunits which were occupying exposed areas were easily detected.

- 26. Checking defense effectiveness and brigade protection in the face of a threat from sabotage teams. The purpose of including this problem in the exercise was to check the effectiveness of the defense and the protection of the rocket troops from sabotage-reconnaissance teams, as well as to use these teams to locate the main elements of the rocket troops' combat formation.
- 27. The sabotage-reconnaissance teams consisting of one officer and ten enlisted men received orders to locate the rocket troops' combat formation in a 15-square kilometer area. The findings of the reconnaissance team were radioed at periodic intervals to the receiving center of the directorate of the exercise. Three teams participated: two in the areas where the battalions of the army operational-tactical missile brigade were deployed; and one in the army field missile-technical base area. The protection of the army field missile-technical base was organized by an attached motorized rifle company (Kpz) and that of the army operational-tactical missile brigade was provided by organic units. The [diversionary] teams landed by parachute in the troops' operating area a day

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in advance and were able to observe the work of the reconnaiss ance teams and the occupation of positions by the combat formation. The teams stayed for 36 hours in the areas where the army operational-tactical missile brigade was operating and for two days in the army field missile-technical base's area. During this time, the teams reported on the activities of the brigade's reconnaissance teams, reconnoitered and reported the deployment areas of the POT [probably technical support bases] of two battalions, of the technical battery and rear echelon units of the brigade, and of the helicopter landing area. They also captured one GAZ-69, the commander of the meteorological battery, and one map.

- 28. Attention is drawn to the following considerations which are the result of the diversionary-reconnaissance team operations.
 - Teams assigned to reconnoiter rocket troops should undergo training in basic missile materiel familiarization and the fundamentals of its operation. This training will facilitate mission fulfillment and improve the reports submitted.
 - The effectiveness of the diversionaryreconnaissance teams decreased when
 the missile units were protected by
 infantry. The protection of the army
 field missile-technical base could serve
 as an example, since the diversionaryreconnaissance team was unable to penetrate
 the base area.
 - Under favorable conditions the diversionaryreconnaissance teams will be able to provide
 exact data on the disposition of the rocket
 troops. More often, however, reporting is
 only in general terms, (e. g., on the location and type of target). In the latter
 case, supplemental reconnaissance must be
 conducted before an attack is launched.

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- Diversionary-reconnaissance teams can also be used against the rocket troops, especially while they are preparing to launch an attack and when missiles are being delivered. Remotely deployed meteorological stations often are attacked. Therefore, security must be taken into consideration when selecting sites.
- 29. An overall analysis of the above exercise yields the following basic conclusions:
- a. To maintain a high state of combat readiness, annual combined exercises should be conducted (preferably during summer training) involving the operational-tactical missile brigade with extensive participation by rocket troop rear echelons, subunits for cover and protection, aircraft, and diversionary-reconnaissance teams. Such an exercise creates the most realistic conditions for perfecting the leadership of command personnel and their direction of subordinate units on the field of battle. Such an exercise also simulates future difficulties and assignments.
- b. It would seem advantageous in the future to conduct operational-tactical missile brigade exercises jointly with exercises on the division level. The brigade's participation in these exercises, in which often as many as two divisions participate on each side, creates the proper conditions for improving the coordination of the actions of the operational-tactical missile brigade and for overcoming difficulties under conditions for the temporary regrouping of forces. It also helps the commanders to acquire skill in controlling and directing fire.
- c. Because the majority of brigades already have considerable training experience, it would seem advisable to conduct exercises outside their military districts (OW) at least once a year.
 - d. The possibility of target detection by

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aircraft decreases with the judicious application of camouflage, and above all by restricting daytime marches. Therefore, the movement of rocket troops should be completed by dawn.

e. The brigade is equipped with a mobile communications center of the <u>Dukat</u> type which is utilized only to an insignificant degree. The allocation of a mobile communications center of the RWL-1 type with two radio links would be more suitable. Comment: The designation RWL-1 has not yet been equated with a specific type of communications equipment.] The number of radio links presently in the brigade should be allowed to remain the same, thus permitting the requirements of the brigade to be more fully satisfied, especially when on the move.

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