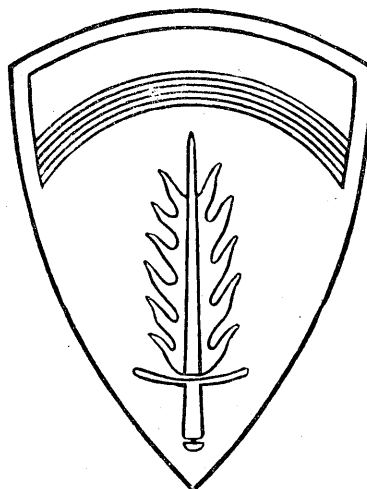


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SMALL UNIT TACTICS

ARTILLERY

Part II

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SMALL UNIT TACTICS

-ARTILLERY-

Part II

By

Wilhelm WILLEMER, Oberst

Historical Division
HEADQUARTERS
UNITED STATES ARMY, EUROPE

Wilhelm WILLEMER

Oberst

Date of Birth: 13 January 1905

Place of Birth: Danzig

WILLEMER joined Germany's professional 100,000-man Army in 1924 immediately after graduating from high school at Stade and was assigned to the 1st Infantry in Koenigsberg, East Prussia. In 1929 he was promoted to second lieutenant, in 1933 to first lieutenant, and in 1936 to captain.

In 1939, WILLEMER was serving in an assignment as a company commander. In this capacity he took part in the Polish campaign, following which he was detailed for General Staff Corps training in a War College course at Dresden. Then, after participation in the Western campaign of 1940, he was transferred to East Prussia to serve on the staff of the 87th Division for participation in the invasion of Russia. While serving in this assignment, WILLEMER was promoted to major and awarded General Staff Corps status. From then on until the last month of the war, he remained on the Eastern front, serving as operations officer of the 15th Division (January 1942-May 1944), operations officer of Army Group North (May-September 1944), and Chief of Staff of the XXVII Corps (October 1944-April 1945). In April 1942 he was promoted to lieutenant colonel, in September 1944 to colonel. In April 1945 WILLEMER was transferred to the Western front, where he was taken prisoner by British forces at Cuxhaven on 8 May.

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FOREWORD

by

Generaloberst Franz Halder

The two reports attached hereto appear to be well suited for use as examples in artillery tactics training. They have been compiled by Colonel Wilhelm Willemer on the basis of studies submitted by General der Artillerie Thoholte. The sketches contained herein are clear and comprehensible and therefore constitute excellent study material.

I am in complete accord with the precepts as summarized by the topic leader in the last chapter of each report.

(signed) Franz Halder

PRELIMINARY REMARKS

This report represents the second and final part of the "Artillery" study in the "Small Unit Tactics" series, and consists of examples compiled on the basis of reports submitted by General der Artillery Thoholte.

Example # 1 deals with German artillery concentration, attack, and breach of a Russian field position, while Example # 2 depicts defensive operations. Both examples make reference to enemy artillery tactics.

The action involved was carried out by OHQ artillery charged with the mission of reinforcing and operating in conjunction with division artillery.

Special emphasis should be placed on the fact that while the line of action described in these examples has proven effective, the employment of other tactics might be feasible, and--particularly with respect to artillery operations--that no hard and fast rule can be followed.

EXAMPLE 1

EMPLOYMENT OF ARTILLERY IN BREAKING THROUGH
LENINGRAD DEFENSE LINE

I. GENERAL SITUATION

Place: Area extending from Skvoritzzy to Duderhof, 35 to 25 kilometers southwest of Leningrad.

Time: 6 to 8 September 1941.

Weather: Dry autumn weather; good visibility. The sun rose at 0500 German daylight saving time.¹

Terrain conditions in general: The attack zone was a slightly undulating region with hilly patches, broken by clusters of brushwood and wooded sections. There were very few open large areas. Near Duderhof a plateau rose 40 to 60 meters above the surrounding terrain. From here there was an unimpeded view across the gradually sloping hills as far as Leningrad and the Gulf of Finland.

II. SPECIAL SITUATION

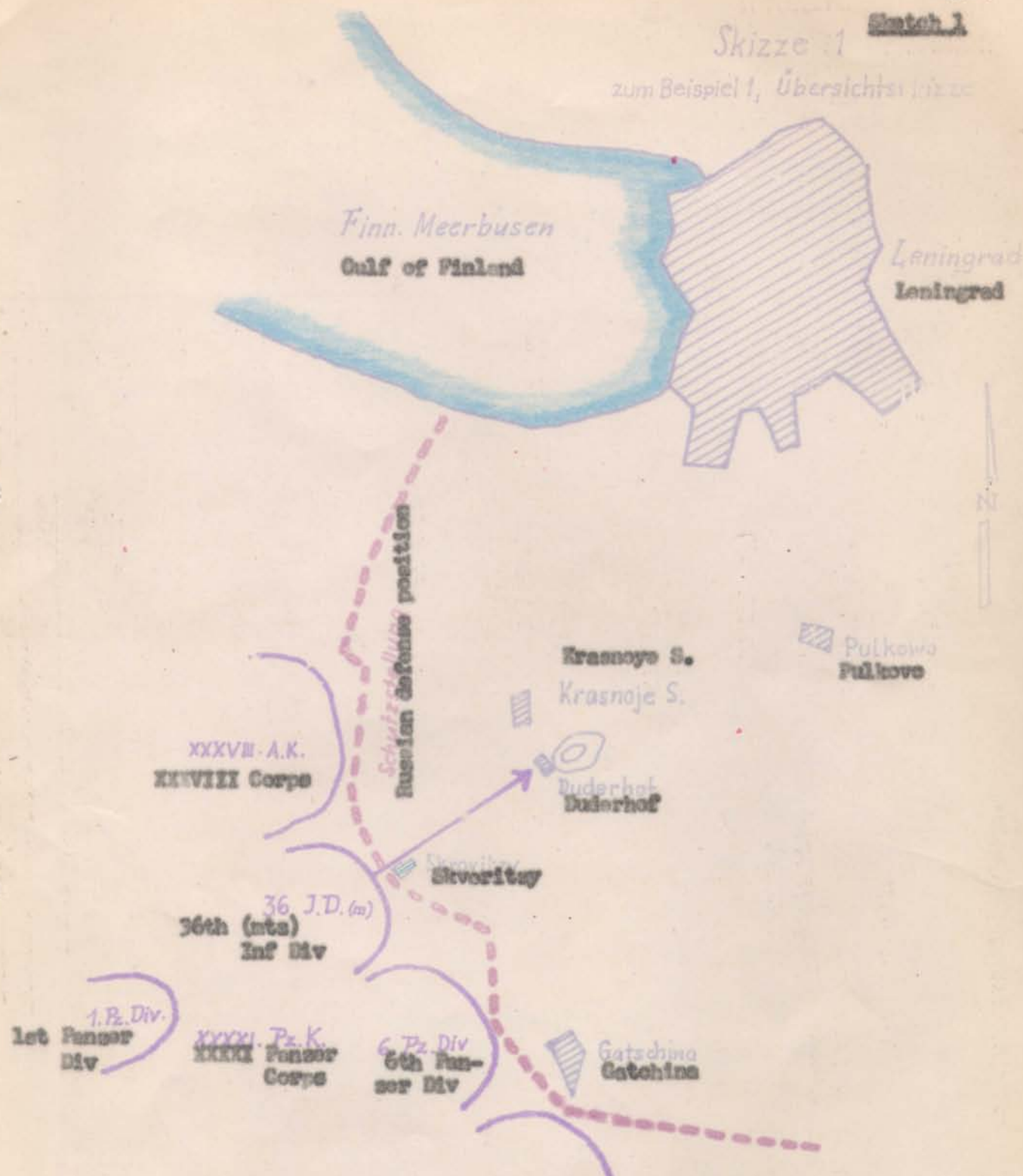
The XXXXI Panzer Corps, with both flanks protected, was charged with the mission of breaking the Leningrad defense line and advancing on Leningrad over Duderhof. The perimeter of the Leningrad defense position extended within the corps sector through the village of Skvoritzzy (sketch 1).

¹ 0600 Central European time.

Skizze 1

Sketch 1

zum Beispiel 1, Übersichtsskizze



DIRECTION OF ATTACK OF 36TH (MOT) INFANTRY DIVISION
FROM 8 TO 11 SEPTEMBER 1941

Angriffsrichtung der 36. Inf. Div. (mot) 8.-11. 9. 41

Maßstab 1: 300 000

The corps committed the 36th (mts) Infantry Division at the point of main effort of the corps sector, on both sides of the Skvoritszy-Buderhof line, on a frontage of approximately five kilometers. This example deals with the support rendered by the artillery during the break-through achieved by this division.

During the few days preceding, the 36th (mts) Infantry Division had been able to rest after having marched and fought uninterruptedly since the opening of the campaign. It was amply supplied with food and ammunition. Thus far its losses had been moderate and its artillery was at full strength. The unit felt superior to the Russian troops, who had been defeated repeatedly. Its combat value was high.

One projector battalion² had for some time been subordinated to the artillery regiment. For the initial penetration the 1st Panzer Artillery Regiment of the 1st Panzer Division was assigned to the 36th Infantry Division, which had worked with this regiment when the Russian defense positions at the Lithuanian border had been pierced. The main body of the 1st Panzer Division was earmarked for use as corps reserve.

² Nebelwerfer.

Chart # 1 shows the organization of the reinforced 36th (mts) Infantry Division.

For counterbattery fire the division depended upon the support of one heavy artillery group under the immediate command of the corps.

The chain of command of the artillery is shown on chart # 2.

The division was promised the support of one dive-bomber group.

The enemy troops faced by the 36th Infantry Division on the day of attack were at least one division in strength; 20 to 30 batteries were firing in the sector of attack. It may be assumed that the Russian unit was not a complete division but that it consisted of various elements of routed units, combined and brought up to strength by means of replacements. Among the evidences of this situation were the insufficient flexibility of the artillery and the lack of coordination between it and the infantry. Another indication was the conduct of the infantry troops who, after initially offering stiff resistance, manifested less tenacity--once the German break-through had been achieved--than would normally be expected of properly integrated Russian troops.

Anlage 1

TruppengliederungChart 1*der verst 36. J.D. (mot)**für den Angriff am 8.9.1941 gegen die
äussere Befestigungslinie von Leningrad*ORGANIZATION OF REINFORCED 36TH (MTR) INFANTRY DIVISION
FOR THE ATTACK TO BE LAUNCHED AGAINST THE
LENINGRAD DEFENSE PERIMETER ON 8 SEPTEMBER 1941Hq 36th (mts)
Inf Div36th (mts) Signal
Platoon36th (mts)
Inf AT Co
w. towed
weapons36th
Eng Bn

Hq 87th Inf Regt.

1st
Bn2nd
Bn3rd
Bn

Hq 118th Inf Regt

3rd
Bn2nd
Bn1st
Bn

36th Arty Regt.

1st Bn

2nd Bn

3rd Bn

guns

guns

guns

118th (von 1. Pz. Div)

1st Bn

2nd Bn

3rd Bn

guns

guns

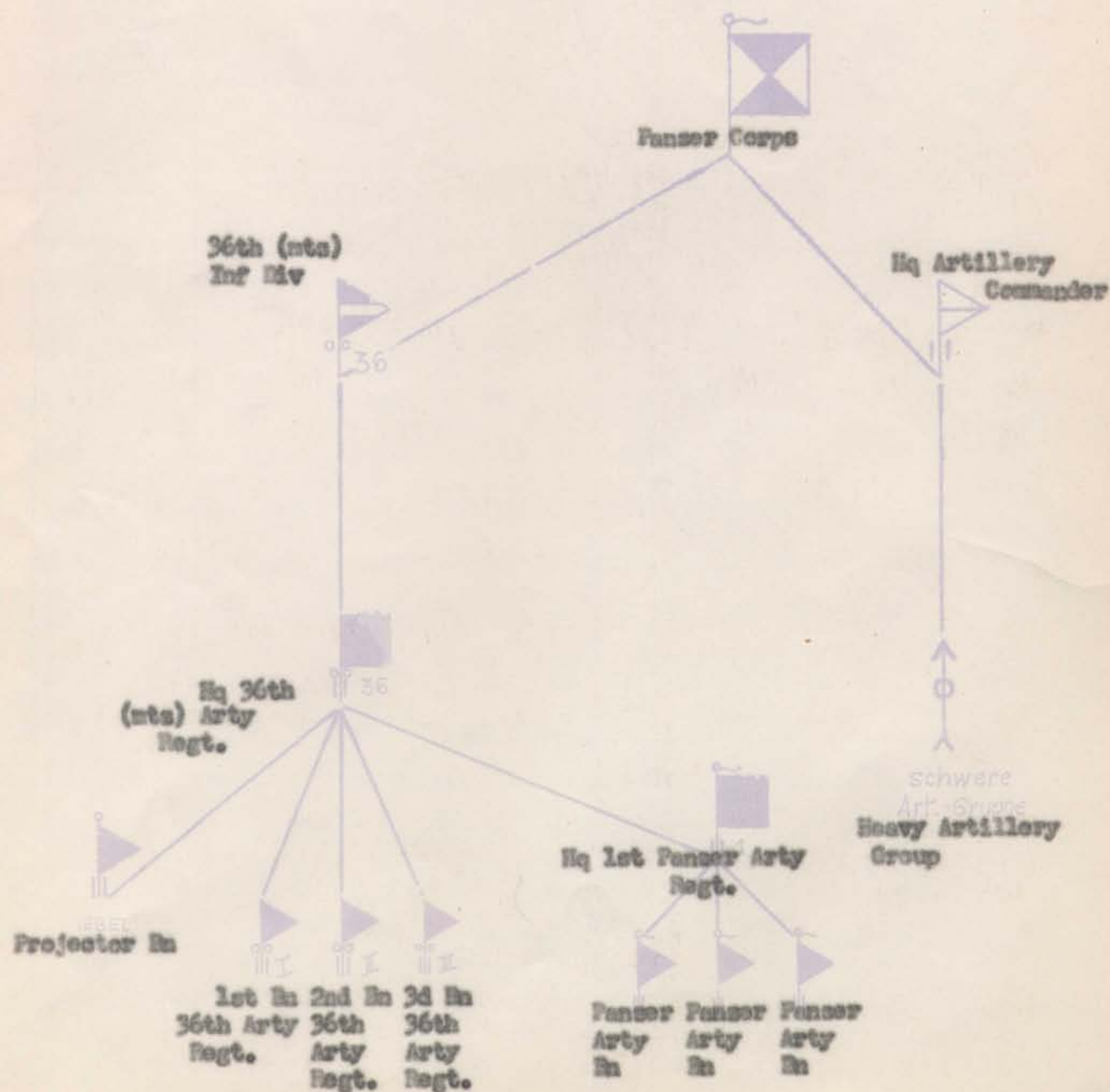
guns

Nebel
Projector Bn

guns

Befehlsgliederung der Artillerie
der 36. J.V.(mot.) für den Angriff am 8.9.41

CHAIN OF COMMAND OF COMMAND OF THE ARTILLERY
OF THE 36TH INFANTRY DIVISION FOR THE ATTACK
TO BE LAUNCHED ON 8 SEPTEMBER 1941



III. PREPARATORY MEASURES

1. Reconnaissance Operations

Terrain reconnaissance and enemy observation operations were effected by reconnaissance planes and by visual reconnaissance from OP's on a hill occupied by German security detachments and located two to three kilometers southwest of Skvoritzky. The following reconnaissance picture of the situation was obtained (sketch 2):

The Russian position extended straight through the attack sector, on both sides of Skvoritzky. It consisted of a line of strong points, numbered 1 to 6 on the sketch. In each strong point there was a bunker made of logs and covered with earth. The embrasures were exposed to view and the bunkers were inadequately camouflaged. Each bunker was protected by a trench system 200 to 300 meters in extent. The strong points were several hundred meters apart. No wire entanglements were discernible. Approximately two kilometers northeast of Skvoritzky a large concrete bunker, with several embrasures, had been constructed.

The general impression was that the position had been constructed in great haste and had not been completed.

The attack zone on both sides was flanked by wooded sections which could be used to advantage for counter-thrusts and flanking fire. The terrain on the right was

open; on the left it was covered with shrubs and broken by mounds which obstructed the view but facilitated approach.

There were no Russian observation posts in evidence, and during the day the position, on the whole, showed no signs of life. German reconnaissance planes identified several Russian artillery firing positions behind the woods north and northeast of Skvoritzy, but the pieces remained silent.

The hill on which the German OP's were located obstructed the enemy's view of the German rear area and thereby provided cover for the German troops assembling for action.

2. Over-all Plan of Attack

The division decided to shift the point of main effort to the left, because such a shift offered better possibilities of approach. The regiment on the right (118th Infantry Regiment) was therefore assigned an attack sector three kilometers wide while the one on the left (87th Infantry Regiment) had an attack frontage of two kilometers. The attack was scheduled to begin on 8 September 1941 at 0530.

The method of attack was discussed in great detail during conferences between infantry and artillery commanders.

The infantry preferred to execute the attack, as far as possible, in one continuous movement. The artillery, on the other hand, requested that the attack be carried out in phases so that it would be able to displace its observers forward in time and discharge its numerous duties one after the other.

Operations in the main attack sector had the following missions:

1. To prevent enemy action from the village of Skvoritzzy;
2. To neutralize strong point # 4;
3. To eliminate strong points # 5 and 6 and the embraures at the same time;
4. To prevent enemy action from the elevated terrain behind the strong points and eliminate the observation posts presumably located there and at the fringes of the forest to the left;
5. To repel any counterthrusts likely to be made from the wooded section at the left;
6. To render continuous support for the thrust into the enemy rear.

Upon request of the division the artillery was divided into two groups. The first group, in direct support of the infantry attack, consisted of the 36th Artillery Regiment,

the 1st Panzer Artillery Regiment (to be committed until penetration had been achieved), and one projector battalion. It was placed under the commander of the 36th Artillery Regiment.

The second group, which was to be responsible for counterbattery fire, was led by the corps artillery commander and consisted of several heavy battalions, including one howitzer battalion and one observation battalion. The howitzer battalion, furthermore, was assigned to attack the concrete bunker located northeast of Skvoritzky. *infertile* This second group, directed only to support the division, remained under corps command. *standard in us organization*

This separation into two groups was effected because it was the division's aim to have the commander of its own artillery regiment, who had been trained for close support of infantry, retain full control of the infantry support.

The dive-bomber group had orders first to attack the Russian artillery and afterward to support the infantry's penetration in depth.

The plan of attack, agreed upon by the infantry and artillery commanders, called for the following operations by the main-attack infantry regiment (sketch 3):

First phase: The 1st and 2d Battalions respectively of the 87th Infantry Regiment will advance to points within attack range.

Second phase: The 1st Battalion will effect penetration of strong point # 5 and the 2d Battalion will effect penetration of strong point # 6.

Third phase: The 1st Battalion will wheel in the direction of strong point # 4 and the village of Skvoritzky. The 3d Battalion will be moved between the 1st and 2d Battalion for the push into the rear, in which action it will be joined by the 2d Battalion echeloned to the left.

In the right attack sector the 118th Infantry Regiment, advancing at the start of the attack on a wide front, will strike at strong points # 1 to # 3 for the purpose of containing these strong points (sketch 2).

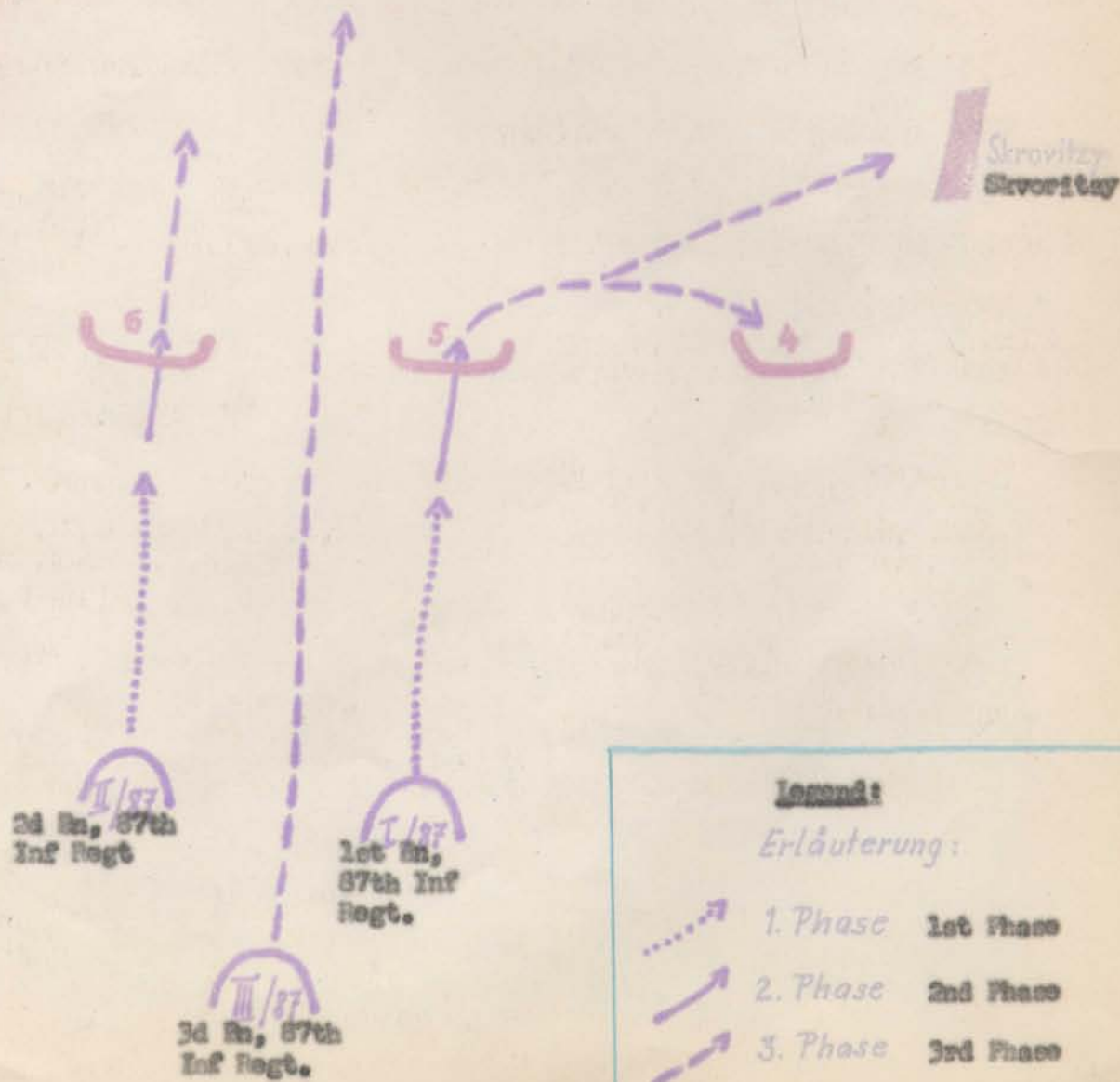
In the attack plan of the artillery direct support group, which follows, and which was coordinated with these operations of the infantry, the development of the point of main effort was indicated distinctly by the fact that only one artillery battalion was assigned to support the infantry regiment at the right, whereas six were allotted for the one at the left.

Skizze 3 zum Beispiel 1

SKETCH 3

Kampfplan des Schwerpunktregimentes J R 87

Schema ohne Maßstab

PLAN OF ATTACK OF THE 87TH INFANTRY REGIMENT (THE MAIN-ATTACK)REPT (NOT TO SCALE)

The fire distribution order of the commander of the artillery direct support group was issued orally to the commander of the 1st Panzer Artillery Regiment and to the battalion commanders of the 36th Artillery Regiment and the projector battalion on 7 September at 1100. It was subsequently furnished in writing, as follows:

Fire distribution order of the artillery support group, for the attack of the 87th Infantry Regiment:

First phase: Infantry will start out and advance to a point within attack range (chart 3).

The following units will take action:

One light battalion of the 1st Panzer Artillery Regiment will attack strong point # 4. In this action it will be important to keep the strong point under fire so as to make enemy counteraction from the trenches impossible.

One light and one heavy battalion of the 1st Panzer Artillery Regiment will fire on strong point # 5. The commander of the 1st Panzer Artillery Regiment will establish liaison with the commander of the 1st Battalion, 87th Infantry Regiment.

One light and one heavy battalion of the 36th (mtz) Artillery will attack strong point # 6. The commander of the 3d Battalion, 36th Artillery Regiment will establish liaison with the commander of the 2d Battalion, 87th Infantry

Regiment and will at the same time arrange for the support of the attack on the strong point. The commander of the 3d Battalion, 36th Infantry Regiment, will assume command of both battalions.

The projector battalion will cover the entire village of Skvoritay with incendiary bombs. It is necessary to bombard the village in its entirety in order to eliminate the possibility of any counteraction, particularly on the part of enemy artillery observers. Firing will commence simultaneously with the start of the adjustment fire. Fifteen minutes will be available for the adjustment fire, while thirty minutes have been provided for the fire for effect.

During the night of 8 September the light battalions of the 36th Artillery Regiment and of the 1st Panzer Artillery Regiment respectively, taking advantage of all available cover, will each move up one gun to a point close enough to the target area to enable them, as soon as the adjustment fire starts, to destroy the embrasures in the enemy strong points by direct fire. Preparations are to be made in such a way as to make sure that the fire successfully takes effect before any enemy counteraction can be achieved.

Second phase: Penetration of strong points # 5 and # 6 (chart 4). One light and one heavy battalion of the 1st Panzer Artillery Regiment will shift their fire from strong point # 5 to the village of Skvoritzky and take over the mission of the projector battalion at that point. It is necessary to make sure that the bombardment of the village will continue without interruption; therefore, the observation posts will have to be established and interconnected in advance.

One light battalion of the 1st Panzer Artillery Regiment will continue its mission of firing on strong point # 4. Contact with 1st Battalion, 87th Infantry Regiment, should be established in time to make sure that support will be forthcoming for the attack which the 1st Battalion, 87th Infantry Regiment will launch on strong point # 4 from the rear.

The 1st and 3d Battalions of the 36th Artillery Regiment, commanded by the CO, 3d Battalion, will place a barrage on the brushwood terrain behind strong points # 5 and # 6. This barrage must be maintained without interruption and cover the terrain completely in order to eliminate any possibility of enemy counteraction from this area during the assault on the strong points.

The projector battalion will shift its fire from the village to the edge of the forest on the left flank and will lay a smoke screen in front of this forest so as to eliminate the possibility of any enemy observation and action from this point. Observers should be sent forward early enough so that the smoke screen will produce the desired effect when the troops begin their attack into the rear area. One liaison detachment will be assigned to the 3d Battalion, 87th Infantry Regiment. Contact will be established with the group in charge of the counterbattery fire, and care should be taken that nothing will interfere with the heavy battalion's observation of the concrete bunker.

Third phase: Penetration in depth following capture of strong points # 5 and # 6 (chart 5).

There is no change in the respective mission of any of the battalions of the 1st Panzer Artillery Regiment. Liaison will be established with the 1st Battalion, 87th Infantry Regiment, for the support of the attack on strong point # 4 and the village. Observers will make certain that any likelihood of enemy action against the left flank of the battalion wheeling southward will be detected promptly so that proper counteraction can be

taken. As soon as the village is captured, control over the 1st Panzer Artillery Regiment will cease.

The 1st and 3d Battalions, respectively, of the 36th Artillery Regiment will assume responsibility for the support of the penetration in depth of the 3d Battalion; the observers will join the 3d Battalion, 87th Infantry Regiment. Special attention will be given to preparations for immediate action, by means of observed fire, against any counterattacks likely to be made on the captured strong points # 5 and # 6. The artillery battalions will make direct arrangements with the 3d Battalion, 87th Infantry Regiment, concerning the point at which the observers will join the battalion. It is important that the transfer of the observers be accomplished with the least possible delay.

The projector battalion will continue laying the smoke screen.

3. Assembly for Action

On 7 September, in accordance with the order to the artillery, reconnaissance operations and establishment of contact with the infantry continued at battalion and battery level. In addition, observation posts were set up and channels of communication installed (chart 6).

Schematische Darstellung der Feuerverteilung

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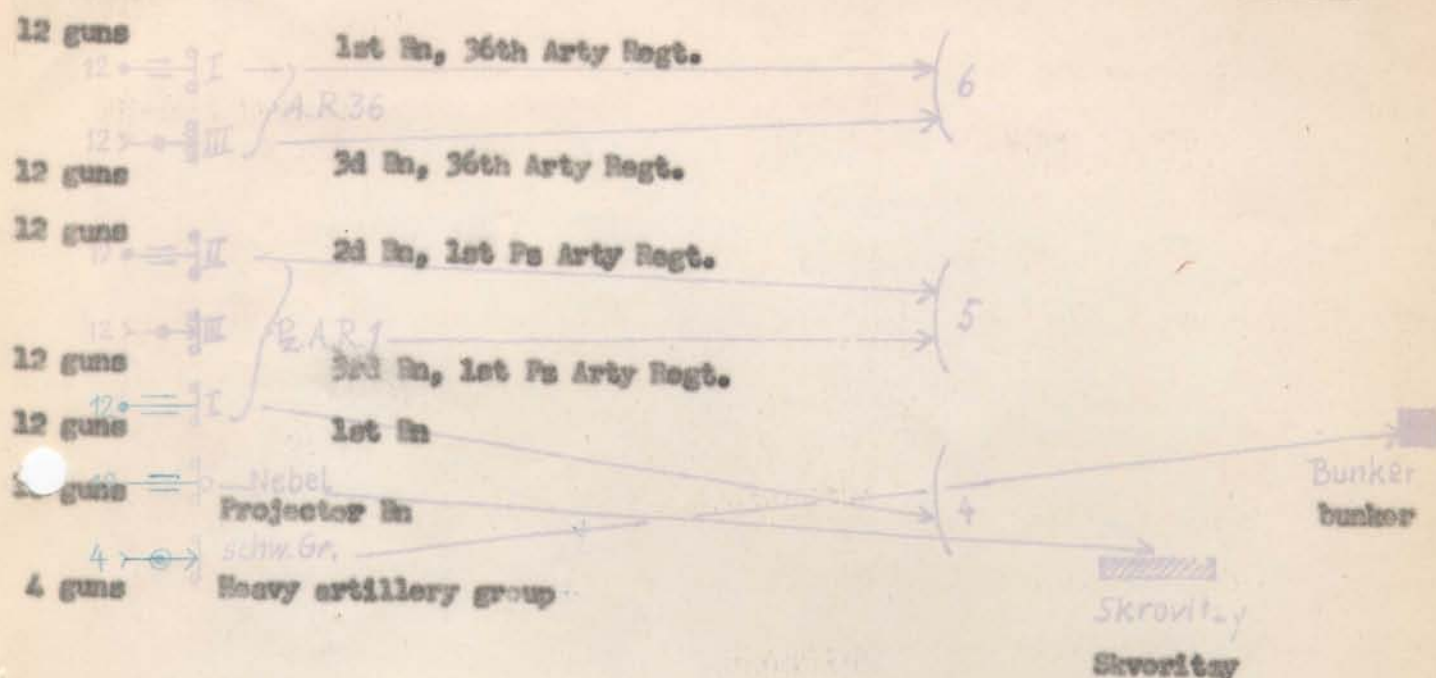
Anlage 3

DISTRIBUTION OF THE
ARTILLERY PREPARATORY
FIRE ON 8 SEPTEMBER 1941
(1st Phase)

für die Angriffsvorbereitung am 8.9.41

(1. Phase)

Chart 3



Anlage 4

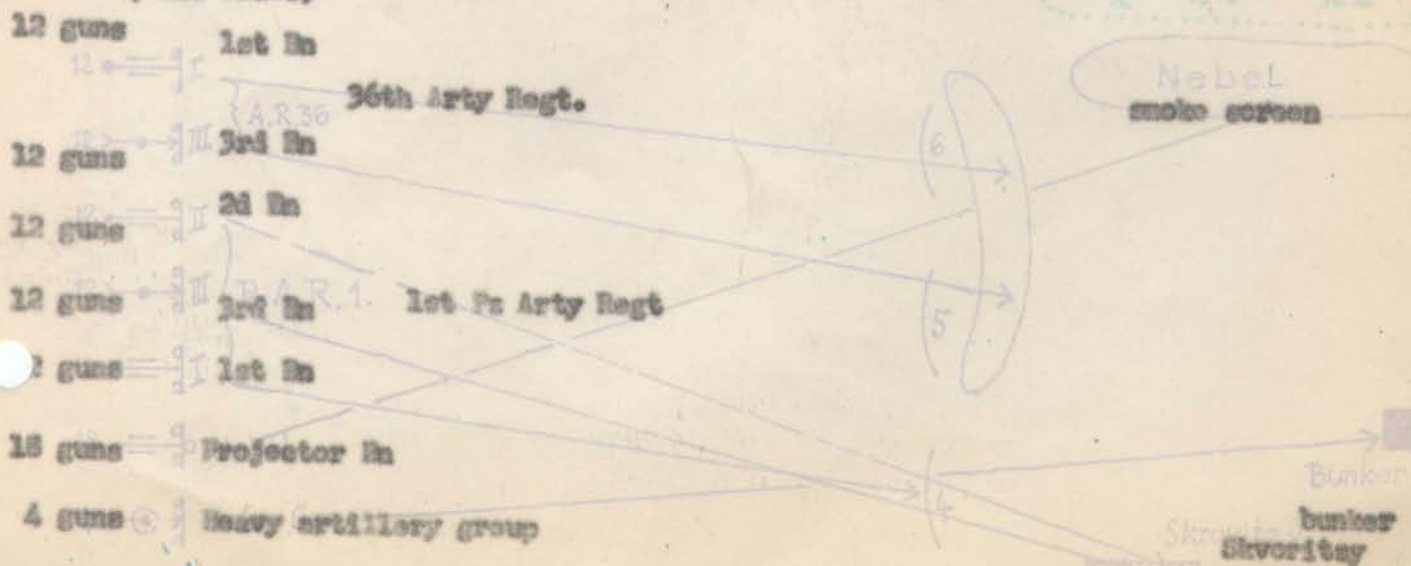
Chart 4

Schematische Darstellung der Feuerverteilung

während des Einbruchs am 8.9.41

FIRE DISTRIBUTION ON 8 SEPTEMBER 1941
DURING THE TIME OF PENETRATION
(2. Phase)

(2nd Phase)



During the night of 6 September attempts had been made to move some of the guns into the field emplacements south of the observation post hill. The attempts were unsuccessful because the approach roads and certain sections of the terrain were found to be mined. Since the mines were not covered with earth they were plainly visible by day and it was possible to recognize and mark them. Detouring around the mines, however, delayed moving the guns into position.

With the exception of a few reconnaissance planes, Russian aircraft were not in operation, nor did Russian ground troops interfere with the establishment of observation posts and the assembly for action.

The map and survey section of the 36th Artillery Regiment issued to the batteries and infantry companies gridded maps with a scale of 1:25,000. Later the map grid greatly facilitated identification of targets.

During the night preceding the attack, the guns which had been designated to take the embrasures under direct fire were moved to the forward outpost line and were manhandled into position so as to avoid noise.

The artillery had instructions not to fire before H-hour except in case of an enemy attack. Fire for

CHANNELS OF COMMUNICATION AT THE START OF THE ATTACK

Nachrichtenverbindungen zu Beginn des Angriffs

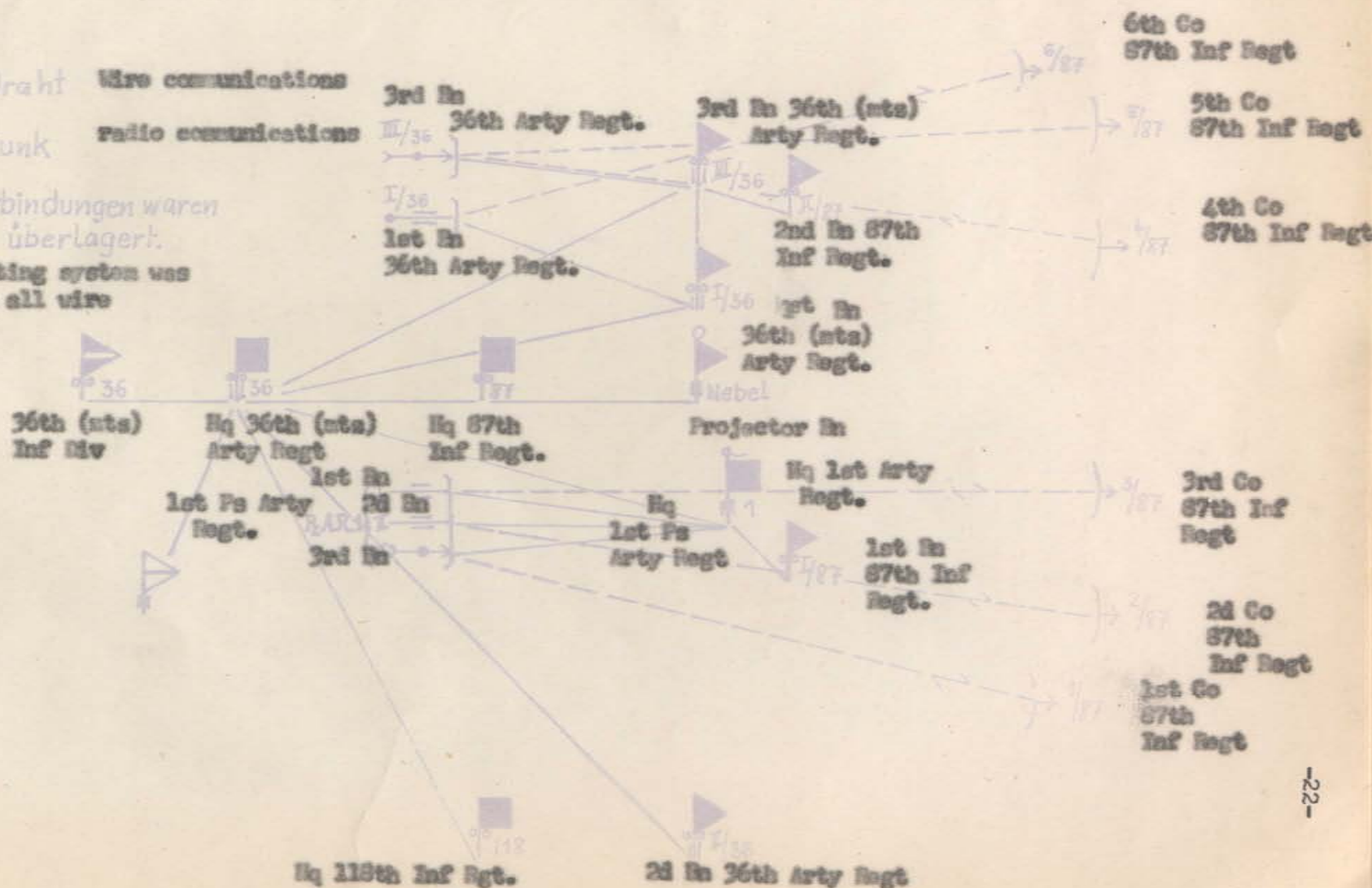
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Anlage 6

— Draht Wire communications
 - - - Funk radio communications

Alle Drahtverbindungen waren mit DraFunk überlagert.

A wire broadcasting system was superimposed on all wire connections



adjustment was to be accomplished between 05:15 and 05:30, the period just prior to the attack.

During the night of 7 September the advance elements of the German infantry assembled for action in the clumps of bushes and the depression just forward of the observation-post hill. The distance from the jump-off position to the line of enemy strong points was approximately 2000 meters.

IV. THE ATTACK

1. First Phase: Advance to a Point within Attack Range

On 8 September at 05:15 the German artillery opened fire, starting with the adjustment. At the same time the individual guns which had been moved forward took the embrasures of the enemy bunkers under direct fire at a range of approximately 2500 meters. Each battery carried out its own adjustment fire, for which only fifteen minutes had been allotted, the right battery firing first and the others following in succession. In order to avoid confusion while spotting, the following procedure was used: The firing was timed with a stop watch; and half a second prior to the termination of the shell's flight, the observer was warned of the burst by the exclamation "now!" Whenever a battery had succeeded in placing its fire so

close to the target that the next round, after appropriate correction, could be expected to hit the target, the battery ceased firing and reported to the battalion that its adjustment was complete.

No sooner had the German artillery fired its first rounds than the Russian light and heavy caliber artillery guns opened fire. At first the Russians placed an artillery barrage approximately 1000 meters ahead of their positions. Very soon, after perhaps ten minutes, they shifted their fire. Five to six of their heavy batteries began to shell the German guns which were firing at the embrasures from open firing positions. It was not long before the German guns were compelled to cease firing, and only the gun aiming at strong point # 5 succeeded in scoring a hit, on the embrasures of the bunker. An additional eight to ten Russian light batteries attacked identified German observation posts. The Russian artillery succeeded in causing the withdrawal of two of the German observers. The duties of the one were taken over by the forward observer and in the other case the adjacent observation post conducted the adjustment. Furthermore, ten to twelve Russian heavy caliber batteries were shelling the rear area, apparently probing for battery positions. However, their fire failed to take

effect at any point. On the whole, 25 to 30 Russian batteries seemed to be in operation. The Russian artillery fire was distributed over the entire division front. For a time it was impossible to determine the point of main effort.

At 0530 the German infantry began to work its way forward. For a while it advanced rapidly because it encountered no resistance whatever. The German artillery shelled the enemy trench system while the projector battalion fired at the village. The forward observers were unanimous in reporting that the fire on the trenches was well placed throughout, but that the firing of the projector battalion, which was attacking the village with incendiary ammunition, produced no results. The village was not on fire at any point.

At 0600, after half an hour had elapsed, the German infantry forces had gained approximately 500 meters of ground. With the aid of the gridded map the forward observers had no difficulty in identifying the line reached by the infantry.

During the first half hour of the attack the Russian artillery fire had not been shifted. Then, however, the situation changed suddenly. Having determined the German point of main effort the enemy now concentrated the fire of all his artillery on the advancing forces of the 87th

Infantry Regiment who, subjected to the heavy and well-placed Russian artillery fire, were forced to take cover. The advance came to a standstill.

Almost simultaneously the forward observers accompanying the advance infantry elements called for intensified action against the enemy artillery, because the severity of its fire made an advance practically impossible.

Upon inquiry, the counterbattery or heavy artillery group reported that in the meantime reconnaissance had identified a large number of enemy batteries on which counterbattery fire had been started. The dive-bomber squadrons, enthusiastically hailed by the infantry troops, flew their first sorties against the Russian artillery. The projector battalion which was still shelling the village, apparently without success, was instructed now--earlier than had been planned originally--to shift its fire to the left, to the edge of the forest, in an effort to obstruct the vision of the Russian artillery observers suspected at that point. This order was received by the projector battalion at approximately 0615. Its first rounds had an immediately paralyzing effect on the enemy. The Russian batteries became silent almost instantly and then resumed firing sporadically and with obvious uncertainty.

By that time only a few enemy batteries followed, with their fire, the movements of the German infantry forces. The majority of their guns continued firing on the initial targets. At some points it was possible to evade their fire. On the whole, the enemy artillery fire considerably decreased in intensity.

At 0615, at the request of the commander of the artillery regiment, two heavy battalions were assigned to the artillery direct support group, with the mission of placing their fire at the rear of the trench systems of strong points # 5 and # 6. Although no enemy troops were discernible there, it was suspected that enemy mortars and additional artillery observers were stationed at that point. The artillery commander was reluctant to detach these battalions from the group engaged in shelling the enemy artillery. However, since firing on the enemy artillery observers seemed more important than attacking the enemy artillery positions--because the Russian artillery would be rendered helpless without observers--the corps ordered the temporary detachment of these two battalions. They opened fire at about 0630.

The following points were now under fire: Strong point # 4 was being attacked by one light battalion and strong point # 5 was being shelled by one light and one heavy

battalion. One light and one heavy battalion were firing on strong point # 6 and two heavy battalions were placing their fire to the rear of strong points # 5 and # 6. The projector battalion had blanketed the edge of the forest with an excellently-placed smoke screen. One light battalion of the 36th Artillery Regiment was placing its fire ahead of the 118th Infantry Regiment which was advancing on the right. (Sketch 4 shows the artillery fire distribution at 0630).

In a very short while the forward observers were able to report that the German infantry forces had resumed their advance. They had not yet encountered any reaction from the enemy strong points.

Protected by the well-placed and apparently effective covering fire, the infantry advanced briskly. At about 0730 the 3d Battalion, 36th Artillery reported that the advance elements of the infantry battalion on the left had worked their way forward to within approximately 300 meters of strong point # 6. So far this battalion had not encountered any resistance from the Russian infantry. At that time the battalion on the right was still farther to the rear and was under fire from enemy strong point # 4 or from the terrain in rear thereof. The battalion requested artillery fire action on these enemy forces. The battalion

of the 1st Panzer Artillery Regiment which was shelling the trench system of strong point # 4 was ordered to shift its fire to the northernmost portion of the trench system and the terrain in rear thereof. The infantry was notified that any other support was out of question. However, by 0815 the battalion on the right had also succeeded in advancing to within approximately 300 meters of strong point # 5. The commander of the infantry regiment and the commander of the artillery regiment then agreed that at 0830, as planned, the artillery would shift its fire from the strong points to the area beyond them. At 0825 the artillery would fire at the maximum rate for five minutes and then effect the shift.

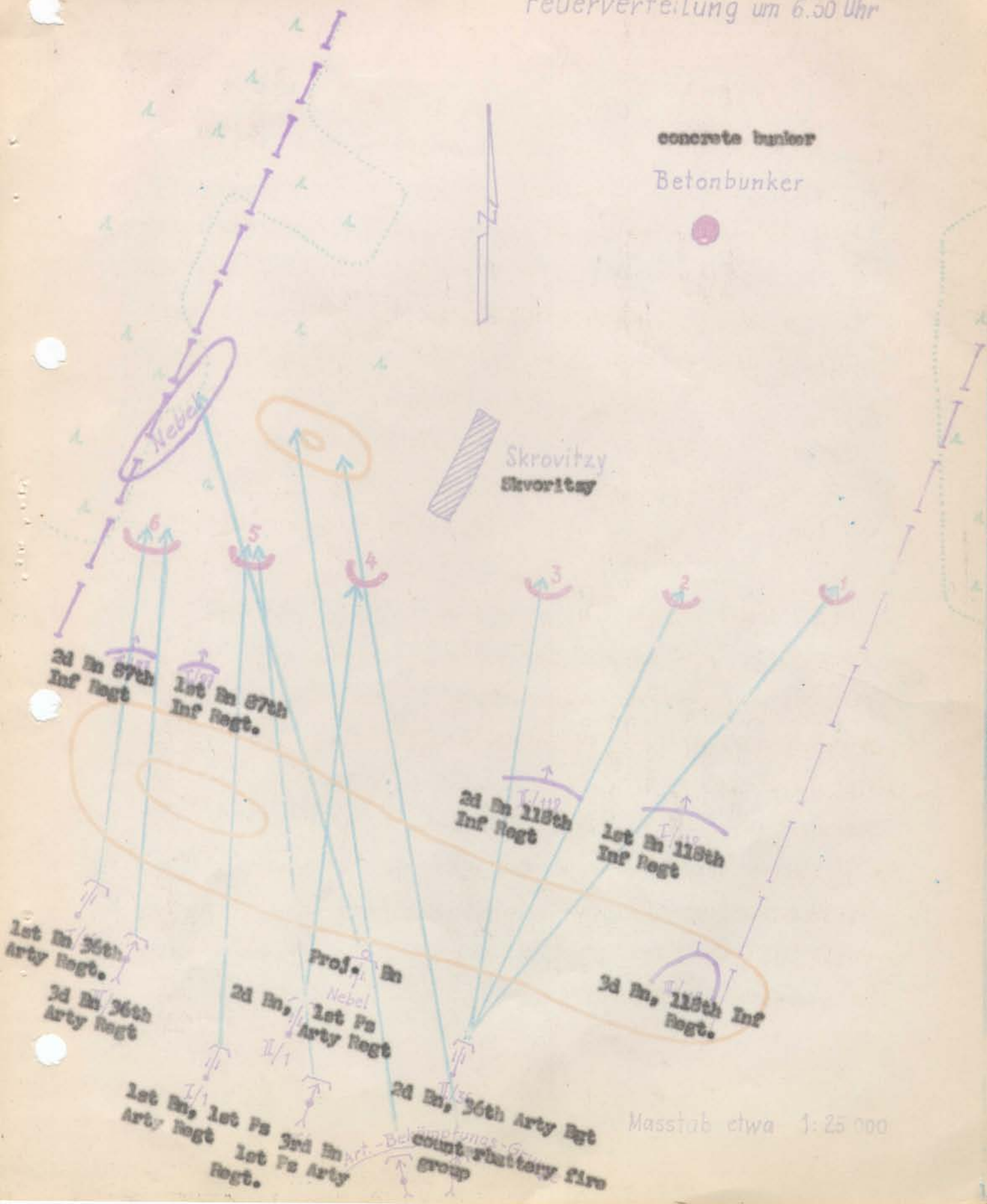
There had been no change in the counterbattery fire of the enemy artillery, which was firing from all guns on the German infantry. However, only a few Russian batteries were firing on the advance elements. Most of the Russian guns kept attacking the old targets. Their fire was sporadic and had little effect on the rear of the German attack sector. It was obvious that the action of the German heavy artillery group against the Russian artillery, the dive-bomber attacks on the enemy artillery positions, and the efforts to obstruct the vision of the enemy observers had achieved success.

Skizze 4 zum Beispiel

Sketch 4

Feuerverteilung um 6.30 Uhr

FIRE DISTRIBUTION AT 0630



2. Second Phase: Penetration of Strong Points # 5
and # 6

At 0830, the time when the German infantry was beginning its assault over the last remaining 300 meters, the following action was taking place:

Two battalions of the 1st Panzer Artillery Regiment were attacking the village;

One battalion of the 1st Panzer Artillery Regiment was firing on strong point # 4;

One battalion of 36th Artillery Regiment was shelling the terrain in rear of strong point # 5;

One battalion of the 36th Artillery Regiment was striking at the terrain beyond strong point # 6.

Two heavy battalions were supplementing the fire of the two battalions of the 36th Artillery Regiment; the projector battalion was laying a smoke-screen in front of the forest.

Sketch 5 shows the fire distribution at 0835.

By 0830 the troops of the 118th Infantry Regiment, moving forward in the division right sector, had advanced on an average to within 1000 meters of the Russian positions. They were exposed to the counteraction of Russian troops in strong points # 1 to # 3 and, according to reports of

the forward observers, were having a great deal of trouble, but it was impossible to comply with the regiment's repeated request for increased artillery support.

At 0830, when the artillery fire was shifted from strong point # 5 and # 6 to the rear thereof and the infantry troops started working their way forward, they were confronted with surprisingly stiff resistance from enemy troops in the strong points. The infantry troops could advance only very slowly. At 1000 the 1st Battalion of the 87th Infantry Regiment--the first battalion heard from--which was advancing on strong point # 5, reported that it was beginning the assault. Barely ten minutes later the command was relieved to learn by radio that the battalion had succeeded in penetrating strong point # 5. The artillery forward observer, together with the advance infantry elements, had entered the Russian positions. The battalion was instructed to hold the captured strong point against any possible counterthrusts. It was necessary for the artillery to start firing for adjustment at once in order to be ready for immediate action against counterthrusts or counterattacks. The forward observer, who was now in front, took complete charge of the fire direction. It was another 45 minutes before the 2d Battalion succeeded in penetrating strong point # 6. During the course

of this action the forward observer in strong point # 5 had been able to render excellent support. He identified well-camouflaged mortars, located in rear of strong point # 6, which had been attacking the advancing troops of the 2d Battalion with considerable effectiveness. Only when these mortars ceased firing did the resistance of enemy troops in the trenches subside. At 1100 strong points # 5 and # 6 were in German hands and the penetration had been successfully accomplished.

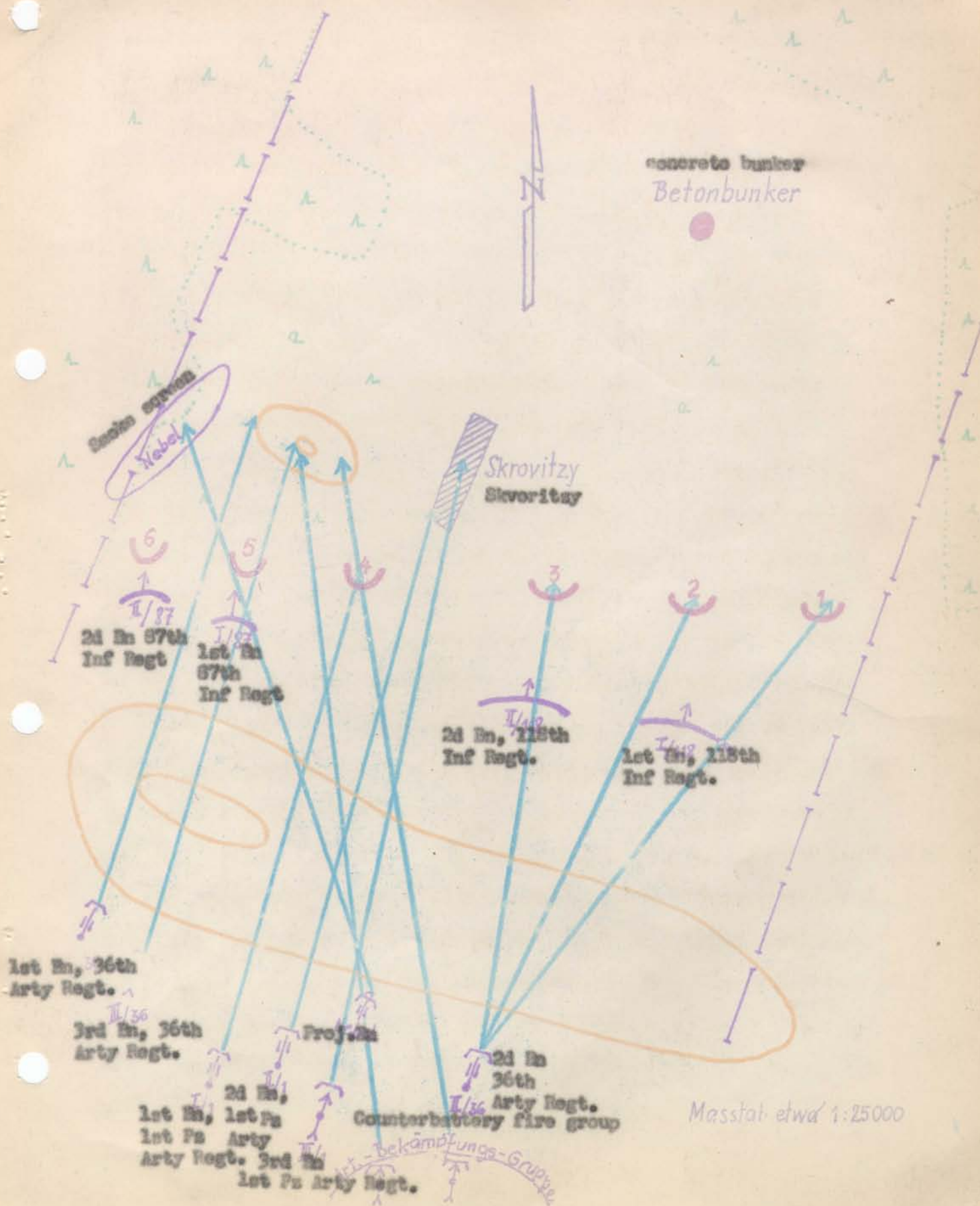
There was practically no shifting of enemy artillery fire. The German penetration had been discovered by only two or three enemy batteries, which then began shelling the trench systems occupied by the German troops. Most of the enemy guns, however, were still firing on the area between the German jump-off position and the captured trenches.

3. Third Phase: Advance into the Rear of the Battle Area

In the meantime the 3d Battalion of the 87th Infantry Regiment, which had been designated to carry out the penetration in depth, had been brought forward, taking advantage of the areas where fire was not heavy. With two companies in the forward line, it moved into the terrain

lying between strong points # 5 and # 6. There, according to orders, it was to join the forward observers of the 3d Battalion, 36th Artillery Regiment, and then launch the attack. The observers meanwhile had been detached from their former battalion and were waiting for the 3d Battalion in the above-mentioned terrain. The 3d Infantry Battalion was now accompanied by one artillery liaison detachment of the 3d Battalion, 36th Artillery Regiment, which remained at the battalion command post. One observer was assigned to accompany each infantry company.

The division had notified the Luftwaffe that the attack on the rear area would begin at 1115 and had requested dive-bomber support. Promptly at 1115 the dive-bombers made their appearance and thereby gave the signal for the infantry to start operations. In the meantime the projector battalion had been ordered to cease firing and to hold itself in readiness for new fire missions. The two heavy battalions of the heavy artillery group, which temporarily had been subordinated to the regiment, had been given orders to shift their fire to the trench system of strong point # 4. However, this order was not executed because these two battalions were withdrawn by the heavy artillery group for the purpose of resuming counterbattery fire.



For a while the 3d Infantry Battalion advanced rapidly. However, after 20 to 30 minutes, when the smoke screen, which until then had veiled the area in front of the forest, has disappeared, the Russian troops at the edge of the woods launched a furious counterattack against the left flank of the advancing infantry troops, who were forced to assume the defensive. The likelihood of such a counter-attack had been taken into account. The commander of the artillery regiment ordered a sudden concentration of fire to be placed into the forest by the artillery, including the projector battalion, while the 1st and 3d Battalions of the 36th Artillery Regiment were placing under observed fire those enemy troops who had already come out of the forest. The enemy attack broke down quickly under the combined artillery fire and infantry battalion defensive fire. However, these Russian troops continued to be a source of danger to the advancing 3d Infantry Battalion.

Around noon the 2d Battalion, 36th Artillery Regiment, which was supporting the 118th Infantry Regiment's advance in the division right sector, sent a surprising report saying that the regiment was advancing at a brisk pace along the entire front, that the resistance of enemy troops in strong points # 1, # 2, and # 3 was all but broken, and that a break-through was expected momentarily. The Russians were taking to flight.

Upon receipt of this report the division issued the following order: The artillery will shift its main fire from the left, where it has been covering the 87th Infantry Regiment, to the right in order to support with all available guns the advance of the 118th Infantry Regiment.

One half-hour later, at about 1230, one forward observer of the 3d Battalion, 36th Artillery Regiment, who was accompanying the 3d Battalion, 87th Infantry Regiment, reported that apparently some German troops on the left were about to emerge from the wooded area protruding approximately 1500 meters in front of the advance elements of the 3d Battalion, 87th Infantry Regiment. Immediately upon receipt of this message all batteries were ordered to cease firing on the forest and a report was submitted to the division. The division decided that the order which had called for shifting the main fire to the support of the 118th Infantry Regiment was to remain in effect.

4. Fourth Phase: Shifting the Point of Main Effort

Shortly after noon the artillery group supporting the 36th (mtz) Infantry Division consisted of only one heavy and two light battalions of the 36th Artillery Regiment, along with the projector battalion, because after

penetration had been achieved, the 1st Panzer Artillery Regiment, in accordance with orders, had been placed again under the command of the 1st Panzer Division. The 36th Division decided to commit the entire artillery in support of the 118th Infantry Regiment, which was now the main-attack regiment, and chose to risk leaving the 87th Infantry Regiment without artillery support. In making the shift it was possible to have all batteries, with the exception of the projectors, remain in their same firing positions. However, it was necessary to displace the command and observation posts and to establish new channels of communication.

The commander of the artillery regiment initiated the necessary measures without delay. Then, at about 1215, he went to the command post of the 118th Infantry Regiment, where he was made familiar with the situation as follows (sketch 6):

The 1st Battalion, 118th Infantry Regiment had captured strong points # 1 and # 2 and was on the point of continuing its advance;

The 2d Battalion, 118th Infantry Regiment had already left strong point # 3 behind it;

The 3d Battalion, 118th Infantry Regiment was following along the division boundary, echeloned in depth on the right flank of the regiment;

The enemy had abandoned the strong points and had withdrawn to the rear.

The commander of the 118th Infantry Regiment believed it would be possible to advance for a while without encountering any strong resistance, which he did not expect again until reaching the vicinity of the concrete bunker. It was his plan to have the 1st Battalion and 2d Battalion advance on a wide front and to have the inner flanks of the battalions meet at a patch of light sand which was visible from a distance. The 3d Battalion was to follow, echeloned further to the right, and repel any enemy action coming from the edge of the forest. Reconnaissance elements dispatched into the forest had not as yet sent back any information.

The commander of the artillery regiment proposed that the 1st and the 2d Battalion each be combined with one light artillery battalion and that the rest of the artillery keep the edge of the forest under observation and hold itself in readiness to supplement the fire of the light battalions.

As a result the following artillery orders were issued:

The 1st Battalion, 36th Artillery Regiment, heretofore supporting the 2d Battalion, 87th Infantry Regiment, will support the 2d Battalion, 118th Infantry. Observation posts will be moved

forward far enough to command a view of the terrain to the left of the concrete bunker. (This was a written order brought by a special missions staff officer to the 2d Battalion, 118th Infantry Regiment, to which the artillery battalion commander had been assigned).

The 2d Battalion, 36th Artillery Regiment, heretofore committed in support of the entire 118th Infantry Regiment, will assist the 1st Battalion, 118th Infantry Regiment. Observation posts will keep the terrain to the right of the concrete bunker under observation. (This was a verbal order, transmitted directly to the commander of the 2d Battalion, 36th Artillery Regiment.) The 3d Battalion, 36th Artillery Regiment, heretofore committed in support of the 3d Battalion, 87th Infantry Regiment, will repel any enemy action from the edge of the forest at the right and prepare to reinforce the fire of the 1st and 2d Battalions, respectively, of the 36th Artillery Regiment. To this end the battalion will establish its command post in the vicinity of the command post of the 118th Infantry Regiment. The artillery liaison detachment will

join the 3d Battalion, 118th Infantry Regiment.

The observers will follow the 3d Battalion.

(This was a written order which was transmitted to the 118th Infantry Regiment, to which the commander of the 3d Artillery Battalion had been assigned.)

The projector battalion, changing position by sections, will move behind the right flank of the 118th Infantry Regiment. It will have the mission of screening the edge of the forest and will direct preparatory fire on the terrain in which the concrete bunker is located. (For this purpose the commander was assigned to accompany the advance of the 3d Battalion, 118th Infantry Regiment.

All batteries were instructed to begin their adjustment fire as soon as possible.

The command post of the commander of the 36th Artillery Regiment remained in the vicinity of the division command post.

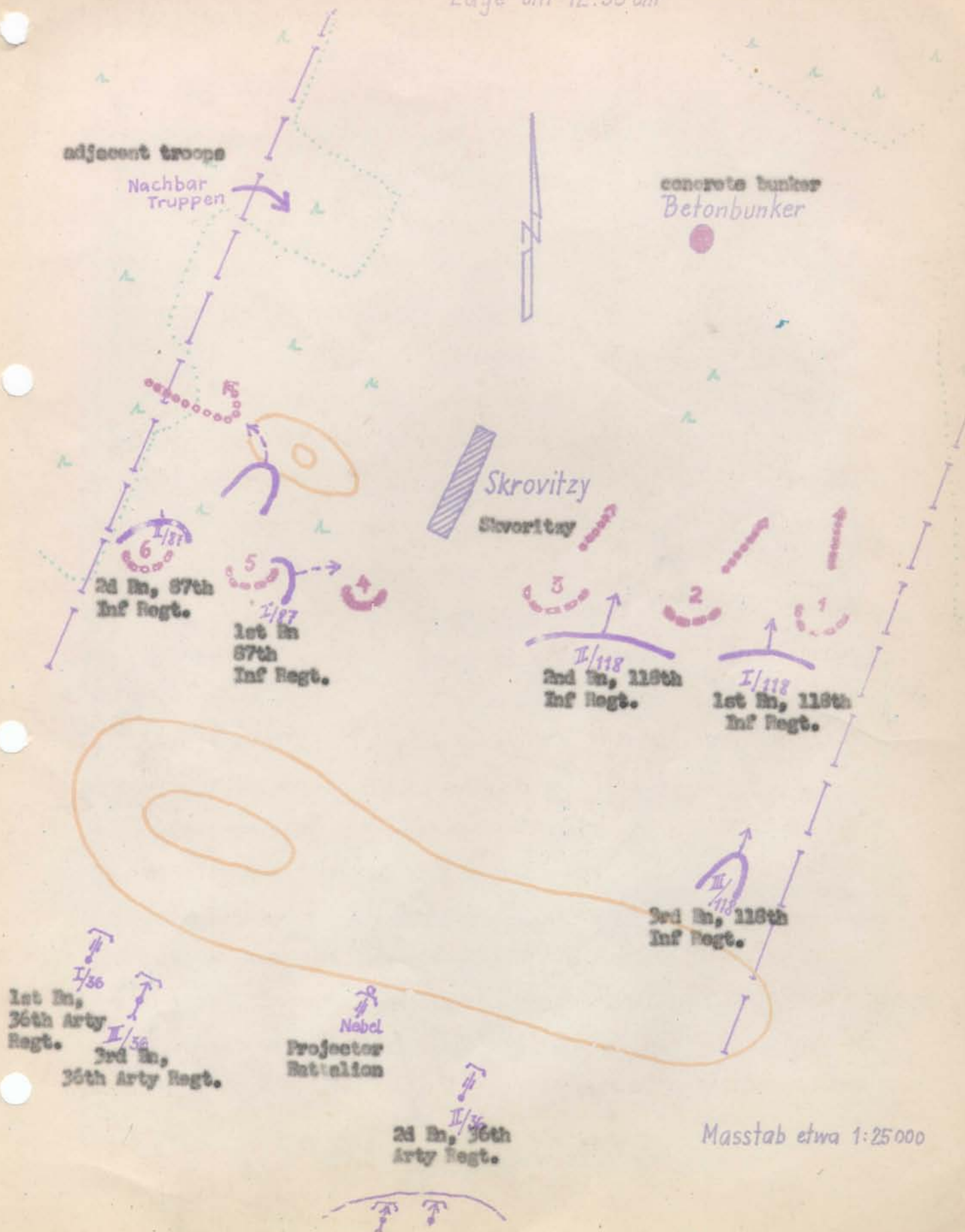
The communication platoon of the artillery regiment was ordered to establish radio communication quickly between the respective command posts of each of the three infantry battalions and the command post of the 3d Battalion, 36th

SITUATION AT 1230

Skizze 6 zum Beispiel 1
Lage um 12.30 Uhr

Sketch 6

-42-



Artillery Regiment, which was set up in the immediate vicinity of the command post of the 118th Infantry Regiment.

Owing to the fact that the attack was now breaking up into isolated actions, it was no longer possible to have centralized fire control at regimental level. The artillery battalions had to support the infantry advance in closest cooperation with the infantry battalions, with which they had been instructed to coordinate their action. By that time the artillery fire had practically ceased throughout the entire division sector. On the German side all command and observation posts were displacing. On the Russian side, firing was sporadic.

The relocation of the command and observation posts, and particularly the movement of the forward observers, required considerable time. Moreover, at that time only one forward observer, held in reserve by the artillery battalions, could be assigned to each battalion in the new attack sector. At 1400--that is, after one and three-quarters hours--the 1st Battalion, 36th Artillery Regiment reported its arrival in the sector of the 2d Battalion, 118th Infantry Regiment. The 3d Battalion, 36th Artillery Regiment did not begin taking the forest under observation until 1415. At approximately the same time the projector

battalion was ready to open fire despite the fact that it had been compelled to change positions.

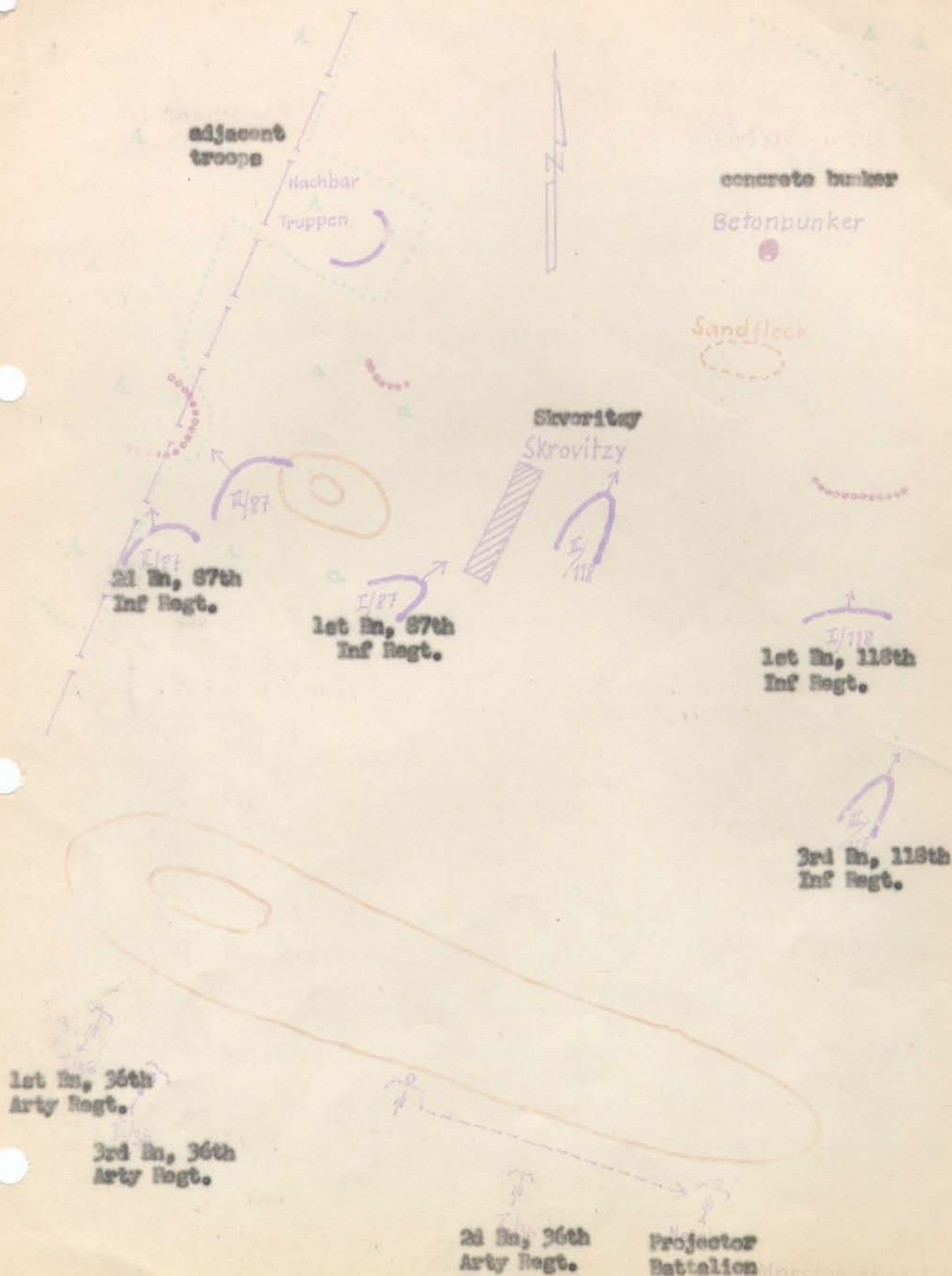
(Sketch 7 shows the situation at 1430).

5. Fifth Phase: Continuation of the Attack

Until 1430 the infantry had made little progress. The advance of the troops had been slowed down repeatedly by the machine-gun and rifle fire from expertly-camouflaged resistance pockets. It was difficult to spot the enemy troops in the terrain, covered with patches of brush. After the artillery had established contact with the infantry battalions, the companies and battalions began to fight their way forward in close combat. The following arrangement was made with the commander of the 1st Battalion, 36th Artillery Regiment, who had established his command post in the immediate vicinity of the command post of the 2d Battalion, 118th Infantry Regiment: At first the two companies in the front lines were to advance on a wide front and for the time being the artillery was only to keep the advance under observation. As soon as enemy troops should appear the artillery was to open fire and put them out of action, whereupon the infantry was to proceed. This plan would make it possible for one company after another to continue the advance. The artillery batteries were to adjust their fire on certain identifiable terrain features,

Lage am 8.8.41 um 1430 Uhr

Sketch 7



such as small hills, so that if targets should appear no time would be lost in taking these or other nearby areas under fire.

After the two companies had worked their way forward for about ten minutes, the forward observer of the 6th Company on the left reported that enemy troops equipped with several machine guns had managed to take up position. The forward observer adjusted the fire of the three batteries. The battalion then brought down a sudden concentration, each battery firing thirty rounds. The company resumed the advance even while the fire was being adjusted. Upon completion of the sudden concentration the battalion increased the range by 300 meters and began firing at a steady rate. The company at the right, which at first had come to a halt, now joined the advance of the company at the left. The two companies had covered approximately 800 to 2000 meters when the company at the right reported contact with the enemy. This company was not accompanied by any forward observer, and the main observers were unable to spot the enemy troops. The infantry company was therefore requested to conduct the adjustment fire. One round of fire was placed in the approximate area where, according to report, the target was bound to be located. The company commander then specified in meters the distance of the

burst from the target, thus guiding the fire to the target. In this case, however, the artillery battalion commander refrained from ordering all three batteries to fire; only the battery which had adjusted its fire was instructed to deliver the sudden concentration, reinforced by the fire of the infantry battalion's heavy weapons.

Meanwhile the enemy artillery had resumed firing and had attacked the German infantry, at first with a few and then with an increasing number of batteries. Some batteries also shelled the rear area. The German firing positions, however, were as yet not under attack; obviously the Russians could not locate them.

Apparently the enemy artillery observation posts directing the fire on our infantry were in the forest fringes on the right. This location was deduced from the fact that the 2d Battalion of the 118th Infantry Regiment, which was advancing farthest to the left and was covered against the edge of the forest by a small rise in the ground, was not taken under fire. The enemy fire was directed almost exclusively at the 1st Battalion, 118th Infantry Regiment. Only a few batteries were shelling the foremost infantry elements. The bulk of the enemy artillery distributed its fire over the entire area. Nevertheless, the hostile fire had such a paralyzing effect on the 1st Battalion, 118th

Infantry Regiment, that its advance was slowed down considerably. An inquiry directed to the 2d Battalion, 36th Artillery Regiment as to the source and direction of the enemy artillery fire elicited the information that the Russians were no longer employing the more westerly of the two artillery groups hitherto identified, but that only the artillery group located northeast of the village was now in action. The corps commander, who had just arrived at the artillery regimental CP, was requested to take more intensive action against this enemy artillery group which was causing so much trouble. The corps planned to arrange for the dive-bombers to fly another sortie, in view of the swift assistance they had rendered in the morning. However, this operation never materialized.

By that time, it was now 1600, the 3d Battalion of the 87th Infantry Regiment, which was advancing in the division left sector, had reached the protruding wooded section and had established contact there with the adjacent division. The battalion reported, however, that it would not be able to continue the advance without artillery support. For the time being it was not possible to supply the requested support. The 2d Battalion, 87th Infantry Regiment which in the morning had been given orders to eliminate the enemy troops who had been attacking the flank of the 3d Battalion,

87th Infantry Regiment from the forest, had pushed them back into the forest and annihilated them, and was now re-assembling. In the meantime the 1st Battalion, 87th Infantry Regiment had mopped up the trench system of strong point # 4 and had passed through the village of Skvoritay.

(Sketch 8 shows the situation prevailing at 1600).

6. Sixth Phase: Repulse of Russian Counterattack

Around 1600 the 2d Battalion, 118th Infantry Regiment reported enemy troop movements in the area between the concrete bunker and the forest in rear thereof. These reports very soon indicated that a large-scale counter-attack was in preparation at this point. For the moment it was not possible to determine the probable direction of this attack.

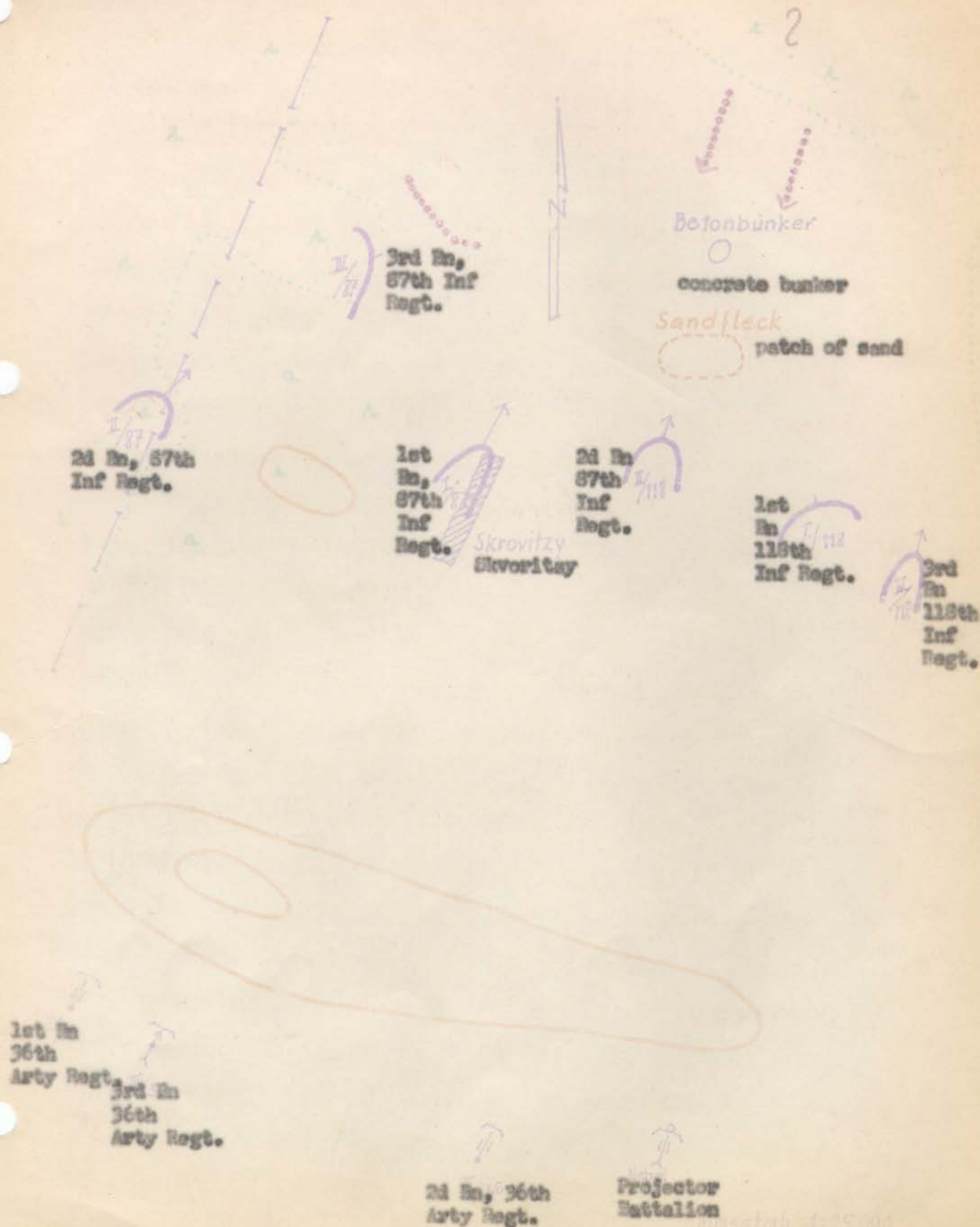
The 2d Battalion, 118th Infantry Regiment was ordered to halt its advance and prepare for the enemy attack. The 1st Battalion, 118th Infantry Regiment was instructed to advance its positions regardless of the enemy artillery fire, in order to establish contact with the 2d Battalion, 118th Infantry Regiment. It was to establish at least visual contact, which it did not have at the time. The 3d Battalion, 118th Infantry Regiment, providing coverage against the forest at its right flank, was to advance rapidly along the edge of this forest so as to be able to outflank the enemy

counterattack which was in process of preparation. In addition the 1st Battalion, 87th Infantry Regiment was placed under the command of the 118th Infantry Regiment in order to assist in repelling the enemy counterattack. Orders issued by division headquarters called for the right wing of the 1st Battalion, 87th Infantry Regiment to advance along the boundary line of the 118th Infantry Regiment until even with the 2d Battalion, 118th Infantry Regiment and to attempt establishing contact with same.

The commander of the 118th Infantry Regiment called the commander of the 36th Artillery Regiment, and after apprising him of the situation and his plans, stated: "The artillery must bring the movement of the enemy to a standstill without delay. It will be at least an hour before my measures--moving up the 1st Battalion, 118th Infantry Regiment and the 1st Battalion, 87th Infantry Regiment--will have taken effect. During that time my 2d Battalion, alone in front, will have to bear the brunt of the counterattack. Please hold the enemy in check and prevent his attacking us as long as possible. Once my battalions have made contact at the front I will have no more worries." The commander of the artillery regiment, in reply, promised that he would immediately order his entire regiment to fire ahead of the 2d Battalion,

SITUATION AT 1600

Lage um 1600 Uhr



118th Infantry Regiment, on both sides of the patch of sand, and that the projector battalion would shell the area abreast of the bunker and behind it.

In consequence the following orders were issued to the artillery battalions: The 1st Battalion, 36th Artillery Regiment will place its fire ahead of the 2d Battalion, 118th Infantry Regiment, on the left of a line bisecting the patch of sand, while the 2d Battalion, 36th Artillery Regiment will fire ahead of the 2d Battalion, 118th Infantry Regiment on the right of a line bisecting the patch of sand; the 3d Battalion, 36th Artillery Regiment will reinforce the fire of the two light battalions. Immediate steps will be taken in preparation for this artillery protection. Apart from that, each battalion will take under fire any Russian troops in sight until the enemy will have reached the area abreast with the bunker. Then the fire will be concentrated, in accordance with initial orders.

The projector battalion was instructed to attack without delay, using its maximum rate of fire, the terrain between the bunker and the forest. The terrain was identified more specifically with the aid of the gridded map. The heavy artillery group was requested to order all available heavy batteries likewise to shell this terrain.

(Sketch 9 shows the distribution of fire at 1630).

The Russian artillery continued its fire on the 1st Battalion, 118th Infantry Regiment and the terrain behind it. The 2d Battalion, 118th Infantry Regiment was virtually untouched by the enemy fire. The 3d Battalion, 118th Infantry Regiment, too, was little affected by enemy fire. The impression was that the counterattack was moving in the direction of the 1st Battalion, 118th Infantry Regiment. However, upon inquiry, the forward observers with the 2d Battalion, 118th Infantry Regiment stated that most of the enemy troops were advancing to the right of the bunker and in the direction of the 2d Battalion, 118th Infantry Regiment which was employing its heavy weapons. The battalion estimated that the enemy forces were attacking in the strength of at least one regiment.

As soon as the enemy troops reached the area abreast of the bunker they were under the observation of practically all German batteries. Their well-placed fire brought the enemy's advance to a halt, though not for long. The Russian advance elements forged ahead approximately 600 to 700 meters and were continually reinforced from the rear. Our artillery fire, though well-directed and effective, did not keep them from moving up reinforcements in ever-increasing number.

The 2d Battalion, 118th Infantry Regiment appealed to the artillery for help, stating that if the enemy forces continued increasing in strength as up to then, the battalion would be overrun during the Russian assault momentarily expected.

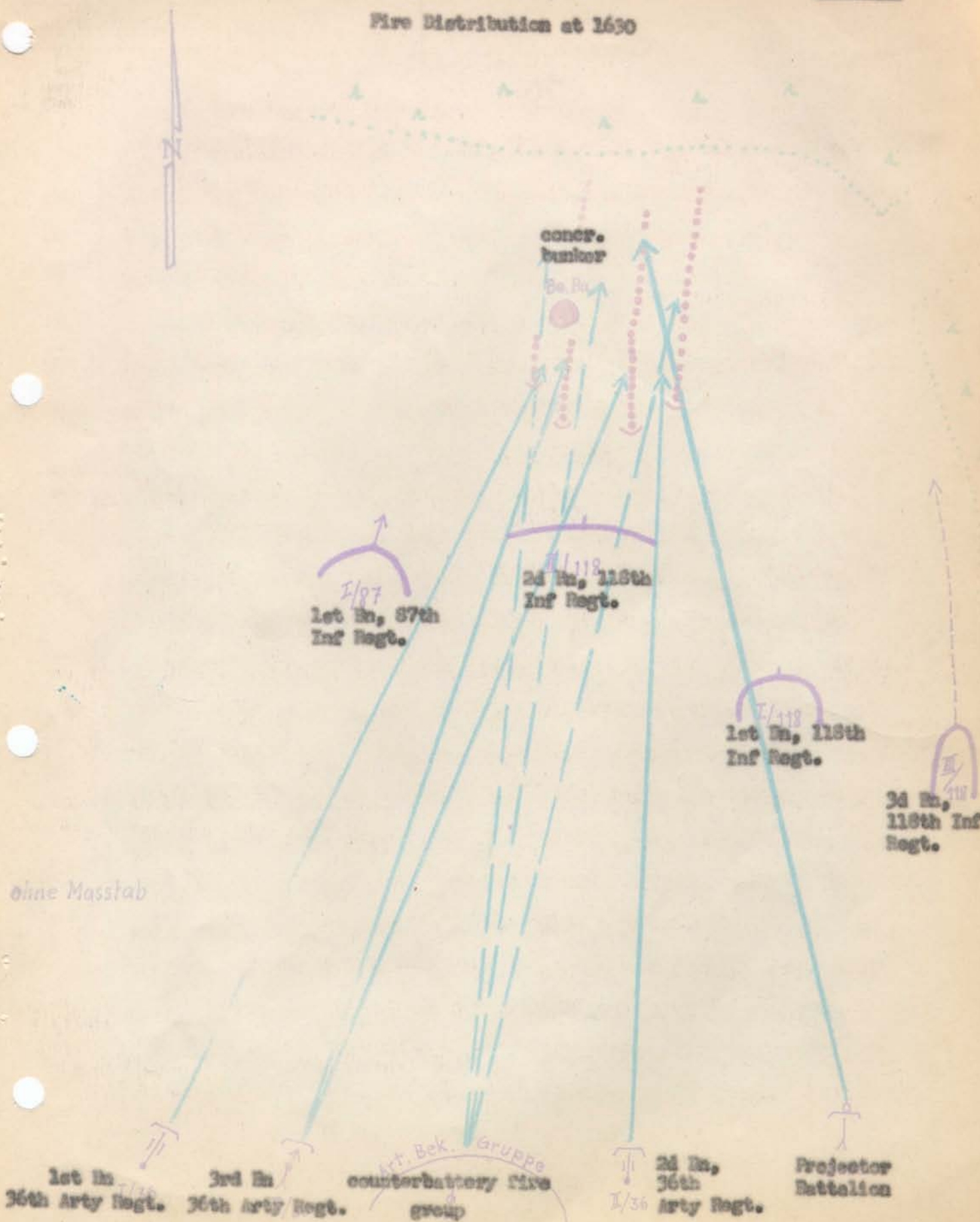
The projector battalion was given orders to place its fire closer to the German line, using high explosives. It was instructed to take under fire the terrain close by the bunker from which the reinforcements for the Russian attack units were steadily moving forward. The heavy artillery group was requested once more to have all available batteries fire on the terrain around the bunker. The artillery commander was notified that for the present it was necessary for the counterbattery fire to take second place and that the important job at the moment was to get out of the critical situation which was endangering the success of the entire offensive. In compliance with this request a large number of heavy batteries, including 210 mm howitzers, began shelling the terrain around the bunker as well as the area in back thereof.

At approximately 1730 it was reported that the enemy was advancing on a wide front against the 2d Battalion, 118th Infantry Regiment. All batteries were instructed to take action, using their fastest rate of fire. By that

Feuerverteilung 1630 Uhr

Sketch 9

Fire Distribution at 1630



time the 2d Battalion, 118th Infantry Regiment had employed its reserve company to extend its right wing, so it no longer had any reserves at its disposal. The battalion expected the enemy attack to be launched on a frontage of approximately 800 meters. Both its wings had been moved back slightly. Contact with the 1st Battalion, 118th Infantry Regiment had not as yet been established. However, a message received at that time from an officer reconnaissance patrol of the 1st Battalion, 87th Infantry Regiment brought the information that this battalion by now should have reached a point approximately even with the 2d Battalion, 118th Infantry Regiment and would join the battle forthwith. The 1st Battalion, 87th Infantry Regiment, which had understood the situation, advanced its left wing far enough to be able to take part in the action. Its heavy weapons took the attacking enemy troops under enfilading fire. The enemy attack came to a halt and thereby lost momentum. Some of the enemy troops attempted time and again to carry the attack forward but were always repulsed, suffering heavy casualties. The German artillery, which until then had been delivering concentrated fire, now resumed its observed fire and under the direction of the forward observers began to shell the enemy troops farthest advanced. After an hour

the battle came to a complete standstill and the enemy discontinued his attempts to move forward.

By approximately 1900 the 3d Battalion, 118th Infantry Regiment, advancing along the edge of the forest, had reached a point even with the bunker, where it wheeled in and attacked the enemy's deep flank.

The projector battalion and the heavy artillery group were notified to cease fire.

The effects of the attack of the 3d Battalion, 118th Infantry Regiment were quickly noticeable. The Russians pulled some portions of their forces out of the front and seemed to be withdrawing. The 2d Battalion, 118th Infantry Regiment immediately resumed its attack, and was joined in it by the 1st Battalion, 87th Infantry Regiment. The artillery battalions were now placing their fire ahead of the infantry battalions they had been instructed to support.

The German infantry forces reached and entered the forest at the rear of the enemy lines. The Russian resistance was broken.

V. LESSONS

1. The German Artillery

a. Dividing the artillery into one direct support group, under the division artillery commander, and one counterbattery or heavy artillery group under the corps artillery commander, resulted in the following disadvantages which became clearly evident during the course of the action:

(1) Failure to utilize the heavy artillery group fully at the start of the attack, when the enemy artillery had not yet been identified. This group could have taken part for a while in supporting the infantry.

(2) A complex and time-wasting chain of command which made it necessary for requests to be channeled from division to corps headquarters. The corps, after making the decision in each case, transmitted the order to the corps artillery commander.

(3) Resultant delay in assigning some portions of the counterbattery fire group to support the infantry. This delay occurred in the morning, at the time the German attack had come to a standstill, and in the afternoon when the Russian counterattack threatened to bring about a crisis.

A perfect solution would have been to place the corps artillery commander under the direct command of the division to give him control of all the artillery. In that case, moreover, shifting of the artillery point of main effort would have been a much simpler task and would have been executed more smoothly. The available documents do not indicate whether a possible reason for the corp's failure to arrive at this solution was the fact that the counterbattery group had also to hold itself in readiness to assist the adjacent divisions.

b. The clearly-defined development of the artillery point of main effort, both in the initial action and during the shifting of the point of main effort, was in keeping with a definite plan.

c. Under the prevailing circumstances, which necessitated continuous fighting over terrain which was partly closed, the shifting of the artillery point of main effort revealed the inherent weakness of this measure, which was that for hours the infantry was practically without any artillery support. In this case it did not matter; especially since, in case of need, the counterbattery group would have been able to come to the rescue. It is open to question whether or not the division was justified in its decision to shift the point of main effort.

d. Cooperation between the infantry and artillery functioned satisfactorily because both arms, through constant contact, always thoroughly understood each other's plans and possibilities.

e. The flexibility of the artillery command evidenced by the smoothly-functioning change from concentrated to observed fire, was equal to all the demands of combat.

2. The Russian Artillery

a. The Russian command conducted a purely passive defense, except that it had the outpost area mined. The artillery in particular might have been effective in support of an active defense, especially at the stage of the German approach and offensive preparations. This support might have included the following actions:

(1) Hampering the reconnaissance operations of the German troops and their approach to observation-post hill by moving up a number of batteries and by assigning forward observers to direct the fire. The lanes which the troops were forced to use in crossing the minefields should have been taken under plotted fire.

(2) Launching attacks with sudden concentrations of fire on the German troops assembling for action during the night of 7 September, and particularly at daybreak.

Since the Russians were familiar with the terrain, the approximate time of assembly and the approximate location of the German infantry's assembly areas could not have remained a secret to any alert observers. Attacking the infantry with such fire shortly before the start of the attack is likely to produce effective results. Of even greater importance is the effect of such fire on the morale of the attacking troops, because they will be made to realize that they are facing an alert and strong opponent. In many cases such fire will cause attacking troops to lose courage completely.

The enemy might have refrained from taking the above-mentioned measures because the Russian artillery wished to prevent the German reconnaissance artillery³ from detecting the location of their battery positions before they started attacking. However, appropriate deceptive measures, such as sudden bursts of fire from all available guns, lasting only seconds, to a large extent would have prevented the German artillery from making the proper computations. On the other hand, such actions call for considerable training and a first-class communications network.

³ Flash and sound ranging. (Editor)

In the fall of 1941 the Russian artillery at Leningrad obviously did not have either.

b. The Russian observation post system proved to be inadequate. To be sure, after the attack had started in the morning, the Russians were able to recognize the German point of main effort and they succeeded in detecting the shift of the artillery point of main effort in the afternoon. However, apparently they were able to command a view of only parts of the combat area; for while they took some battalions under well-placed fire they completely failed to strike others. Seemingly observers who were eliminated were not replaced. However, in order to meet such contingencies it is necessary for the artillery to keep additional observers and means of communication in reserve, just as the infantry sets aside reserves to keep the battle going.

c. Coordination between Russian artillery and infantry did not function satisfactorily. This lack of coordination was particularly evident during the counter-thrust which was launched in the morning from the edge of the forest at the left without being supported by any battery, and when the counterattack was mounted in the afternoon from the bunker area, on which occasion the artillery fire and the actual action were not properly

integrated. It is not enough for the command to order fire support. The important thing is for the control agencies of the artillery (command posts, observation posts, forward observers) to keep in constant close touch with the local infantry units (battalions, companies).

However, in criticizing the weaknesses of the Russian artillery we must bear in mind that the forces before Leningrad in the fall of 1941 were units which either had been newly activated or for months had been suffering defeat and in many instances had been routed. As a result, these units--in the quality of commanders as well as equipment--did not display as high a level of efficiency as that reached by the Russian artillery later in the war. However, a certain lack of flexibility characterized it even then.

EXAMPLE 2

EMPLOYMENT OF ARTILLERY IN REPELLING A LARGE-SCALE
RUSSIAN ATTACK SOUTH OF LAKE LADOGA

I. GENERAL SITUATION

Place: Salient in the sector of the XXVI Corps, located south of Lake Ladoga between Shlisselburg and Nga, approximately 50 kilometers east of Leningrad (sketch 10).

Time: July 1943. The Russians started their attack on 22 July.

Weather: Dry summer weather; good visibility. The sun rose at 0330 German daylight saving time.

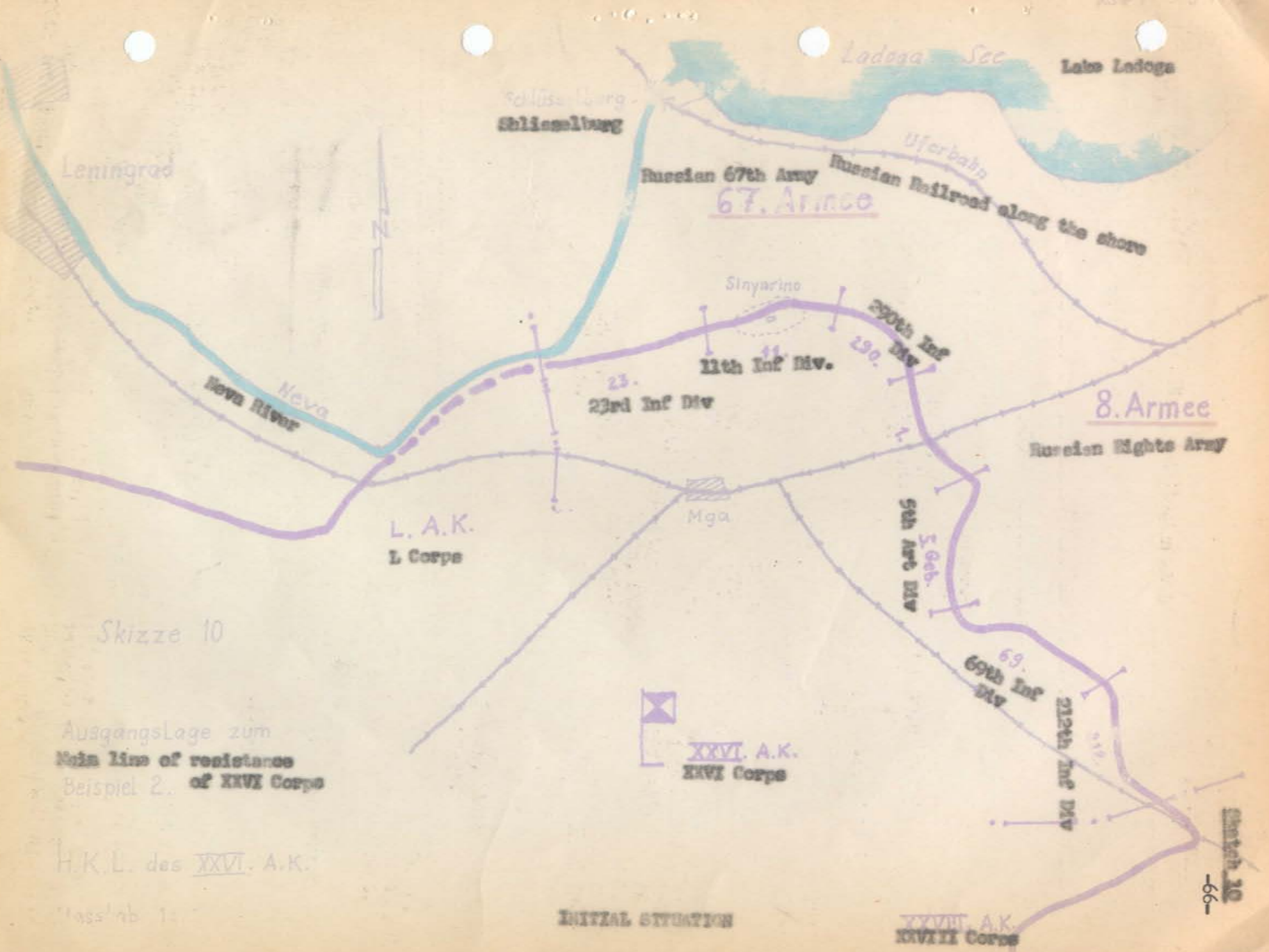
Terrain: In January 1943, during the second Ladoga battle, the German Eighteenth Army had been forced to withdraw from Lake Ladoga. Since that time the Russians had been holding a narrow land route which extended through Shlisselburg to Leningrad and had lost no time in building a railroad along the shore of Lake Ladoga. This corridor, approximately ten kilometers wide, was commanded by the Sinyavino Hills which were occupied by the German 11th Infantry Division. This ridge, its highest peaks about 50 meters above sea-level, rose 20 to 30 meters above the surrounding terrain. It commanded a view as far as Lake Ladoga, and from some points on it the shore railroad was

open to observation. Consequently, possession of this ridge was of the utmost importance for both sides; the Eighteenth Army called it the "window" of the northern front. Its northern slope, on which the German and Russian main lines of resistance were separated by a distance varying between 300 and 600 meters, was covered by small sections of forest and brushwood.

The village of Sinyavino had been destroyed completely during the second Ladoga battle. North of the ridge there were moors with occasional patches of forest and shrubbery. Peat-digging operations for the Leningrad power plant had been conducted on a large scale, and the terrain was intersected by numerous spur tracks of a peat railway. Covered positions for several batteries could be found south of the ridge. The region was not suited for extensive armored operations because everywhere, with the exception of the Sinyavino Hills, tank movements would be hampered by wooded and swampy areas.

II. SPECIAL SITUATION

After the second Ladoga battle the Russians had established themselves on the northern slopes of the Sinyavino ridge. The German command therefore expected the Red Army to resume its advance on the salient so that they would



be able, on the one hand, to relieve the pressure on Leningrad once and for all and, on the other hand, to prevent the German troops from recapturing the lake shores through a sudden thrust. Consequently in this sector the Germans had committed first-class and battle-trying divisions on a frontage of six to ten kilometers--a commitment in keeping with the requirements for the repulse of a large-scale attack.

The XXVI Corps had seven divisions in the front line. The troops had been able to recover from the heavy fighting of the spring and had managed fairly well to replace their losses. The positions were well fortified. A continuous trench connected a number of strong points which had been prepared for all-round defense. In addition, the position of the heavy weapons, as well as the command posts for the headquarters staffs, had been developed as strong points. It was not possible to develop the position in depth behind the front line because such a step would have necessitated abandoning to the enemy the ridge just in back of the main line of resistance. It was consequently necessary to fight for every inch of ground, with the result that the Ladoga battles began to assume the characteristics of the World War I battle of Verdun.

Only limited numbers of infantry reserves were available. Approximately one platoon was assigned to each battalion, one company was earmarked for each regiment and division respectively, and the corps reserve consisted of one infantry regiment. (Chart 7 shows the organization of the 11th Infantry Division).

It should be pointed out that only two battalions had been assigned to the infantry regiments of the German divisions.

The corps had at its disposal a relatively strong GHQ artillery consisting of three heavy artillery regiments and two observation battalions. (Chart 8 describes the organization of the GHQ artillery). This organization existed because in 1942 strong artillery forces had been assembled in the northern sector for an attack on Leningrad which, although planned, had never been carried out.

The Luftwaffe, on the other hand, was numerically weak because during this period the bulk of the German air forces had been concentrated for the attack on Kursk.

During the Volkhov and Ladoga battles the troops had come to know the Russian soldiers as courageous and tough opponents particularly adept at making the most of terrain conditions. Nevertheless the German troops were confident and their morale was high.

The XXVI Corps was facing the Russian Eighth and Sixty-seventh Armies. Each of these armies was in command of twelve to fourteen infantry divisions and several armored brigades. This strength fluctuated because, during the attack, fresh units were constantly replacing those that became depleted. On the first day of the attack approximately four to five divisions were committed by each army.

The Russian command in the northern sector had to depend on its own units because at that time the Russian point of main effort was in Central and Southern Russia. Although the numerical strength of the troops available for the attack was considerable, as compared with the number of defending forces, the Russian command evidently did not consider it sufficient for launching the thrust against the deep flanks of the salient. The units were brought up to strength and given training in preparation for their mission. Commanders as well as troops were experienced in combat. They were characterized particularly by the incredible tenacity with which they endeavored, despite all losses, to attain their objectives.

The enemy's preparations for the attack were made deliberately and with the greatest care.

ORGANIZATION OF THE 11TH INFANTRY DIVISION

Chart 7

AS OF 22 JULY 1943

Gliederung

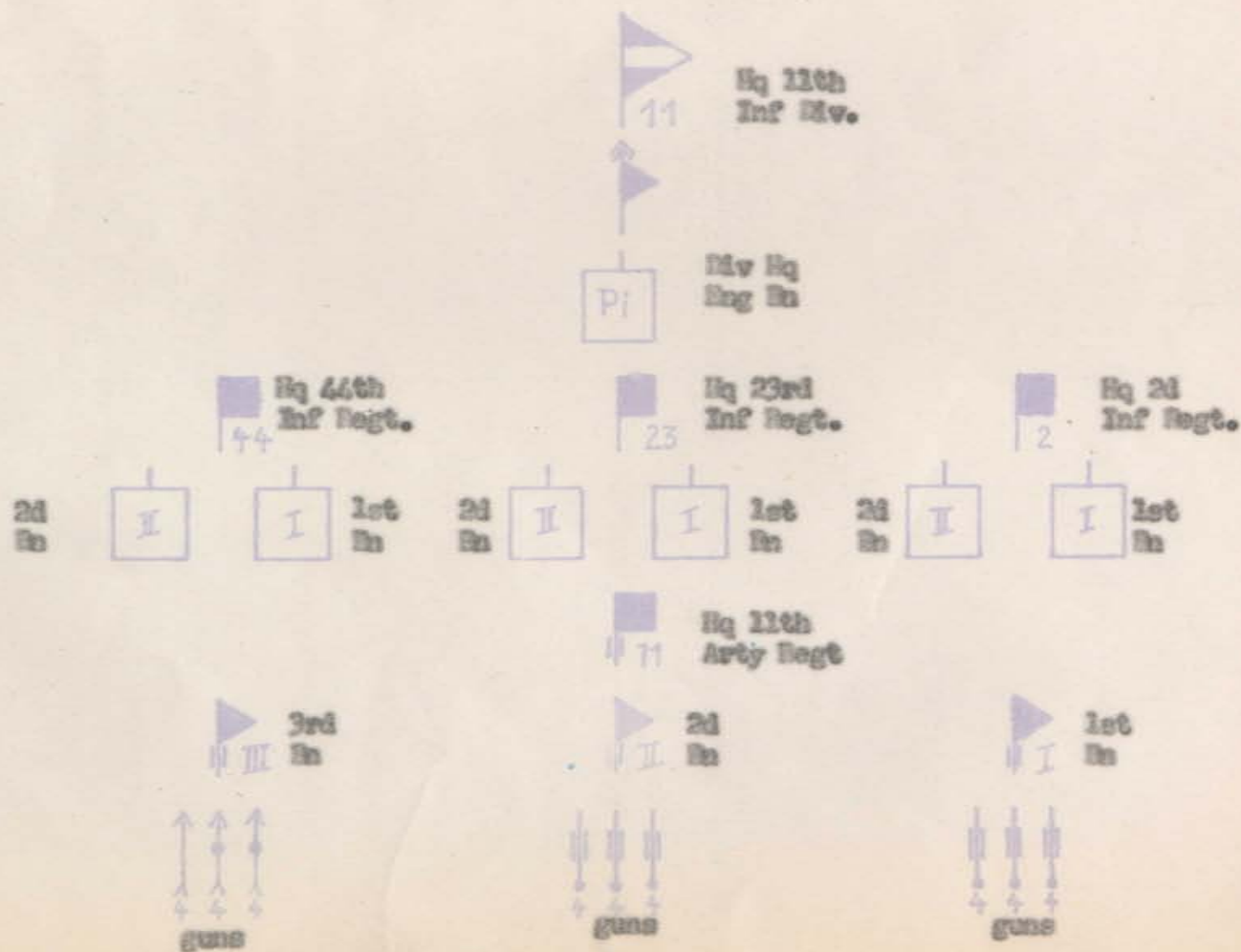
MS # P-060^a Pt 1

der 11. Grenadier Division

Anlage 7

am 22.7.1943

MS # P-060h



Gliederung

der dem XXVI. A.K. unterstellten Heeres-Artillerie

Juli 1943 vor Beginn des am 22.7. beginnenden Angriffs.

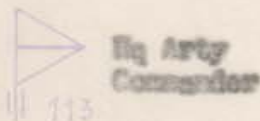
Anlage 8

Chart 8

ORGANIZATION OF THE GUN ARTILLERY SUBORDINATED TO THE XXVI CORPS IN JULY 1943, PRIOR TO THE START OF THE ATTACK LAUNCHED ON 22 JULY.



XXVI
Corps Hq



Hq Artillery
Commander

Artillery Regt. I
(number no longer known)



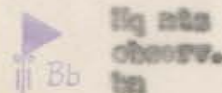
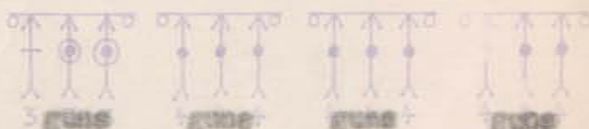
Y (Nummer nicht mehr bekannt)



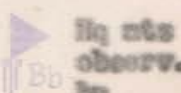
Artillery Regt. I
(number no longer known)



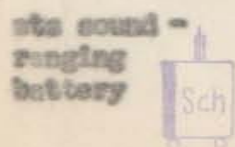
X (Nummer nicht mehr bekannt)



Hq Artillery
Observer Bn



Hq Artillery
Observer Bn



sound-
ranging
battery



flash-
ranging
battery



sound-
ranging
battery



flash-
ranging
battery

Some of the batteries were equipped with captured guns

Die Batterien waren zum Teil mit Beutegeschützen ausgerüstet.

III. ARTILLERY PREPARATIONS FOR DEFENSIVE COMBAT

1. Reconnaissance Operations

In order to ensure proper employment of the artillery, particularly the GHQ artillery, it was of primary importance that the Russian point or points of main effort, as well as the direction of attack should be identified in time. In addition, the various phases of the Russian concentration would have to be recognized, so that action might be taken accordingly. Finally, the exact time of attack would have to be determined as far as possible, to enable the artillery to move into its firing position on time--but not too early, either--and to take the enemy infantry forces under fire at the very moment they were assembling for action.

Along with other means of reconnaissance and intelligence (radio intelligence, captured prisoners, agents, aerial observation, and aerial photographs) the observation artillery played an important part. Its activities consisted of making computations from the findings of observers and observation battalions in their attempts to locate the enemy artillery. The observation posts, over a long period of time, had been recording with scrupulous precision every perceptible movement and every shot. The Russians endeavored to camouflage the adjustment fire of

their supporting artillery by coordinating it with the normal fire missions of the positional batteries and-- especially during high-burst ranging in the German rear area--by distributing it at irregular intervals over a long period of time. In addition, diversionary fire missions were carried out. The German computation sections succeeded nevertheless in identifying certain target areas on which the Russians were adjusting their fire. At the same time the observation posts were able to detect the Russian firing positions.

As a result of these findings it was possible to establish with certainty that during the first weeks in July two clearly-defined Russian points of main effort were developing against the sectors of the 1st and 11th Infantry Divisions respectively. The Russians obviously intended to bypass the German 290th Infantry Division stationed between these two divisions. To all appearances it was the enemy's aim first to take the salient in a pincer movement, then to capture the important railway junction of Mga, and subsequently to roll up the German northern sector. Computations made on the basis of information from other sources led to the same conclusions.

By the time the enemy attack started, the observation battalions had identified approximately 70 to 80 enemy

batteries in each main attack sector--equivalent to the employment of 1 to 1½ batteries per 100 meters of frontage.

The extent of enemy artillery concentration and the increased strengthening of the system of strong points also enabled the Germans to conclude, from every indication, that the attack would be launched during the second half of July.

2. Plans for Artillery Course of Action

On 12 July a conference was held at XXVI Corps headquarters, attended by the division commanders and the corps artillery commander. The following instructions were outlined in preparation for the expected defensive battle:

a. In view of the fact that the 11th Infantry Division is holding the strategic hills, this division will take precedence in any plans for supporting action and for counterbattery fire on the two identified Russian points of main effort against the 1st and 11th Division respectively.

b. The divisions which adjoin the 1st and 11th Infantry Divisions, and which probably will not be attacked, will make arrangements for large portions of their artillery to place their fire ahead of the threatened neighboring sectors. All observation posts, artillery liaison

detachments, and forward observers will be transferred to the sectors of the 1st and 11th Infantry Divisions.

c. The GNQ artillery of the corps will be grouped by the corps artillery commander in such a manner that the majority of the batteries will be able to place their fire ahead of the sectors of the 1st as well as of the 11th Infantry Division.

d. The divisions will retain command of their artillery while the corps artillery commander will exercise tactical control thereof. The corps artillery commander will take steps for the execution of the following missions:

(1) Any identified enemy batteries able to take under fire the sectors of the 1st and 11th Divisions respectively will be under constant fire.

(2) Any newly-constructed enemy fortifications which might serve as assault positions will be destroyed.

(3) The enemy approach routes will be taken under harassing fire during the night as well as throughout the day in order to impede the progress of the enemy troop concentrations.

(4) A new plan of fire will be drawn up in concurrence with the divisions: this plan will go into effect automatically at the start of the attack and will

be in effect until changes are necessitated by the course of action.

(5) Arrangements will be made for the entire artillery to move into newly-prepared positions during the night preceding the attack, when it is known to be imminent, thus making it possible to evade the fire that the enemy may be expected to direct against the present firing positions, which probably are known to him.

(6) These newly-prepared positions will be improved in preparation for close defense, and in addition the general defense line for the artillery will be developed.

(7) Sufficient ammunition supply for three days of combat will be stored in and around the firing positions.

On the basis of these instructions the artillery commander assigned the following missions:

a. The GHQ artillery will be in charge of the counterbattery fire as well as the harassing fire which will attack the enemy supply routes.

b. The destruction of the new enemy fortifications will be the task of the division artillery.

c. In the plan of fire which will be drawn up, the division artillery will be assigned responsibility

for defensive fire missions. Wherever its fire power is insufficient it will be supplemented by the GHQ artillery fire.

d. The shelling of suspected enemy assembly positions will devolve upon the GHQ artillery.

3. Arrangement of Plan of Fire of 11th Infantry Division

On the basis of the instructions issued by the corps artillery commander, the commander of the 11th Artillery Regiment engaged in conference with the commanders of the three infantry regiments committed in the front line. The discussions were held in the field. It was specified where the enemy assembly areas presumably were located and against which sectors the defensive fire was to be directed. For the artillery these conferences served the important purpose of disclosing the weak points of its own defensive setup.

The sector of the 11th Infantry Division had an overall frontage of approximately six kilometers (sketch # 11).

At first only the three battalions of the 11th Artillery Regiment were available for the execution of defensive fire missions. This meant that each infantry regiment was assigned one artillery battalion.

During a tactical walk by the commander of the 11th Artillery Regiment in company with the commander of the

2d Infantry Regiment, in whose sector the Sinyavino Hills were located, the infantry commander requested that as much continuous defensive fire as possible be placed ahead of his entire front line. His sector had a frontage of approximately 1800 meters. The assigned battalion, by placing three batteries in line, would be able to cover with fire only 600 meters at most. The artillery commander, on the other hand, opposed placing all three batteries in line or scattering the fire of his battalion because, as he claimed, defensive fire of this type would be too widely dispersed and could easily be sifted through by the enemy without heavy losses. He insisted that the fire be concentrated on a frontage of 400 meters with two batteries in line and the third battery supplementing their fire.

In the right portion of the regimental sector (sketch 12) the foremost German line and the Russian position were roughly 300 to 400 meters apart. At this point the Russians had organized their positions in depth. A patch of brushwood, extending between the two opposing sides, made it possible to approach without being seen. The battalion commander assigned to this sector believed that during the night preceding the attack the Russians, taking advantage of the brush-covered terrain, would move their foremost attacking echelons close up to the German positions.

In the center of the sector a deep depression, with steep banks, extended towards the German position. This depression was easily taken under fire, along its entire extent, by heavy infantry weapons.

In the left portion of the regimental sector the enemy position ran along the fringes of a forest. A winding "antitank ditch," wide and deep, extended diagonally across this sector towards the German positions. The terrain at this point was fairly open to view.

The artillery observation posts were located in the right section behind the German positions on the Sinyavino Hills. In the left section the observation posts had to be moved up to the foremost lines.

The infantry commander regarded his right sector as the one most exposed to danger as well as the most important tactically.

The commanders agreed upon the following procedure: The defensive fire of the 2d Battalion, 11th Artillery Regiment, assigned to support the 2d Infantry Regiment, was to be placed ahead of the right regimental sector on a frontage of 400 meters, overlapping the boundary of the unit adjacent to the right by about fifty meters. One battalion of the GHQ artillery was to take under defensive fire the antitank ditch and the areas on either side thereof.

Additional zones for defensive fire were established so that, in case of need, the fire could be directed without delay.

The artillery thus assumed responsibility for the fire to be placed in two areas, each with a frontage of 400 meters, ahead of the sector of the 2d Infantry Regiment. That was very little. As compensation the infantry commander requested that heavy artillery fire be laid upon the suspected enemy assembly areas. These areas were the system of trenches in front of the right section and the forest ahead of the left section.

In order to achieve a simple and reliable method of target designation if the enemy should penetrate the German positions, maps were issued on which the targets in the German trenches were marked with numbers.

The fire plan for the sector of the 2d Infantry Regiment specified the following line of action:

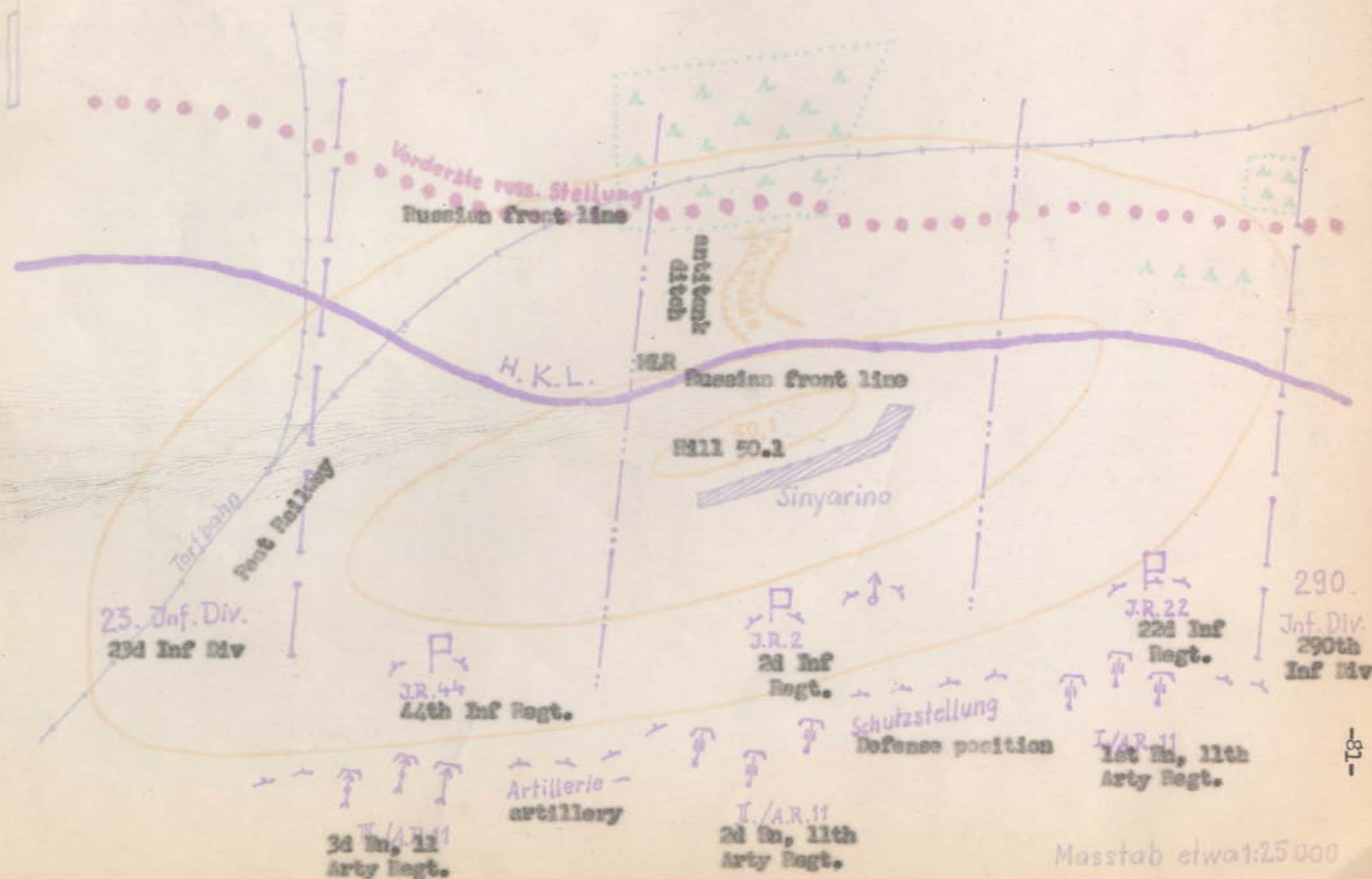
a. In case the enemy attack is launched without artillery preparation--which was considered unlikely--the defensive fire will be released automatically against the two designated areas, as directed by the forward observers who will remain in close proximity to the company commanders. At the same time the CHQ artillery will shell the two assembly areas. This fire will be released through the battalions where the artillery liaison detachments will be located.

ORGANIZATION OF THE 11TH
INFANTRY DIVISION ON
21 JULY 1943

Skizze 11 zum Beispiel 2
 Gliederung der 11. Inf. Div. am 21. 7. 43

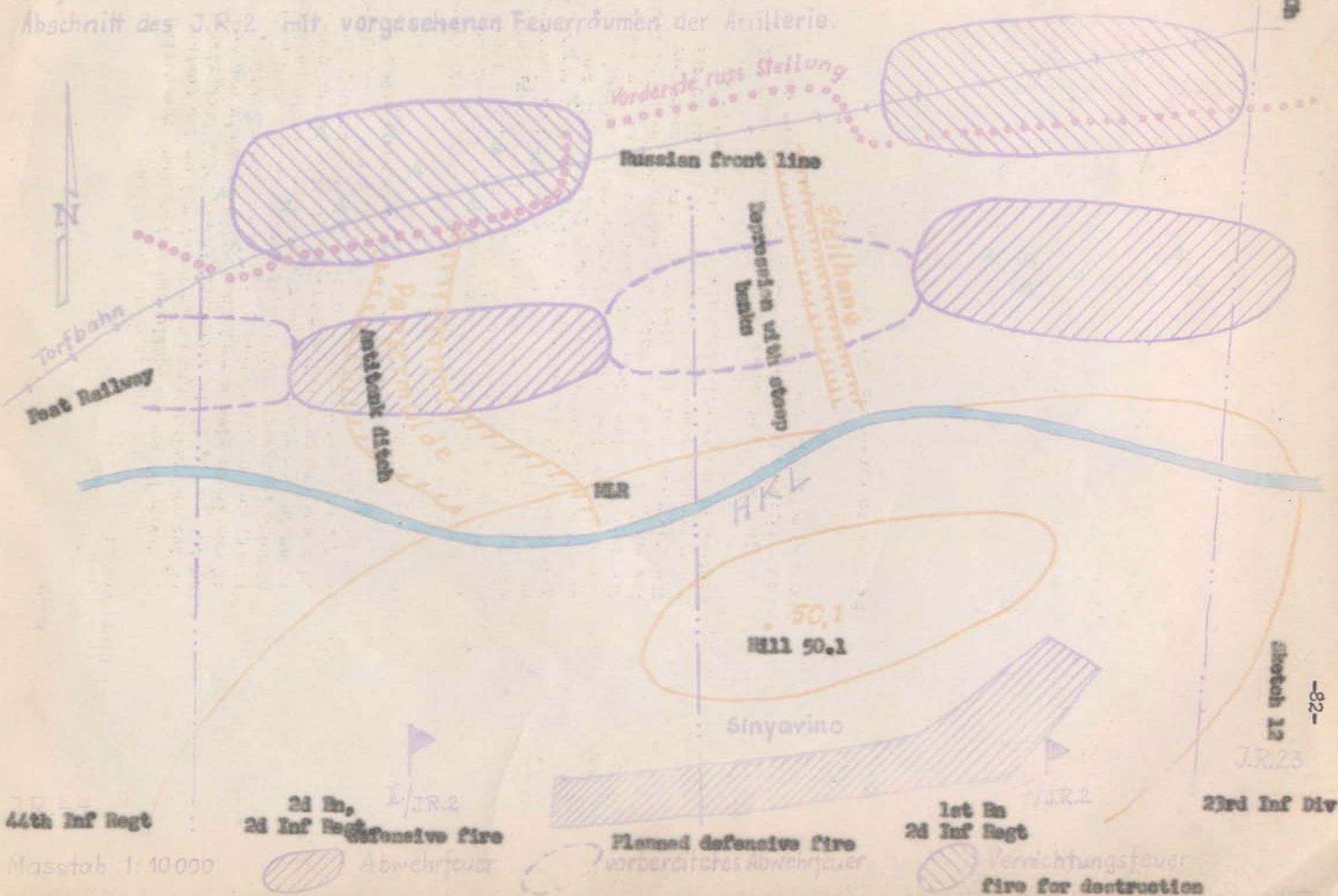
MS # P-060^h Pr. I

Sketch 11



Skizze 12 zum Beispiel 2

Abchnitt des J.R.2 mit vorgesehenen Feuerzonen der Artillerie.



b. If the enemy attack is launched with artillery preparation, the 2d Battalion, 11th Artillery Regiment, as soon as the enemy begins to fire, will take under fire the brush-covered terrain in front of the right sections for the purpose of striking at any enemy forces who might have moved forward. The GHQ artillery will attack the system of trenches located in rear of this terrain. In the left section the GHQ artillery will fire at first into the forest; when the enemy attack begins, the battalion which has been assigned the defensive fire mission will shift this fire to the defense zone. The fire will be released as indicated previously.

The infantry then will coordinate its plan of fire with the fire plan of the artillery in order to attack, with heavy infantry weapons, the areas not covered with artillery fire.

The following measures were taken in order to maintain contact between the two arms:

a. To each infantry regimental command post the commander of the 11th Artillery Regiment assigned one artillery liaison detachment, provided with telephone and radio equipment.

b. The artillery battalions were instructed to establish their command posts, wherever at all feasible, close to the command posts of the infantry regiments and

to make sure that radio communications were functioning properly.

The infantry battalions committed in the forward positions were to be assigned one artillery liaison detachment each.

c. The batteries moved the forward observers to the front line. (Every battalion was assigned two forward observers.)

d. The fire direction centers of the batteries were ordered to establish communications with the infantry command posts--either battalion or company command posts--located nearest to them.

After assigning the above-mentioned elements, the artillery had practically no personnel of this type left. Only one forward observer was still available for each artillery battalion and was kept in reserve (chart 9).

4. Firing Positions

The combat positions of the artillery were chosen in such a manner that one battalion always formed a combat team for close defense. This meant that the batteries of the battalion took up firing positions which allowed for as much line-of-vision contact as possible and enabled the forces in the respective fire positions to support each other during close defense operations. Wherever terrain

conditions permitted, the firing positions were so chosen as to give the artillery an adequate field of fire against tanks. As protection against artillery fire and bombing attacks, one-man and two-man foxholes, which had proved effective in the past, were constructed. Moreover in the intermediate terrain between the artillery battalion, positions were prepared and equipped with infantry ammunition and hand grenades in such a way that a continuous artillery defensive position resulted. An antiaircraft artillery battalion in rear of the Sinyavino Hills became part of the position.

IV. CONDUCT OF DEFENSIVE OPERATIONS

1. Period Preceding Russian Infantry Attack

In keeping with the instructions of the corps artillery commander, the GHQ artillery attacked enemy batteries which had been identified. For this attack the fires of several heavy batteries were combined each time to deliver sudden concentrations. Every day the GHQ artillery, with considerable expenditure of ammunition, fired on eight to ten enemy batteries. There was no counteraction on the part of the Russians. At night the approach roads and villages in the enemy rear area were covered with heavy harassing fire. Throughout the day the division artillery shelled the Russian system of trenches steadily.

On 21 July indications that an attack was imminent were so numerous that it was expected to occur on the next day. Consequently the corps at 1800 issued orders that by 2400 the entire artillery was to move into the prepared battle positions. At the appointed time all batteries reported themselves ready for action in the new positions.

It was assumed that beginning approximately at 0100 the Russian assault detachments would assemble in the jump-off positions. The positions were therefore taken under the concentrated fire of the GHQ artillery. The first sudden concentration was delivered at 0115. It was directed against the Russian system of trenches located opposite the right sector of the German 11th Infantry Division, and carried out through the combined action of eighteen heavy batteries, including six 210 mm howitzer batteries. This action was taken with full awareness of the risk that it might enable the Russians to identify the battle positions of the GHQ artillery before the start of their attack. However, the suddenness of the fire rendered identification difficult. Moreover, the firing positions of the GHQ battalions were located so far in the rear that they could be taken under fire by long-range artillery weapons only.

The first sudden concentration was succeeded thirty minutes later by an equally heavy sudden concentration aimed

at the forest in front of the left sector. Following that, the GHQ artillery delivered several sudden concentrations ahead of the sector of the 1st Infantry Division. At 0230 the sudden concentrations aimed at the previously-mentioned areas in front of the sector of the 11th Infantry Division were repeated. Complete silence still prevailed on the Russian side.

At 0330, as dawn was breaking, the Russian artillery suddenly opened fire of an unexpected and unprecedented intensity and scope. At the same time the Russians, as expected, bombarded the eastern and northern sectors of the XXVI Corps heavily.

The German infantry positions were blanketed with a rolling fire which extended as far as beyond the positions of the division artillery. It was impossible to determine whether the bulk of the enemy fire was aimed at the eastern or the northern sector. Only the fire directed against the artillery positions made it possible to judge that, in the main, the evacuated firing positions were being taken under fire.

A few seconds after the enemy had opened fire the German artillery, in keeping with the fire plan, responded with heavy counterfire without waiting for instructions from the front.

Radio reports from the forward observers in the front line were received very infrequently. Those arriving during the first half-hour gave no clear picture of what was happening, but they stated uniformly that the forces in the front line were suffering heavy casualties, that permanent emplacements were being eliminated, and that observation was barely possible. No reports of any kind were received from the main observation posts located on the Sinyavino Hills.

At about 0415 the commanding general was given the following brief situation report by the artillery commander: The Russians are covering the sectors of the 1st and 11th Infantry Divisions respectively with surprisingly heavy artillery fire. In addition, the right portion of the sector of the 23d Infantry Division is being pounded by equally intensive enemy fire. The fact that the enemy artillery fire would be directed against the sector of the 23d Infantry Division as well had not been anticipated but has come as a surprise. The main point of effort of the enemy artillery fire is not perceptible. The few reports being received from the front all state that the Russians are attacking the German infantry positions with considerable effectiveness and that their fire is being placed on the entire depth of these positions.

Only a few German artillery positions are under fire. There have been no reports of the loss of entire batteries. The German artillery is firing accordingly to plan. Practically all channels of communication have been disrupted. The artillery commander is anxious to determine the exact moment at which the enemy attack will start so that he may release defensive fire at the proper time.

At the same time, the commander of the 2d Battalion, 11th Artillery Regiment visited the command post of the 2d Infantry Regiment, which was located at the southern slope of the Sinyavino Hills and was closely adjacent to his own. The discussion between the two commanders was indicative of the terrific strain under which they were laboring. All that either of them knew was that the German positions, as well as the entire range, were being attacked by Russian artillery fire of unprecedented intensity. They were unable to tell, however, to what extent the infantry would be able to weather this onslaught. Communications had ceased functioning. Likewise, the radio stations of the fire direction centers located on the ridge were being shelled so heavily that they were unable to respond. However, radio contact was still being maintained between the battalion commander and several forward observers in

the fire trench. One of these forward observers was reporting just then that the Russian infantry troops were moving out of their trenches and beginning to advance. Here too, the question was when would it be advisable to lay defensive fire ahead of the German positions. It was decided to release this fire right then and there; the time was 0425.

2. Repulse of Russian Infantry Attack in Sector of 11th Infantry Division

At 0430, just one hour after the enemy artillery preparation had begun, the Russians ceased firing for about one minute and then resumed the attack with undiminished intensity. However, the fire had been shifted. The foremost trench and the permanent emplacements which had been made part of the German system of trenches--and which, pounded without ceasing, had been enveloped until then by dust and smoke, were no longer taken under fire. On the other hand, the Russian artillery fire was aimed at the rear area, in particular at Hill 50.1, and was increased in intensity. The fire directed against the German artillery positions remained unchanged.

Under cover of their own artillery fire the Russian infantry troops had worked their way forward and had moved up close to the German wire entanglements, which had been

riddled with shells. Undoubtedly the fire of their own artillery had proved troublesome for these troops. The very moment this fire ceased--simultaneously with the last shot, as it were--the Russians, taking advantage of the effect of their artillery fire on the enemy, launched the assault quickly and over-ran the German security detachments which had been moved ahead of the fire trench.

As soon as the Russian infantry started its operations, namely at 0430, Russian planes in incredibly large numbers flew across the positions and gave fire support to the ground fighting. Some of the planes struck at the infantry troops in the trenches and others took the command posts under fire, while a certain number attacked the artillery positions with bombs and aircraft armament. The anti-aircraft battalion committed in the sector of the infantry regiment was a special target. The air defense measures proved completely inadequate, particularly in view of the fact that the weapons which had been designated for anti-aircraft purposes had to be employed in ground combat.

Shortly before 0500 the forward observer attached to the 2d Company of the 2d Infantry Regiment transmitted his first message to the infantry regiment through the battalion command post, as follows: "The Russians have penetrated the German trenches at several points and are constantly

sending new waves of troops into action. Although our artillery fire is well placed it is not heavy enough."

The commander of the infantry regiment asked the chief of the artillery liaison detachment of the 11th Artillery Regiment, who was attached to his headquarters, to contact his regiment and urgently request that additional fire be placed in front of the 1st Battalion, 2d Infantry Regiment. In a short while the artillery liaison detachment reported that for the present the 11th Artillery Regiment was not in a position to increase the fire placed ahead of the 1st Battalion, because all three infantry regiments were engaged in extremely heavy defensive combat. The report also stated that the 11th Artillery Regiment would endeavor nevertheless to obtain additional support through the corps artillery commander.

Meanwhile the two commanders of the GHQ artillery regiments, to whom all infantry headquarters were continuously appealing for additional artillery support, had contacted the corps artillery commander and had proposed that those portions of the GHQ artillery which were engaged in attacking the Russian artillery with counterbattery fire be made available for action against the infantry. The corps artillery commander then ordered one heavy battalion to support the 11th Infantry Division, whereupon the commander of the

artillery regiment directed the battalion to supplement the fire placed into the defense zone in front of the 1st Battalion, 2d Infantry Regiment. As a result, one heavy and one light battalion were now firing on the brush-covered terrain ahead of the 1st Battalion, while one heavy group was attacking the Russian system of trenches. It was probably 0530 before the increased artillery support made itself felt.

The artillery liaison detachment attached to the 1st Battalion, 2d Infantry Regiment, committed in the right sector, had been eliminated. Its radio set had been hit by a shell and rendered useless. In order to be able to maintain contact with the artillery the battalion commander sent for the battery commander of the 4th Battery, 11th Artillery Regiment, whose observation post was located near the battalion command post.

The Russian attack had broken up into separate engagements partly in front of and partly inside of the German trench. At that time--it was then approximately 0545--the commander of the 1st Battalion, 2d Infantry Regiment, was unable to arrive at an exact appraisal of the situation. He discussed his plans with the battery commander as follows:

"I shall now commit my reserves, consisting of just one platoon, so that initially it will be possible to re-gain firm control of the positions of the 2d Company. The artillery has the responsibility of making certain that while my counterthrust is being launched it will be impossible for any additional enemy troops to approach the positions of the 2d Company. The operation will have to be carried out speedily so as to give the Russians no chance to establish themselves. In what way can you assist me? Will it be possible for you to place the entire artillery fire closer to our positions?"

The battery commander asked for a few minutes in which to contact his battalion commander, with whom he was still in radio communication through the set at the battery position. Following this consultation, the battery commander proposed that the fire of the 4th Battery be placed directly in front of the sector of the 2d Company and directed by visual observation. He said that it would be impossible to shift the entire artillery fire which was then being placed ahead of the sector. He continued: "According to the last reports received, the Russians at present are not moving up any fresh attack troops. It is advisable, nevertheless, to take into account the fact that the Russians will send new waves of troops out of the

trenches into action as soon as they believe that the first trench has been captured. However, these fresh attack troops are likely to be only in the Russian jump-off position and consequently it is necessary to continue firing on that position."

Concerning the over-all situation the battalion commander advised that while the Russians had penetrated at many points they had not succeeded anywhere in achieving a decisive break-through.

At approximately 0630 it became apparent that the Russian artillery fire had been shifted once more. The shelling of Hill 50.1, which until that time had been extremely heavy, was considerably reduced. The fire was shifted to the southern slope of Hill 50.1, without decreasing in intensity.

During this time the corps commander visited the command post of the corps artillery commander, a few hundred meters from his own command post. In an account of the situation, based chiefly on reports from the GHQ artillery under his direct command, the corps artillery commander set forth the following:

"Under attack are, for one thing, the 1st Infantry Division and some portions of the 5th Mountain Division adjacent on the right. However, the attack on the latter

seems to be only a diversionary operation. In addition the enemy is striking at the entire frontage of the 11th Infantry Division. Contrary to our expectations, however, the Russians are also attacking the 23d Infantry Division on our left. A point of main effort appears to be developing opposite the central sector of the 11th Infantry Division. The last report that the Sinyavino Hill is no longer under artillery fire seems to indicate that this hill will be attacked shortly. The Russians, although penetrating at many points, have not succeeded in achieving a break-through anywhere. Only on the right flank of the 23d Infantry Division have enemy troops managed to effect any penetrations in depth. According to all reports the enemy artillery is placing its fire with considerable effectiveness and the enemy air force is causing the troops in combat a great deal of trouble. As a result of repeated attacks on its firing positions the artillery is greatly hampered in its operations. Increased anti-aircraft defense is urgently needed."

The corps artillery commander furthermore informed the corps commander that the entire artillery was now in action and that he now did not have a single gun in reserve. He suggested that an assault-gun battery which had been attached to the corps be placed under the command of the 11th Infantry Division. In addition he stated:

"The fighting is now raging in the German trenches, where the artillery can render but little support lest they endanger our own troops. I believe that the present mission of the artillery should consist of preventing the enemy from moving up any additional troops. In case of counterthrusts, however, the assault guns would prove useful."

The corps commander was in agreement with the comments of his artillery commander, and expressed himself as follows:

"In addition to the above-mentioned task it will be the responsibility of the artillery to provide cover for the Sinyavino Hill. In any case, we are still holding these positions and consequently have been able to repel the enemy's first thrust. However, it would be advisable for you to hold yourself in readiness to support the 23d Infantry Division with all available guns in case the enemy penetration in that sector should develop into a breakthrough. If the Russian command exercises sound judgment, its troops will attempt to achieve a penetration in depth at that point in order to have some forces move behind the 11th Infantry Division and attack its positions in the rear. The infantry regiment assigned to the corps has been dispatched already to the boundary between the 11th and

23d Infantry Divisions respectively. Please direct that their positions must be held. If enemy troops succeed in breaching the line at any point, the gap should be closed regardless of enemy forces who have broken through. We must take into account the fact that the Russians will continue the attack and that additional assault troops will be moved up. I believe that the point of main effort will be directed against the Sinyavino Hill and that the enemy will continue to attack this hill."

At about 0645 the reserve platoon of the 1st Battalion, 2d Infantry Regiment began its counterthrust. The platoon leader was accompanied by the commander of the 4th Battery, 11th Artillery Regiment. The platoon reached the infantry company command post without any difficulty. The company commander, apprising the platoon leader of the situation in his sector, said that the Russians had broken through in the center but that one permanent emplacement was still being held. Although the Russians were not moving up any additional forces at the time, the company commander estimated that approximately 100 Russian troops had broken through. He ordered the counterattack to be launched from the right and through the trench. The battery commander was instructed to place his fire as close as possible to the German trenches. The counterthrust was successful;

by 0700 the 2d Company, 2d Infantry Regiment, had regained complete possession of its trench.

Meanwhile the Russians had scored partial successes in the sector of the 23d Infantry Regiment adjacent on the right. Russian troops had moved into the rear of the 1st Company, 2d Infantry Regiment. A Russian detachment of nearly company strength was moving behind the 1st Company along the southern slope of Sinyavine Hill. These enemy troops, at times under their own artillery fire, were advancing in the direction of the command post of the 2d Infantry Regiment toward the antiaircraft gun emplacement located northeast of the regimental command post. Encountering practically no resistance, the Russians reached the antiaircraft gun emplacement and penetrated it. In order to repel these forces the regiment committed its reserve company, reinforced by the regimental engineer platoon and the bicycle platoon. The attack was supported by two assault guns made available by the division, while the other guns were dispatched to the sector of the 23d Infantry Regiment, where they were to assist the counterthrusts. The assault guns were moving forward 200 meters apart, in conjunction with the infantry. The Russians, attacked on the flank and in the rear, offered little resistance. By 0800 the enemy troops who had

broken through the antiaircraft gun emplacement were annihilated and the position was again in German hands.

Thus the situation in the sector of the 2d Infantry Regiment had been restored for the moment. A new enemy concentration seemed to be developing north of the antitank ditch. The regiment estimated that the casualties in this first attack sector amounted to as much as 25 percent. In the sector of the 23d Infantry Regiment adjacent on the right the enemy penetration had been sealed off and counter-thrusts were under way.

On the other hand, a critical situation had arisen on the right flank of the 11th Infantry Division and in the sector of the 23d Infantry Division adjacent thereto. At these points the enemy had by 0800 succeeded in achieving penetrations of two kilometers each. The corps then had the penetration area taken under fire by the entire available GHQ artillery. Likewise, the commander of the 11th Infantry Division decided that this area was to be fired on by the entire 11th Artillery Regiment. This action was taken in spite of objections raised by the 23d and 2d Infantry Regiments respectively and their assertions that it would be impossible for them to do without artillery protection.

(Sketch 13 shows area covered by the artillery fire at 0900).

However, arrangements were made for the antitank ditch to be taken under the combined fire of the 11th Artillery Regiment and large portions of the GHQ artillery as soon as enemy attack troops assembling there commenced debouching. Furthermore, the 23d Infantry Division was supported by the artillery regiment of the division on the right.

About 1000, reports were received from all observation posts that there were definite indications that the enemy attack, which would be launched by troops moving through the antitank ditch, was imminent. Thereupon the 11th Artillery Regiment instructed the 1st and 2d Battalions to shell the zones of defensive fire in and on both sides of the antitank ditch. By mutual agreement with the artillery of the 290th Infantry Division adjacent to the right it was arranged that all available guns would support the 11th Artillery Regiment. The corps artillery commander ordered one heavy group, consisting of one heavy and two medium howitzer battalions, to supplement the fire directed against the zones of defensive fire. Orders called for all batteries to open defensive fire at the start of the enemy attack. One equally strong group of the GHQ artillery was instructed

to open fire without delay on the presumed enemy assembly areas.

At that time the fire ahead of the left flank of the 11th Infantry Division was being delivered only by the 3d Battalion, 11th Artillery Regiment, while the area in front of the 23d Infantry Division was being taken under fire by the division artillery and some batteries of the GHQ artillery. The reserve regiment, which was launching the counter-attack along the boundary between the two divisions had to be content for the time being with this artillery support.

Approximately fifteen minutes after the order had been issued the heavy group, assigned the mission of attacking the presumed enemy assembly area in back of the antitank ditch, opened fire. Just as if the commencement of fire had been the signal for the Russians to begin operations, they now launched a massed attack from their jump-off position 300 meters distant and on a frontage of approximately 600 to 700 meters. Although heretofore the Russians had been working their way forward in loose formations, skillfully making the most of the terrain in approaching the German positions and launching the final assault only if a sufficiently large number of forces was concentrated immediately in front of the line, they now advanced in lines, one close behind the other. And

now all German batteries which had been assigned defensive fire missions went into action (sketch 14).

The objective of the enemy was plainly evident. In view of the deep penetrations they had achieved on the left flank of the 11th Infantry Division and adjacent thereto, and at the 23d Infantry Division, as well as on the eastern slope of Sinyavino Hill, the Russians believed that the moment had come to attack the central sector of the 11th Infantry Division and thereby strike a death blow at the entire Sinyavino position. This attack was not supported by artillery fire. The German positions in front of the steep slope were not taken under artillery fire.

Although the attacking enemy troops had to pass through a box barrage they kept moving steadily forward. The German artillery fire was placed 200 to 300 meters ahead of the German positions. The German infantry troops kept their nerves under control, and not until the Russians began to emerge from the box-barrage area did they open fire with all weapons. The Russians were not prepared for this counteraction. When they were struck by machine-gun and rifle fire they were forced to the ground. Thereby the impetus of the enemy attack was broken and the most serious danger overcome. Some enemy elements, advancing in groups of twenty to thirty men, managed to work their way forward,

but they were repelled and eliminated. At no point did the attacking troops succeed in reaching the German positions. After some hours the Russians discontinued attempts to penetrate the German positions and the first movements in withdrawal became noticeable.

The battalion commander estimated that the Russian forces taking part in this massed attack were at least one regiment in strength.

Toward noon on 22 July combat activities subsided still further. However, some small groups of enemy forces remained in the intermediate terrain where they had entrenched themselves.

The Russians did not resume their attacks that day. The main line of resistance of the 11th Infantry Division was clear of enemy troops. The enemy penetrations in front of the left regiment, the 44th Infantry Regiment, had been eliminated or sealed off. Only in the sector of the 23d Infantry Division on the left were positions still being held by the Russians. There the first enemy tanks had made their appearance.

During their attacks on the 1st and 5th Mountain Infantry Divisions, respectively, the Russians had been unable to achieve any decisive successes (sketch 15).

AREA COVERED BY GERMAN ARTILLERY FIRE IN SUPPORT OF THE COUNTERATTACK

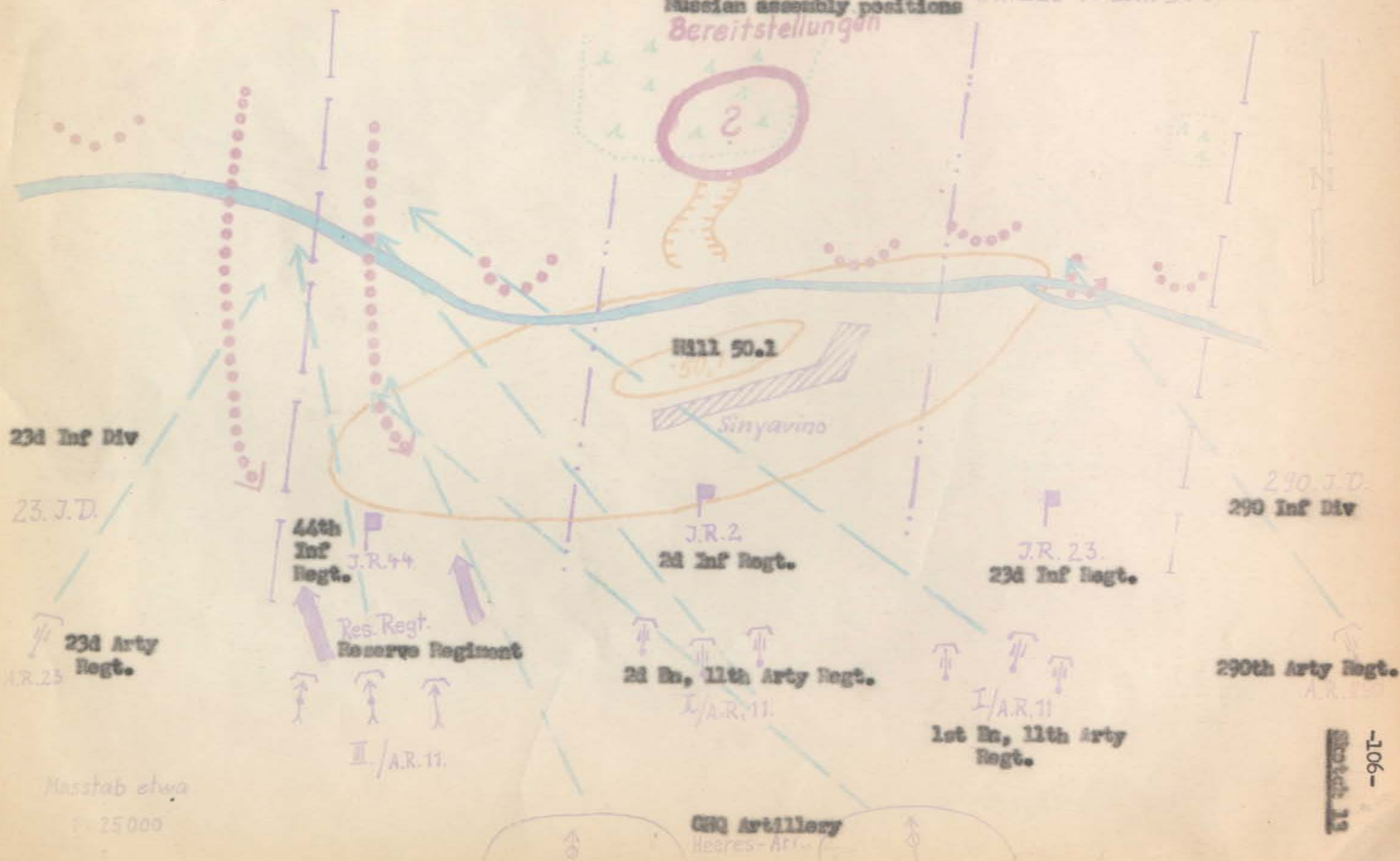
LAUNCHED AT 0900

Lage des eigenen Art. Feuers bei der Unterstützung des Gegenangriffs (Schema) um 9⁰⁰ Uhr

MS#P-007

Skizze 13 zum Beispiel 2

Russian assembly positions
Bereitstellungen



It was unlikely that the Russians would stop their efforts to breach the line. However, their first attempt had ended in failure and the greatest danger had been overcome for the time being. Actually the battles for the Sinyavino Hill continued for weeks. They were fought with extraordinary violence and produced heavy casualties on both sides. Nevertheless the hills remained firmly in German hands and the battles ended in a complete victory for the defenders.

V. LESSONS

1. Reconnaissance Results

In spite of all camouflage measures the Russians had not succeeded in disguising the fact that they were adjusting their fire or in concealing the firing positions of their supporting artillery, except in the area on the right flank of the 23d Infantry Division.

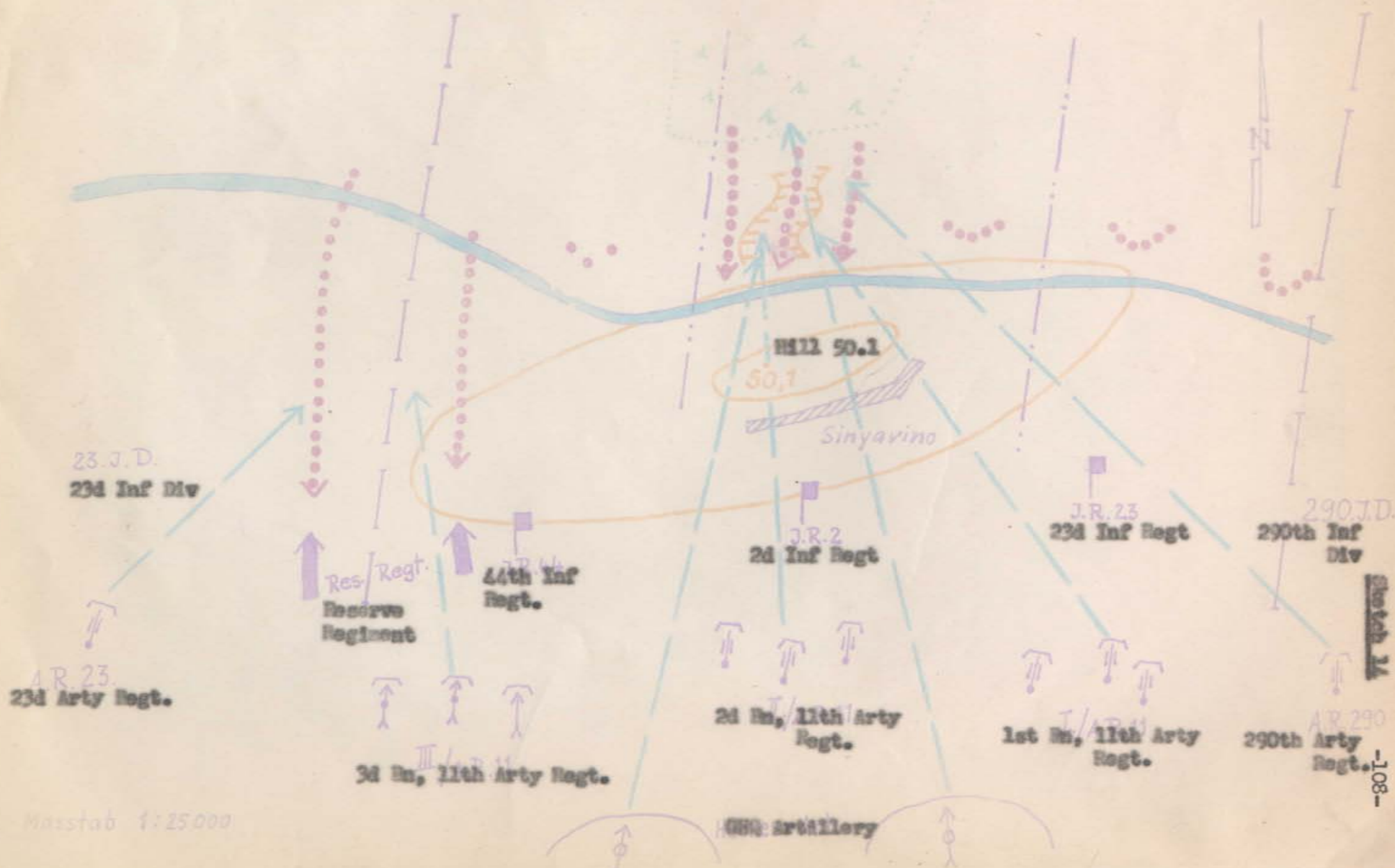
As a rule the Germans were able to identify concentrations of artillery forces prior to large-scale enemy attacks. When the Russians adjusted their artillery fire they used larger caliber weapons (corps and GHQ) than those customarily employed by the artillery of the divisions in the line. This factor alone will always arouse the attention of the opponents. The following procedures might overcome these difficulties: The troops should either

AREA COVERED BY ARTILLERY FIRE IN SUPPORT OF THE ATTACK
LAUNCHED ON THE ANTI-TANK DITCH AT 1030

Lage des Art. Feuers auf Angriff 'Panzergrube' um 1030 Uhr

MS P-060 P.I.

Skizze 14 zum Beispiel 2



adjust their fire only just prior to attacking--a line of action followed by German artillery forces, as described in Example # 1; or (in the case of a major attack developing from position warfare) they should dispense with adjustment fire altogether. In the latter event firing data corrections should be obtained from the direct-support batteries.

Likewise, the systematic construction of firing positions for the supporting artillery (a regular Russian practice) will scarcely escape detection by enemy air reconnaissance. Consequently the Germans usually refrained from preparing any positions prior to attacks and only during the night preceding the attack did their troops dig such foxholes as were absolutely necessary.

2. Communication Channels

The example clearly demonstrates the vital role played by artillery observers in the transmission of tactical messages during combat.

Functioning of communications was handicapped because the messages of the forward observers were received first by the firing positions only and from there were transmitted to the successive CP's through the observation posts of the batteries, battalions, and so on up the line. It would

be advisable for the command posts of the artillery regiments to be provided with radio stations (or frequencies) which could make it possible for these CP's to listen in on the messages of the forward observers.

3. Artillery Tactics

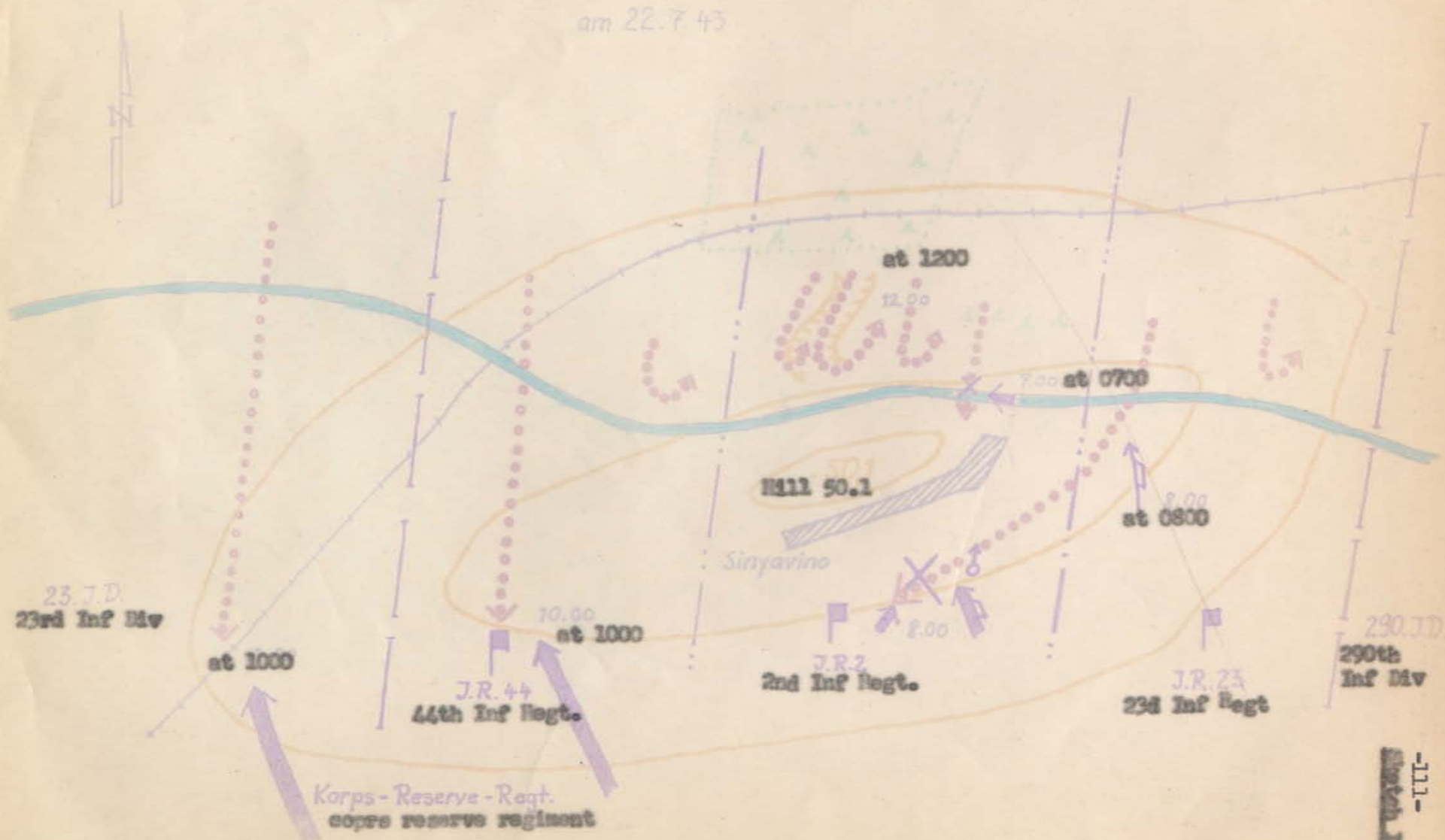
There is no doubt that the German counterattack on the Russian troops assembling for action (offensive defense), caused heavy enemy casualties. The example illustrates, however, that in facing an enemy as tenacious as the Russians it was not reasonable to assume that they would not continue the attack. In the example they adhered to the attack plan originally decided on although they could not have failed to realize that the defenders had recognized their objective and the points of main effort. Even their initial costly defeats did not prompt the Russians to give up their intentions or change their course of action. They continued their attacks on the designated targets--first on the morning of the next day and persistently for weeks after that--regardless of losses. These attrition tactics are typical of the procedure followed by the Russians during large-scale attacks; in many instances they eventually resulted in victory because the German defenders were not able to keep replacing their losses over long periods of time.

ON 22 JULY 1943

Skizze 15 zum Beispiel 2

NS # P-060 PJ I

Russische Einbrüche und deutsche Gegenangriffe
am 22.7.43



Maßstab etwa 1:25 000

No doubt the defensive successes scored by the XVI Corps on 22 July, and thereafter, may be attributed largely to the fact that the operations were executed by strong and amply-munitioned artillery forces and to the flexible and tactically appropriate control of their fire.

The artillery preparations of the Russians for their attacks on the German infantry positions were effective. The positions taken up by their batteries in the major battles were not definitely identified and therefore were not effectively attacked.

As the war progressed the Russians frequently attempted to draw the German artillery fire by means of feints, so as to be able to identify and attack the German battery positions.

The Russian air force, in distinct contrast with the air forces of the western Allies, did not achieve any decisive success in its operations against the German artillery, in spite of its massed attacks and the fact that it encountered little interference. This remained true until the end of the war.

In the course of the attack on 22 July the Russian artillery did not always demonstrate sufficient adaptability in coping with the changing situation.

In order to be able to take action against any penetrating Russian forces it might have been advisable for the Germans to place a box barrage behind their main line of resistance and to execute adjustment fire for the purpose.

4. Organizational Structure

The procedure, followed by the XXVI Corps, of splitting the division artillery and GHQ artillery into two separate groups, is not entirely satisfactory. In many cases both groups had in part the same basic mission--defensive fire, for instance. The transfer of units from one group to the other was a time-consuming process. However, under the circumstances this division of missions did not have a detrimental effect because all the artillery forces concerned were highly experienced and well integrated.

In other similar situations the corps concerned followed the practice of placing the entire division and GHQ artillery under the control of the corps artillery commander. This practice is bound to insure the maximum concentration of any target. The targets will be attacked one after another and the maximum number of guns will be used for each operation. The practice calls for a high degree of efficiency in communications, but it is not impossible of accomplishment.

Of course in the case of the XXVI Corps two main defense sectors were involved. With the adjacent divisions included, five division artillery regiments and the GHQ artillery would have had to be placed under one command, a procedure which probably exceeds the bounds of technical possibility. Under the situation the following procedure might have been expedient: The corps artillery commander would have been given control of the division artillery of the 11th Infantry Division and the two adjacent divisions and, in addition, the bulk of the GHQ artillery. Similarly the artillery of the 1st Division and of the division on the right, as well as some portions of the GHQ artillery, would have been placed under the control of another artillery commander (for instance, the commander of the 1st Artillery Regiment). This would have enabled the corps to exert a decisive influence upon the conduct of the defensive operations.

In conclusion it may be stated that in the organizational structure of artillery there is no such thing as a pat solution applicable to all situations; but that in the employment of artillery, as much centralized control as possible should be sought.

(signed) Wilhelm Willemer