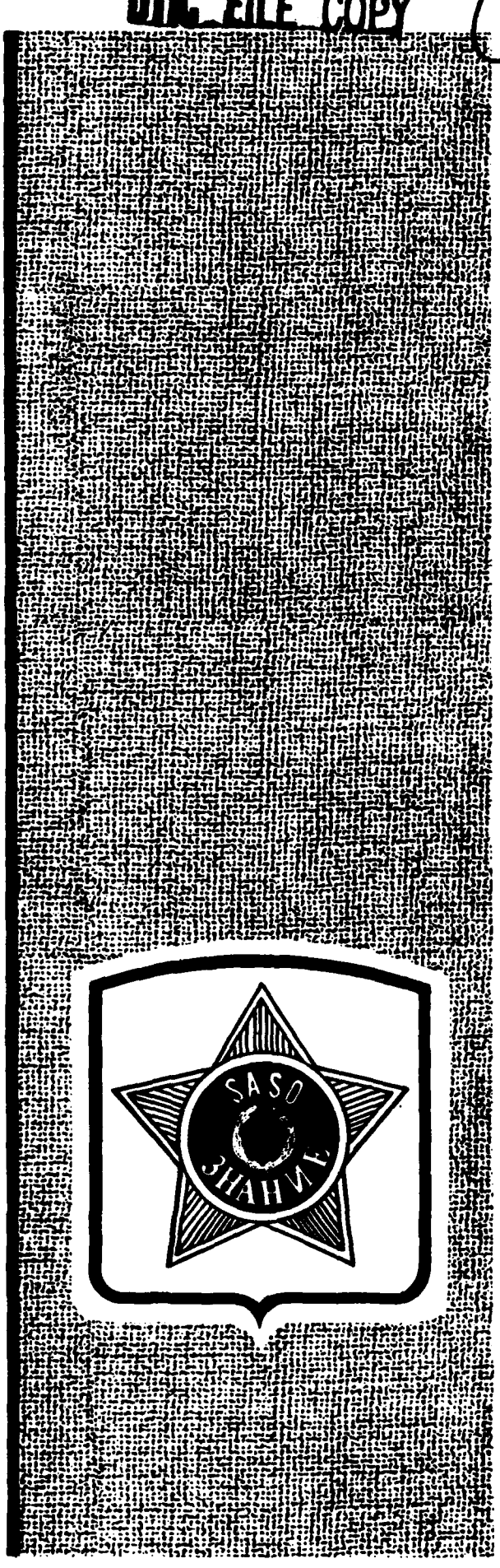
THE GREAT PATRIOTIC WAR AND THE MATURATION OF SOVIET OPERATIONAL ART: 1941-1945



SOVIET ARMY STUDIES OFFICE

Fort Leavenworth,
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April 1987

Tragedy and Rebirth of an Army (1941-1942)

On the morning of 22 June 1941 Nazi Germany unleashed a sudden and massive offensive aimed at destroying the Soviet state. The ambitious German undertaking, based on the premise that the bulk of the Red Army could be annihilated in the immediate border regions by use of blitzkrieg conducted on a large scale, caught the Soviets only partially prepared for war. Force reconstruction and reequipment programs were underway but incomplete and although the Soviets had ample warning, for as yet unexplicable reasons, Stalin forbid the Soviet military to take prudent defensive precautions - thus granting the Germans the equivalent of strategic, operational and tactical surprise. The German hammer blows staggered the Soviet armed forces and almost resulted in its destruction. By Soviet admission:

> our pre-war views on the conduct of armed struggle in the initial period of war did not investigate the possibility of concealed timely deployment and simultaneous enemy armed forces operational on the land, in the air and at sea. Mistakes in theory had a negative effect on resolving the practical questions of covering the state borders and deploying the armed forces which along with other reasons caused serious misfortunes in the war.
>
> There were many problems in working out command and control and organizing communications with operational large units. The assertion that the defense found fullest expression only in the realm of army operations was incorrect, as was the view that the struggle for air superiority must be realized on the scale of front and army operations. The complicated views at the beginning of the war concerning the organization of the army and forces rear did not fully answer the demands of the theory of deep offensive operations and battle. Operational and forces rear services remained cumbersome and immobile.
>
> There were also serious deficiencies in the theoretical training of commanders and in the combat training of forces....[1]

These Soviet admissions, as frank as they were, understated the scale of the problem. In the initial months of the war, Soviet commanders at higher levels displayed an ineptness only partially compensated for by the fervor of junior

officers and the stoicism of the hard pressed troops. Front and army commanders, unable to construct coherent defenses against the German armored thrusts, displayed an alarming propensity for launching costly uncoordinated counterattacks predestined to failure. Only looming disaster drove the Soviet high command to action in a war which quickly became one of survival.

Ultimately, the Red Army successfully met this second great challenge and triumphed, but only after years of death, frustration, and an agonizing process of military reeducation conducted during wartime. Throughout the war new generations of commanders emerged, new equipment was developed and fielded, and military theories matured after their late 1930s hiatus. In essence, the concept of deep operations, in fact if not in name, became the focal point of Soviet offensive theory and the means of converting tactical success into operational and even strategic success. By late 1943, Soviet military theory and the Soviet force structure were wed into a successful formula for achieving victory. During the ensuing two years of war the Soviets experimented with operational techniques, refined their force structure, and worked to overcome resource and logistical constraints. This second great renaissance in Soviet military thought and practice, often ignored in the west because of the Soviet disasters of 1941 and 1942, as related in the works of victorious German generals, is today viewed by the Soviets as the most important period in Soviet military affairs, a vast laboratory for military analysis and a repository of experience that can be and is tapped for inspiration and concrete advice.

For the sake of analysis, the Soviets subdivide their "Great Patriotic War" into three distinct periods, each characterized by broad unifying themes concerning Soviet fortunes in war and the state of military art. The first period of war (June 1941 - November 1942) found the Soviets on the strategic defense punctuated by several Soviet attempts to undertake offensive operations on several important directions. The second period (December 1942 - December 1943) was one of transition from defensive operations to a general Soviet offensive

designed to wrest the strategic initiative from the Germans. The third period (1944-1945) was a period of general Soviet offensives culminating in the achievement of total victory.

The first and most difficult period commenced in June 1941 with the German invasion and the series of border battles during which the Germans swallowed up large segments of deployed Soviet forces. The large scale encirclements of of Soviet forces at Minsk, Smolensk, Kiev, Bryansk, and at Vyaz'ma culminated in the fall of 1941 when German forces tried to cap their victorious advance with the seizure of Moscow by one last envelopment. German failure to take Moscow prompted the first major Soviet attempt to regain the strategic initiative. A desperate Soviet winter offensive in the Moscow environs, broadened into an attempt to expand the offensive across the front from Leningrad to Rostov and the Crimea, foundered because of insufficient Soviet forces and material, and left the Soviets vulnerable to renewed German strategic thrusts in the summer of 1942. The ill-fated and costly Soviet offensive failure at Khar'kov in May 1942 was followed by the general German offensive in south Russia which, by late fall, reached the Volga at Stalingrad and the passes of the Caucasus Mountains. Like the 1941 German offensive campaign, by late fall the Germans were overextended while the Soviets again husbanded their resources for a counterattack. Unlike 1941, in 1942 the Soviets undertook organizational and theoretical measures to better parry the German offensive as it ran out of steam on the banks of the Volga. The November Soviet offensive around Stalingrad saw the strategic initiative pass into Soviet hands and marked the end of the first period of war.

The German attack in 1941 smashed the large and complex Soviet force structure and clearly demonstrated that the Soviet officer corps was incapable of efficiently commanding and controlling so elaborate a force. Likewise, Soviet industry had been unable to supply the necessary weaponry to so extensive a force. Thus, by late summer 1941 the Soviets had dismantled that portion of

their force structure the Germans had not already destroyed. The size of all units was severely truncated to improve span of control, and scarce artillery and armor assets were concentrated under High Command control (see tables 39-42). The Soviets abolished rifle corps and created smaller armies comprising rifle divisions and rifle brigades. Rifle divisions were reduced in strength and smaller, more easily controlled rifle brigades were formed to supplement rifle divisions. The Soviets abolished mechanized corps and their component mechanized and tank divisions and consolidated armor assets in a handful of small tank brigades earmarked to support the smaller armies. Field, antitank, and antiaircraft artillery, withdrawn from rifle divisions, corps and armies, were also formed into battalions, regiments and brigades under High Command control to reinforce armies operating along specific directions. The Soviets created numerous small cavalry divisions, united into cavalry corps in order to compensate for shortages in armor and provide some mobile offensive capability for the basically footbound Soviet army.[2] These measures, along with improvements in strategic and operational command and control, provided the basis for Soviet offensive successes in the winter of 1941-42. But it was clear that further improvements were necessary if the Soviets hoped to expand their limited offensive capabilities. In particular, larger and more effective mechanized formations were essential for developing operational success. Thus in the spring of 1942, while larger artillery units were evolving, and Soviet riflemen were being reequipped with an array of automatic weapons, the Soviets created new tank corps designated to exploit success in army operations (see table 43). Later, in the summer, tank armies of mixed composition (rifle, cavalry and infantry forces) were formed to conduct larger scale exploitation and in early fall, mechanized corps were formed which combined heavy armor and large numbers of mechanized infantry (often scarce in tank corps) (see tables 44-45). Although the new composite tank armies proved unwieldy and difficult to coordinate, the tank and mechanized corps provided the

Table 39. Rifle Forces, December 1941

Army

5-6 rifle divisions or rifle brigades
1-2 cavalry divisions
1-2 separate tank brigades or battalions
artillery regiments
guards mortar battalions (multiple rocket launchers)
1 sapper battalion

strength: 70,000 men
20-90 tanks
30-450 guns/mortars
8-19 multiple rocket launchers

- -

Rifle Division

3 rifle regiments (4 x 76mm gun, 6 x 45mm AT)
1 artillery regiment (8 x 122mm, 16 x 76mm)
1 antiaircraft battalion
1 antitank battalion (12 x 45mm)
1 sapper battalion
1 signal company

strength: 11,626 men
36 guns
162 mortars

- -

Rifle Brigade

3 rifle battalions
1 artillery battalion
2 mortar battalions
1 antitank battalion

strength: 4,400 men

Table 40. Rifle Forces, 1942

May 1942 Rifle Army

6-10 rifle divisions or rifle brigades
2-4 tank brigades, regiments or battalions
1 antiaircraft regiment
artillery regiments
1 guards mortar battalion
1 sapper battalion
1-2 tank corps (optional attachment)

strength: 80,000-100,000 men
250-450 tanks
1,000-2,500 guns/mortars

1942 Rifle Corps

2-3 rifle divisions
(no support)

March 1942 Rifle Division

3 rifle regiments (4 x 76mm,
6 x 45)
1 artillery regiment (20 x76mm,
12 x 122mm)
1 antiaircraft battalion
1 antitank battalion (12 x 45mm)
1 sapper battalion
1 signal company

strength: 12,795 men
44 field guns
170 mortars
6 AA guns
30 AT guns

July 1942 Rifle Division

3 rifle regiments
(4 x 76mm, 6 x 45mm)
1 artillery regiment
(20 x 76mm, 12 x 122mm)
1 antiaircraft battalion
1 antitank battalion
1 sapper battalion
1 signal company

strength: 10,386 men
44 guns
188 mortars
6 AA guns
30 AT guns

July 1942 Rifle Brigade

4 rifle battalions
1 artillery battalion
1 mortar battalion (122mm)
1 automatic weapons battalion
1 antitank battalion
1 antitank rifle company

strength: 6,000 men

Table 41. Tank Forces, December 1941

Tank Brigade	Separate Tank Battalion
2 tank battalions	1 heavy tank company
1 heavy tank company	1 medium tank company
1 medium tank company	2 light tank companies
1 light tank company	
1 motorized rifle battalion	strength: 202 men
1 reconnaissance company	36 tanks
1 repair, reconstruction company	(5KV,11 T-34,
1 transport company	20 T-60)
1 medical platoon	
strength: 1471 men	
46 tanks (10 KV, 16 T-34, 20 T-60)	

Table 42. Cavalry Forces, December 1941

Cavalry Corps
- 2-3 cavalry divisions and/or
- 2-3 light cavalry divisions
- 1 tank brigade (optional)
- 1-2 rifle divisions (optional)
- 1 artillery regiment
- 1 signal squadron

Cavalry Division	Light Cavalry Division
4 cavalry regiments	3 cavalry regiments
1 cavalry artillery battalion	1 cavalry artillery battalion
1 antiaircraft battalion	1 signal squadron
1 reconnaissance battalion	
1 signal squadron	strength: 3447 men
1 sapper squadron	
strength: 9,224 TOE	
6,000 actual	

Table 43. 1942 Tank Corps

March 1942 Tank Corps
- 2 tank brigades (3 in April)
- 1 motorized rifle brigade
- (no supply or support units)

strength: 5603 men
100 tanks (20 KV, 40 T-34, 40 T-60/T-70)
96 guns/mortars

July 1942 Tank Corps
- 3 tank brigades
- 1 motorized rifle brigade
- 1 mortar battery
- 1 guards mortar battalion
- 1 motorycle battalion
- 1 armored car battalion
- 1 transport company
- 1 engineers-mine company
- 2 repair companies
- (tank, artillery)

strength: 7,800 men
168 tanks
(70 T-70, 98 T-34)
98 guns/mortars

Table 44. 1942 Tank Armies

May-June 1942-Type Tank Army

2-3 tank corps
1-3 rifle and cavalry divisions
1 separate tank brigade
1 light artillery regiment
1 guards mortar regiment
1 antiaircraft battalion

strength: 35,000 men
350-500 tanks
150-200 guns mortars

Actual Tank Army Composition

3d Tank Army (May 1942)	5th Tank Army (June 1942)
3 tank corps	3 tank corps
1 motorized rifle division	1 rifle division
2 rifle divisions	1 separate tank brigade
1 separate tank brigade	

1st Tank Army (July 1942)	4th Tank Army (July 1942)	5th Tank Army (Nov 1942)
2 tank corps	2 tank corps	2 tank corps
2 rifle divisions	1 rifle division	1 cavalry corps
1 separate tank brigade	1 antitank brigade	6 rifle divisions
	1 separate tank brigade	1 separate tank brigade

TABLE 45. September 1942 Mechanized Corps

Type 1 Mechanized Corps	Type 2 Mechanized Corps	Type 3 Mechanized Corps
3 mechanized brigades (39 tanks each)	3 mechanized brigades (39 tanks each)	3 mechanized brigades (39 tanks each)
1 tank brigade (53 tanks)	2 tank brigades (53 tanks each)	2 separate tank regiments (39 tanks each)
1 antiaircraft regiment		
1 antitank regiment		
1 guards mortar battalion	(same support as type 1 corps)	(same support as type 1 corps)
1 armored car battalion		
1 signal company		
1 sapper battalion		
1 medical battalion		
1 transport company		
1 repair, reconstruction battalion		
strength: 13,559 men 175 tanks	strength: 14,000 + men 224 tanks	strength: 14,000 men 204 tanks

offensive punch necessary for the Soviets to unleash the successful Stalingrad counteroffensive in November 1942. These structural changes combined with increased Soviet production of the weapons of war and revitalized Soviet military theory to produce the turnabout in Soviet battlefield fortunes in the late fall of 1942.

Soviet theoretical military doctrine during the first period of war, and during the war in general, was eclipsed by Soviet emphasis on implementing practical measures necessary to achieve victory. Under Stalin's leadership, the General Staff made tremendous efforts to investigate strategic, operational, and tactical methods for preparing and conducting operations. Battlefield experiences were gathered, studied, analyzed and converted into directives, instructions and coherent regulations governing the conduct of war.[3] This practical work echoed practical methods undertaken to mobilize the will and resources of the nation for war. While ideology remained a strong ingredient and party control remained preeminent, the Soviets tapped memories of past "Russian" military glories to inspire the nation. A pantheon of Russian heroes: Peter the Great, Suvorov, Kutuzov and others reemerged and their memories were commemorated in new military decorations for Soviet war heroes. New ranks and titles adorned the new Soviet officer corps and reinforced the older Soviet class discipline even while echoes of "holy" mother Russia could be heard. If the nature of Soviet military doctrine remained constant during wartime the tone of that doctrine perceptably changed; driven by the necessity of survival and attaining victory in war.

The foremost strategic problem for the Soviet High Command during the first period of the war was that of conducting a successful strategic defense. Specifically, the Soviets had to halt the German general offensive, deprive the Germans of their initial advantages resulting from surprise and superiority in operational skills, establish defenses along a huge front, including around Moscow and Leningrad, and prepare to conduct critical counteroffensives. All

this had to be done over tremendous distances in spite of tremendous losses in manpower, equipment, territory and in the nation's productive base. The Red Army conducted strategic defensive operations simultaneously along several strategic directions, using several fronts cooperating according to STAVKA plans. This practice clashed with prewar views which supposed that single fronts would conduct strategic defensive operations, and produced new concepts governing operations by groups of fronts. These operations were aimed at inflicting maximum casualties on the enemy, weakening and bleeding his main offensive groups while stopping his offensive, denying him possession of the most important economic and political regions, and creating conditions suitable for the launching of counteroffensives. Such defensive operations raged along frontages of from 200 to 800 kilometers to depths of from 100 to 600 kilometers. (total depth of 400 kilometers in 1941 and 600 kilometers in 1942) over a period of from 20-100 days. Strategic reserves played a significant role in the strategic defense by establishing new defense lines, liquidating enemy penetrations, and providing forces necessary to launch counteroffensives. During this period of the war the STAVKA retained between two and ten reserve armies under its direct control and these reserves were instrumental in launching the winter counteroffensive around Moscow in 1941-42 and the abortive Kharkov offensive in May 1942. Strategic offensives, usually begun in the form of counteroffensive, ranged in scope from 50-550 kilometers of frontage to depths of from 50-250 kilometers.[4] All were overly ambitious, and because of force and logistical inadequacies fell far short of expectations. The Soviet High Command still had to learn the art of the possible.

Strict centralization of command and control at the highest level made successful strategic defense possible. Early attempts to create three Groups of Fronts covering the three main strategic directions (northwest, west, and southwest) failed during the disastrous operations in the summer of 1941. Consequently, to provide "uninterrupted and qualified command and

control" Stalin created the STAVKA of the Supreme High Command (STAVKA VGK). Organized first on 23 June 1941, by 8 August the composition was fixed with Stalin himself as Supreme High Commander.[5] The STAVKA, either directly or through its representatives, familiarized commanders of directions and fronts with the aims of each operation, provided forces and weaponry, designated missions, and organized cooperation between fronts and other large units. It also provided a link between political and military leaders and as such provided clear political control over the conduct of the war.

In the operational arena the Soviets amassed considerable experience in conducting front and army defensive operations. Fronts covered operational directions in accordance with STAVKA plans while armies defended according to front plans. Shortages of men and material forced the deployment of the bulk of forces in a single operational echelon (in violation of pre-war concepts) with only small reserves(see tables 46-47). These shallow poorly prepared defenses were easily pierced by concentrated German armor supported by aviation (see Map 7). As Soviet mobilization progressed and weapons production improved, increased weapons densities and deeper defenses evolved. By the fall of 1942 combined arms armies created army artillery groups, air defense groups, and artillery and antitank reserves (see tables 48-49). The army's defensive depth increased to as much as 20 kilometers, the average operational density to 10 kilometers of front per rifle division, and the average weapons density to 15-25 guns per 1 kilometer of front. By late 1942 army and front defensive depths* averaged 15 and 30 kilometers, respectively, with the first defensive belt best developed, consisting of battalion defensive regions. However, the fragmented nature of the defense isolated subunits and hindered maneuver of forces along the front and in its depths. The Soviets emphasized improvements in antitank defenses which were ineffective early in the war due to the paucity of weapons and the tendency of commanders to scatter them evenly across the front. Heavy caliber artillery and aviation was ineffective against tanks for the same

*depth of first defensive belt

Table-16

FRONT OPERATIONAL FORMATION-DEFENSE

SUMMER 1941

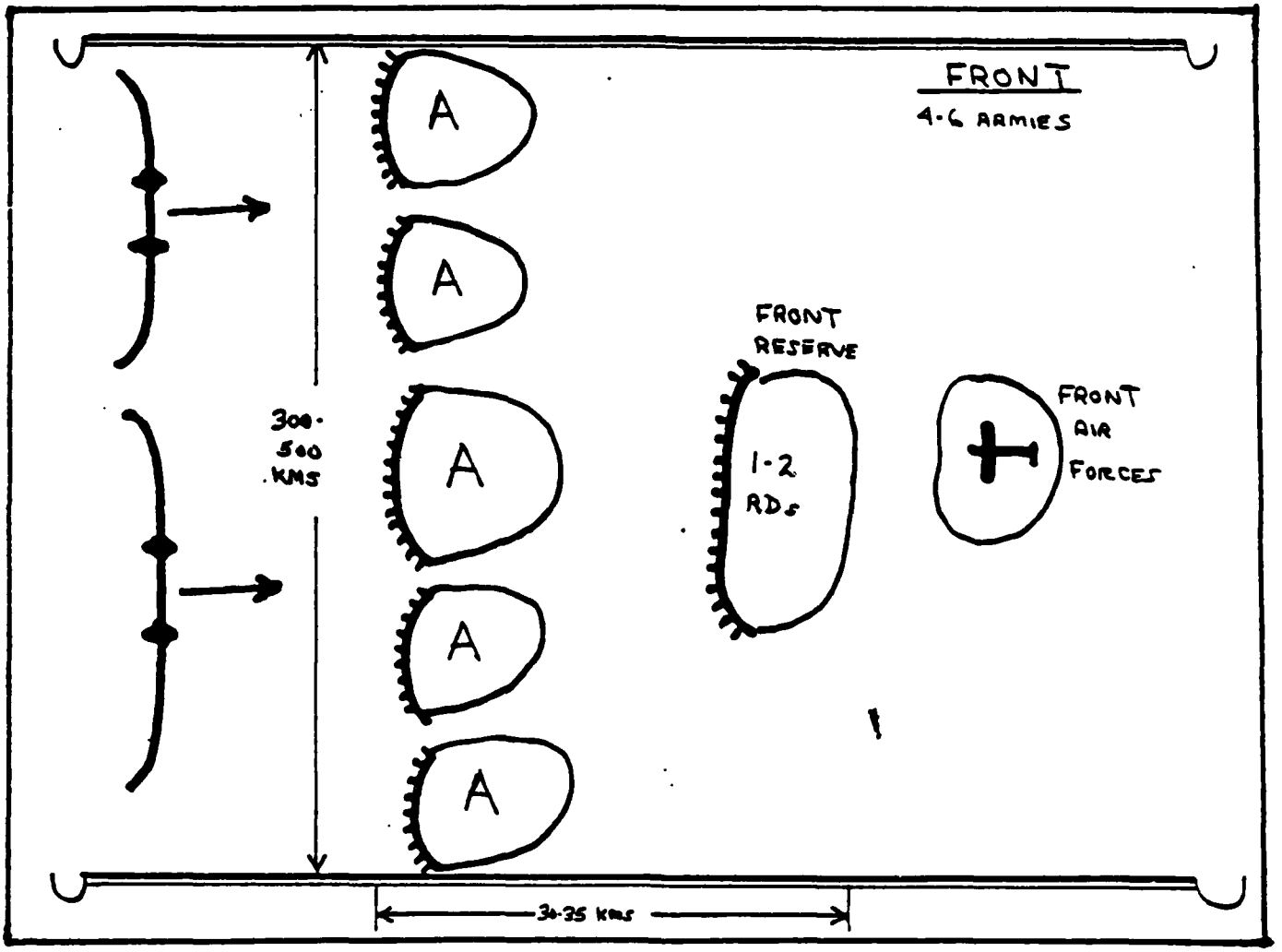
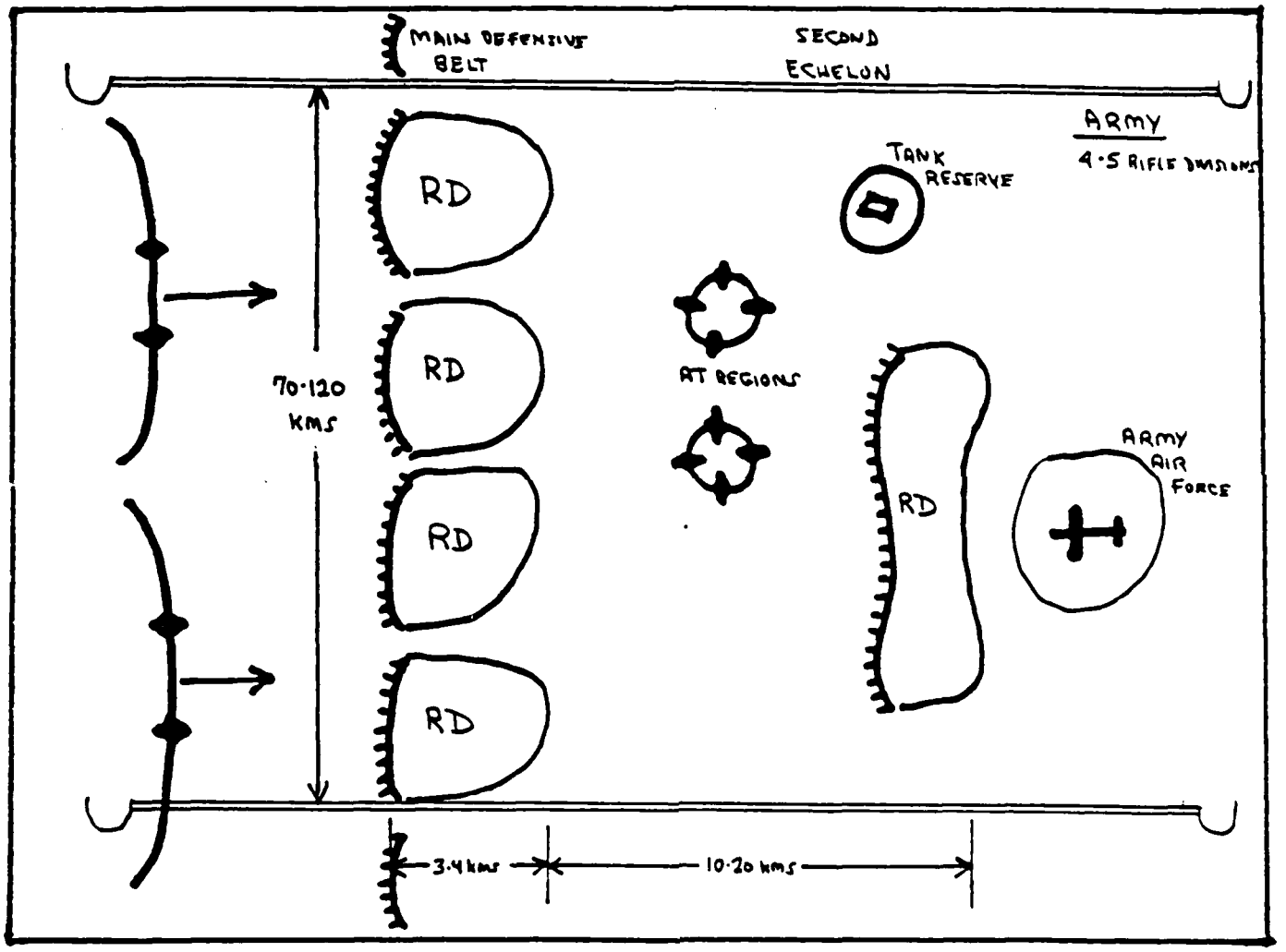


Table 47.

ARMY OPERATIONAL FORMATION - DEFENSE

SUMMER 1941



MAP 7.

SOVIET OPERATIONAL FORMATION

BORDER BATTLES 22-29 JUN 1941

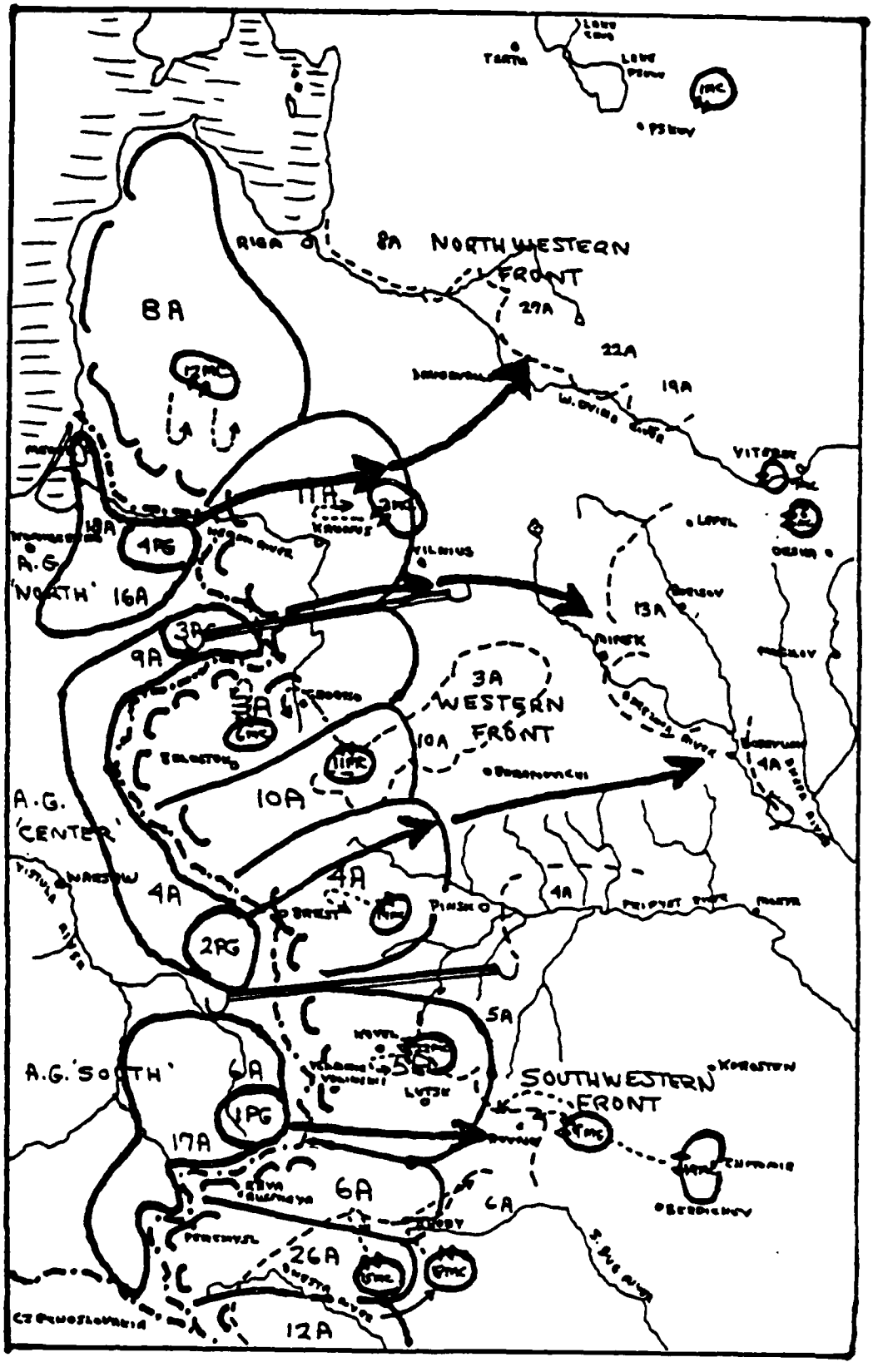


Table 48.

FRONT OPERATIONAL FORMATION - DEFENSE

1942

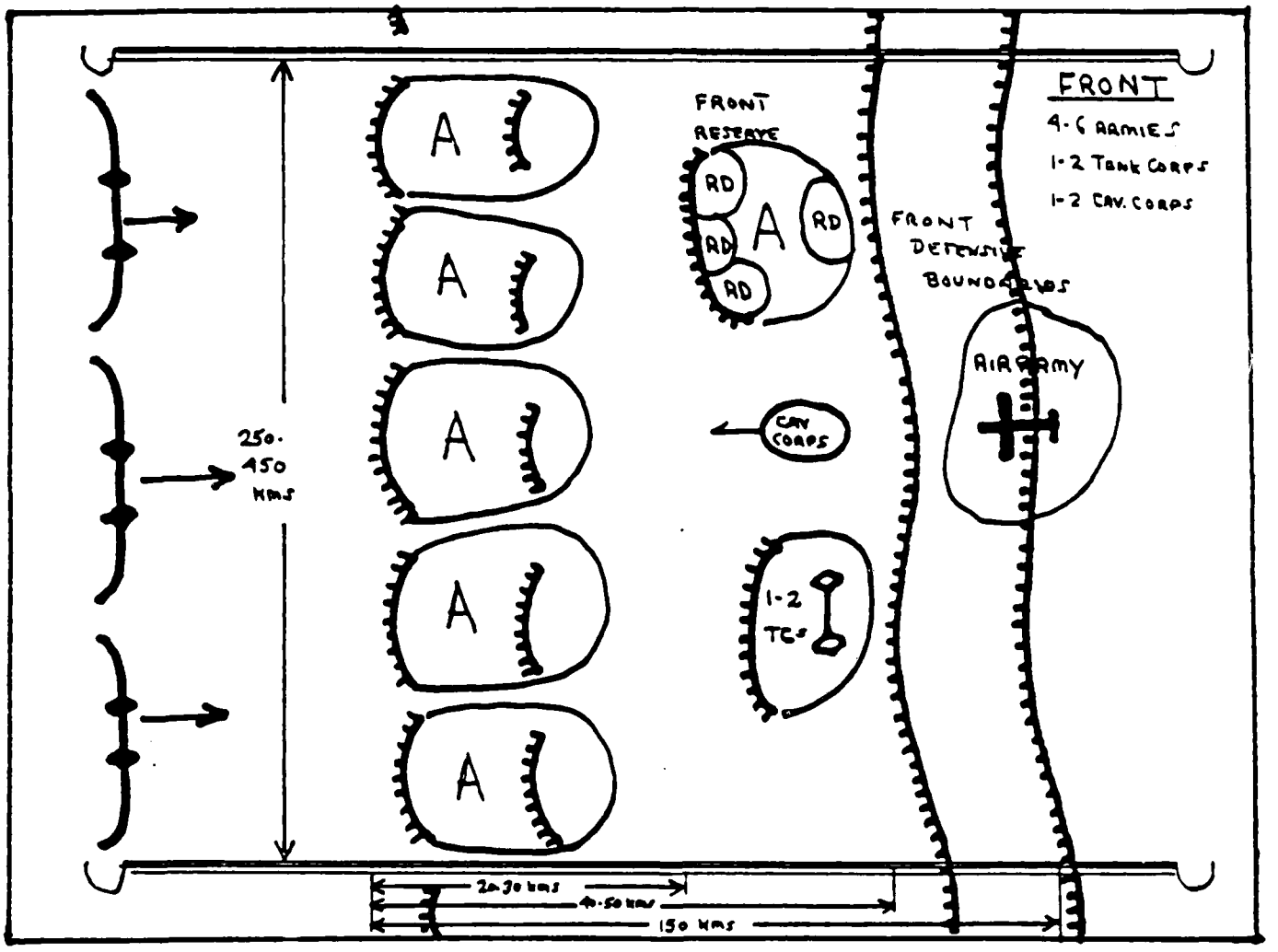


Table 49.

ARMY OPERATIONAL FORMATION - DEFENSE

1942

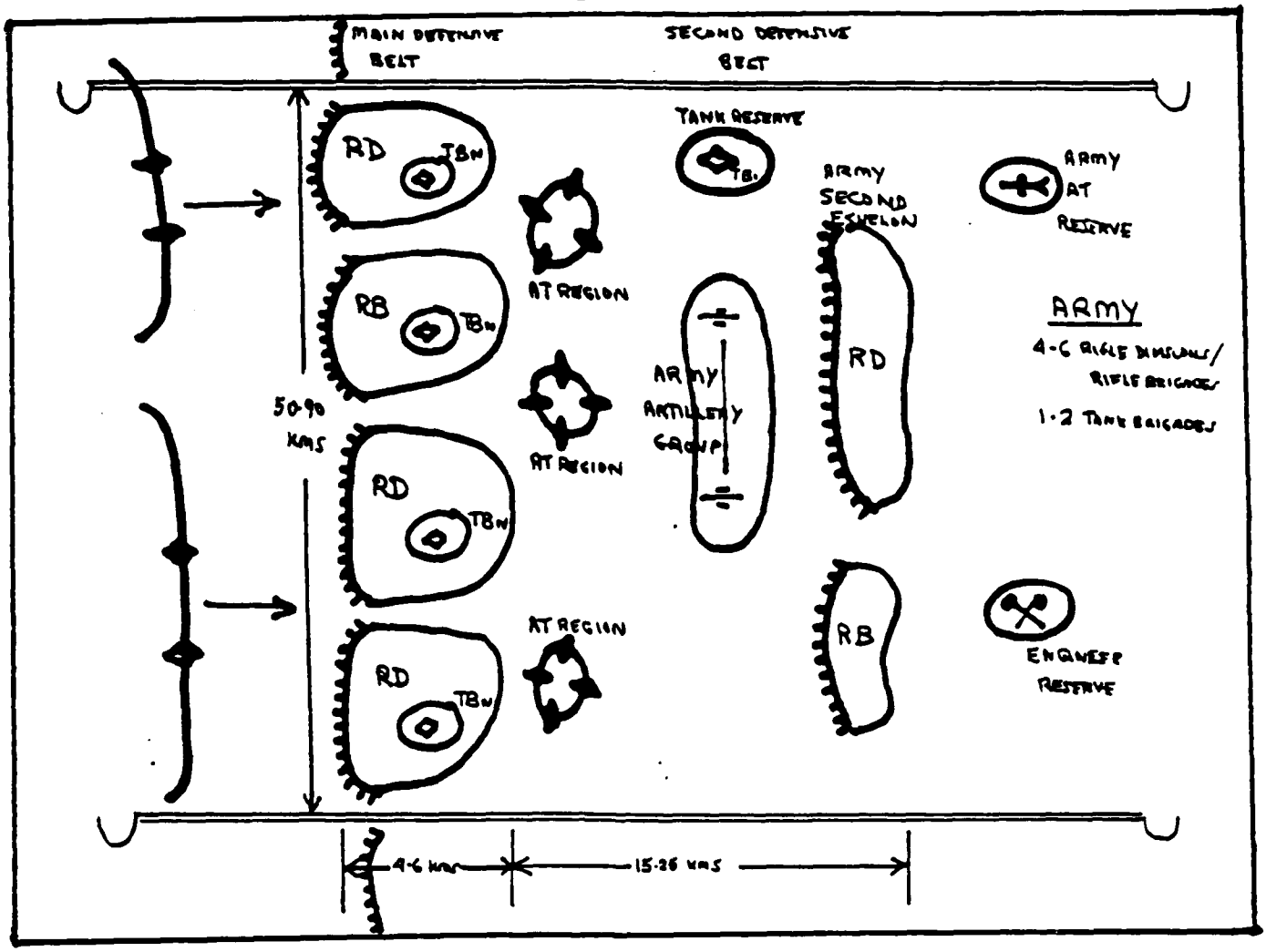
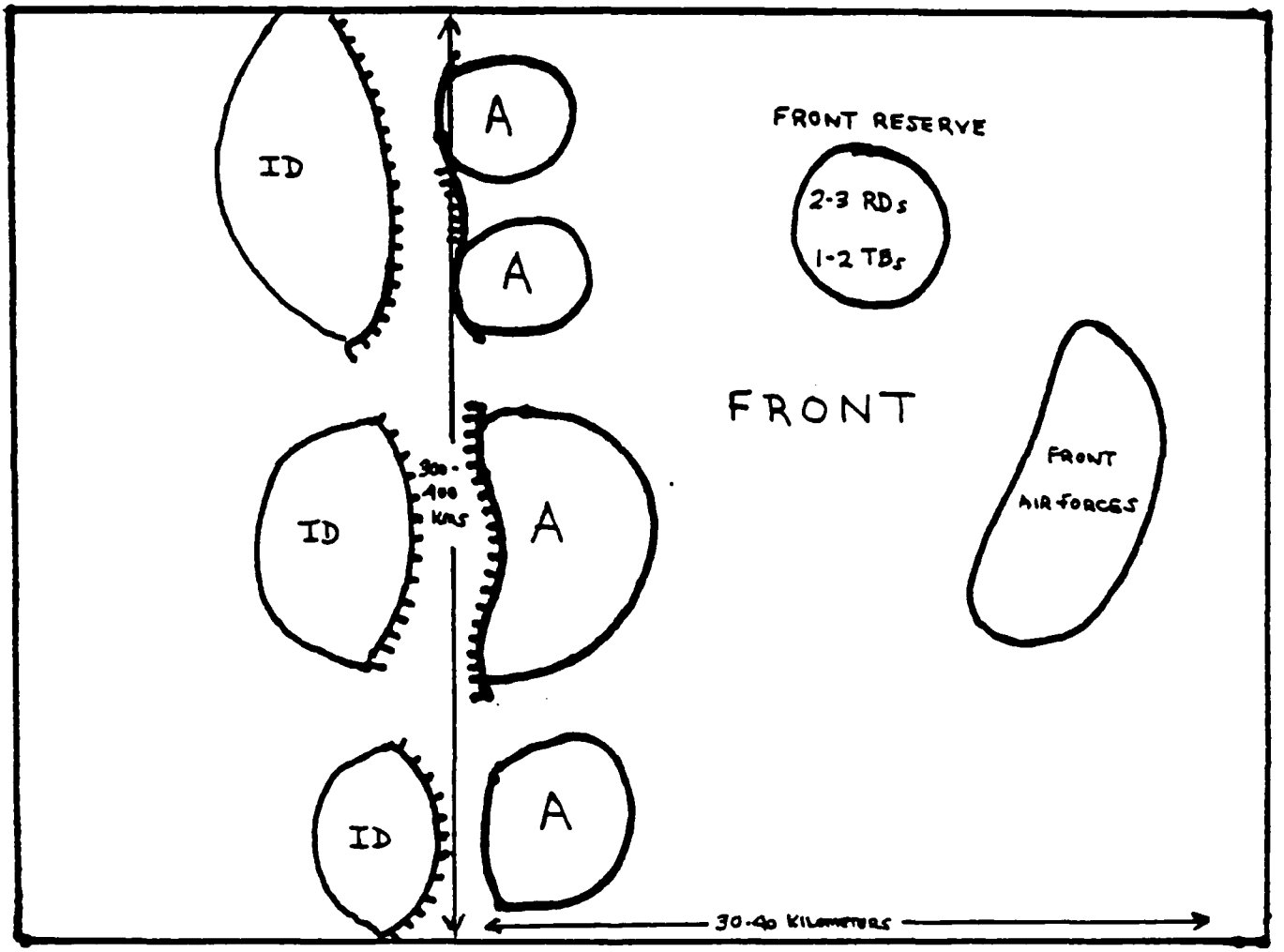


Table 50.

FRONT OPERATIONAL FORMATION 1941



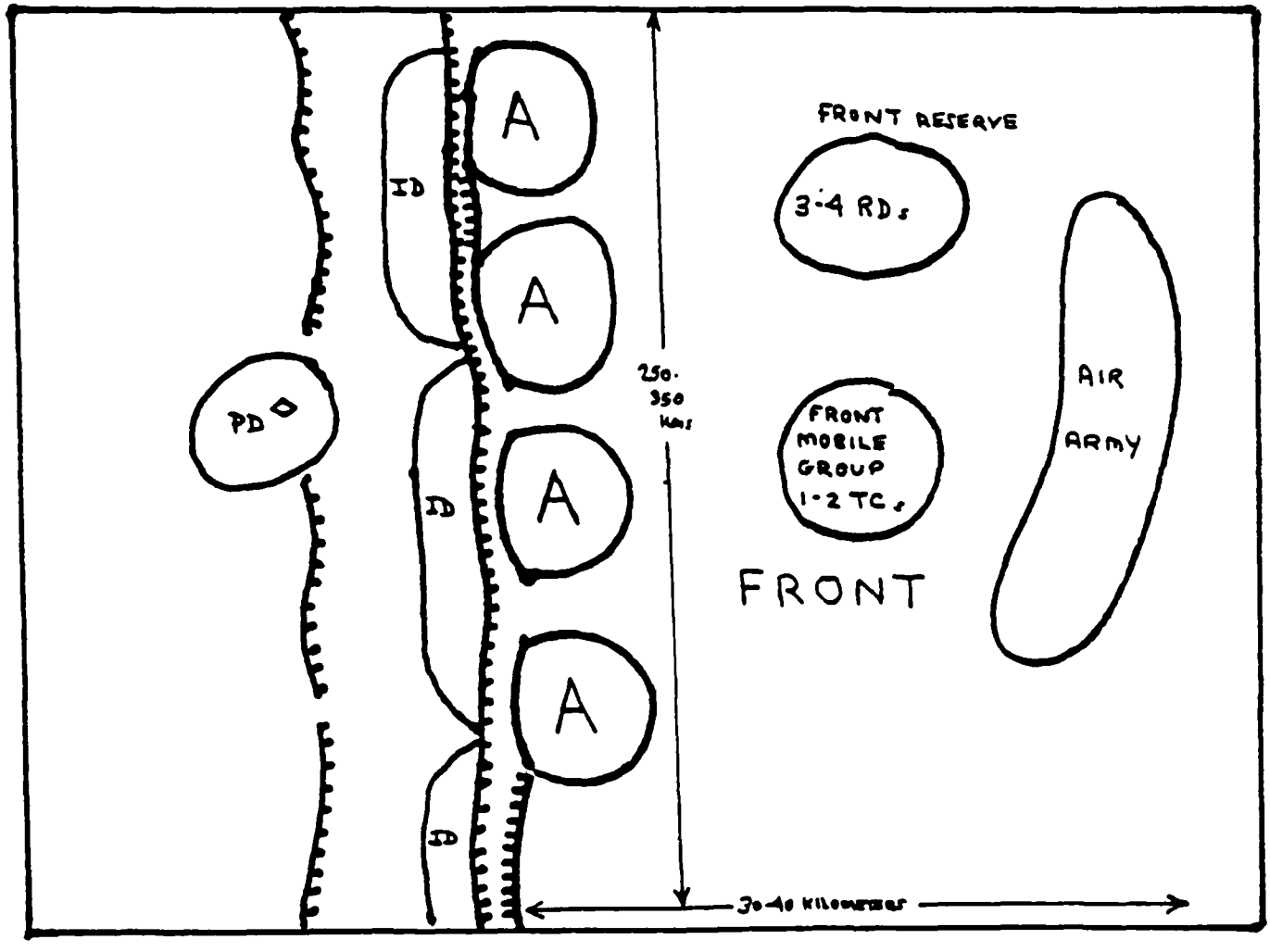
reason. Although antitank artillery remained in scarce supply (less than 5 guns per kilometer), by mid-1942 the Soviets began creating antitank regions (strong points) echeloned in depth along likely tank axes of advance. The detachment of antitank reserves from front and army commands to lower command echelons also increased the density and mobility of antitank defenses. After the summer of 1941, artillery customarily engaged enemy armor units to supplement antitank defenses (often in a direct fire role).[6]

Offensive experiences in 1941-42 provided the Soviets with the basis for improving their operational techniques in 1943. In the largest offensive, the winter campaign of 1941-42, Soviet fronts advanced in sectors of from 300-400 kilometers and armies in sectors of 20-80 kilometers with objectives at depths of 120-250 kilometers for fronts and 30-35 kilometers for armies which were to be secured over a period of 6-8 days. The tendency on the part of Soviet commanders to disperse attacking forces over a wide front prompted STAVKA corrective action during the winter offensive. STAVKA Directive 3 (10 January 1942) required creation of shock groups in order to mass forces on relatively narrow frontages in critical sectors at all levels of command.[7] The directive established penetration sectors of 30 kilometers for fronts and 15 kilometers for armies. That permitted creation of higher artillery densities on main attack directions (from 7-12 guns/mortars per 1 kilometer in summer-autumn 1941 to 45-65 guns/mortars in the summer of 1942). The offensive operational formation of fronts in the entire first period of war was single echelon, at first with a two or three rifle division reserve, and later with a tank or cavalry corps in reserve (see tables 50-51 and Maps 8-15). Armies also formed in single echelon (see table 52). However, in 1942 a growth in forces allowed armies to deploy in two echelons with a combined arms reserve, mobile forces, artillery groups and antitank, tank, and engineer reserves (see table 53). The depth of the army operational formation increased to 15-20 kilometers and in some instances, 30-40 kilometers.[8]

The operational role of armor increased both in a defensive role and on the offensive. The Soviets used the small tank brigades of 1941/42 in concert with

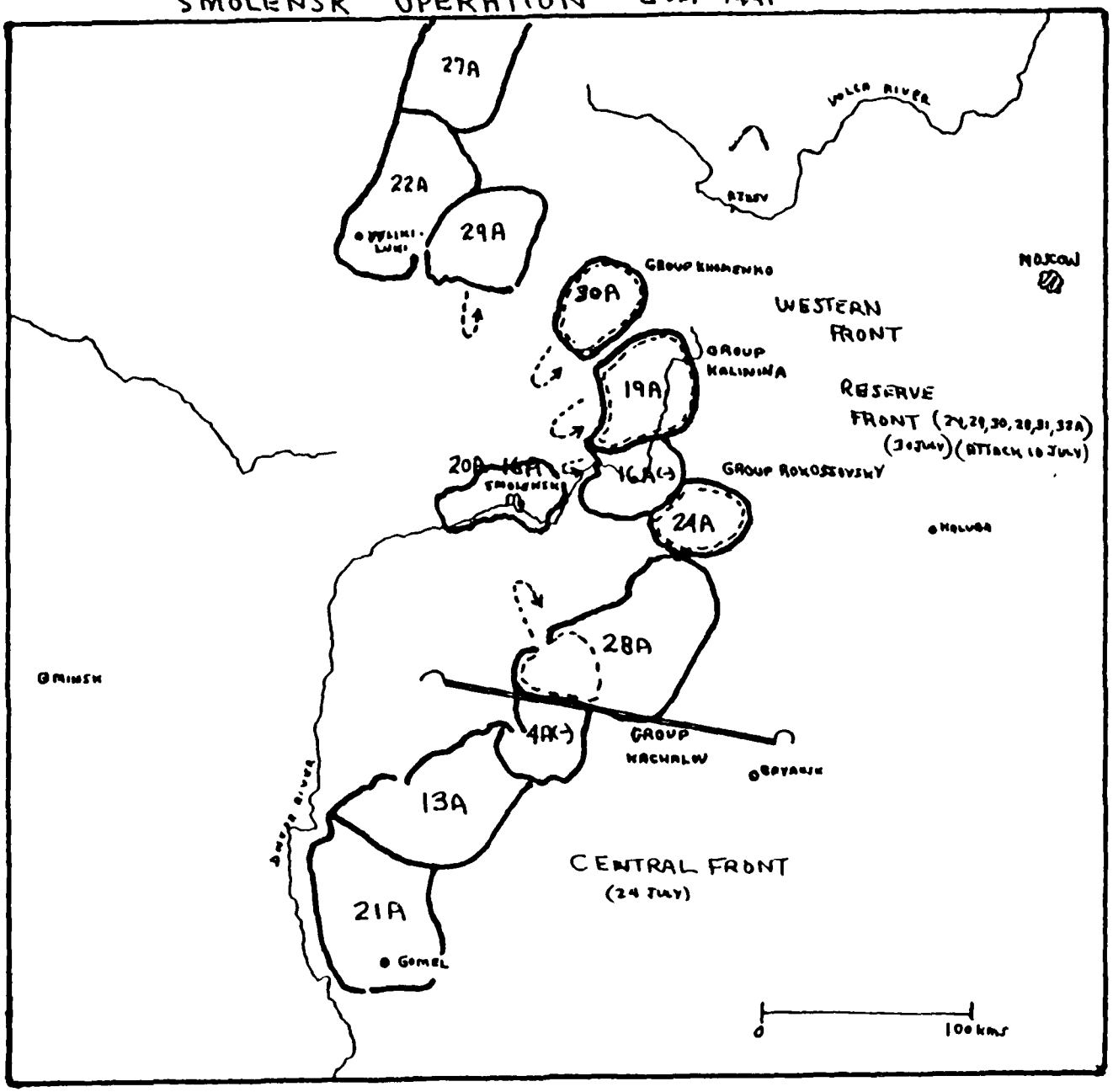
Table 51

FRONT OPERATIONAL FORMATION 1942



SOVIET OPERATIONAL FORMATION

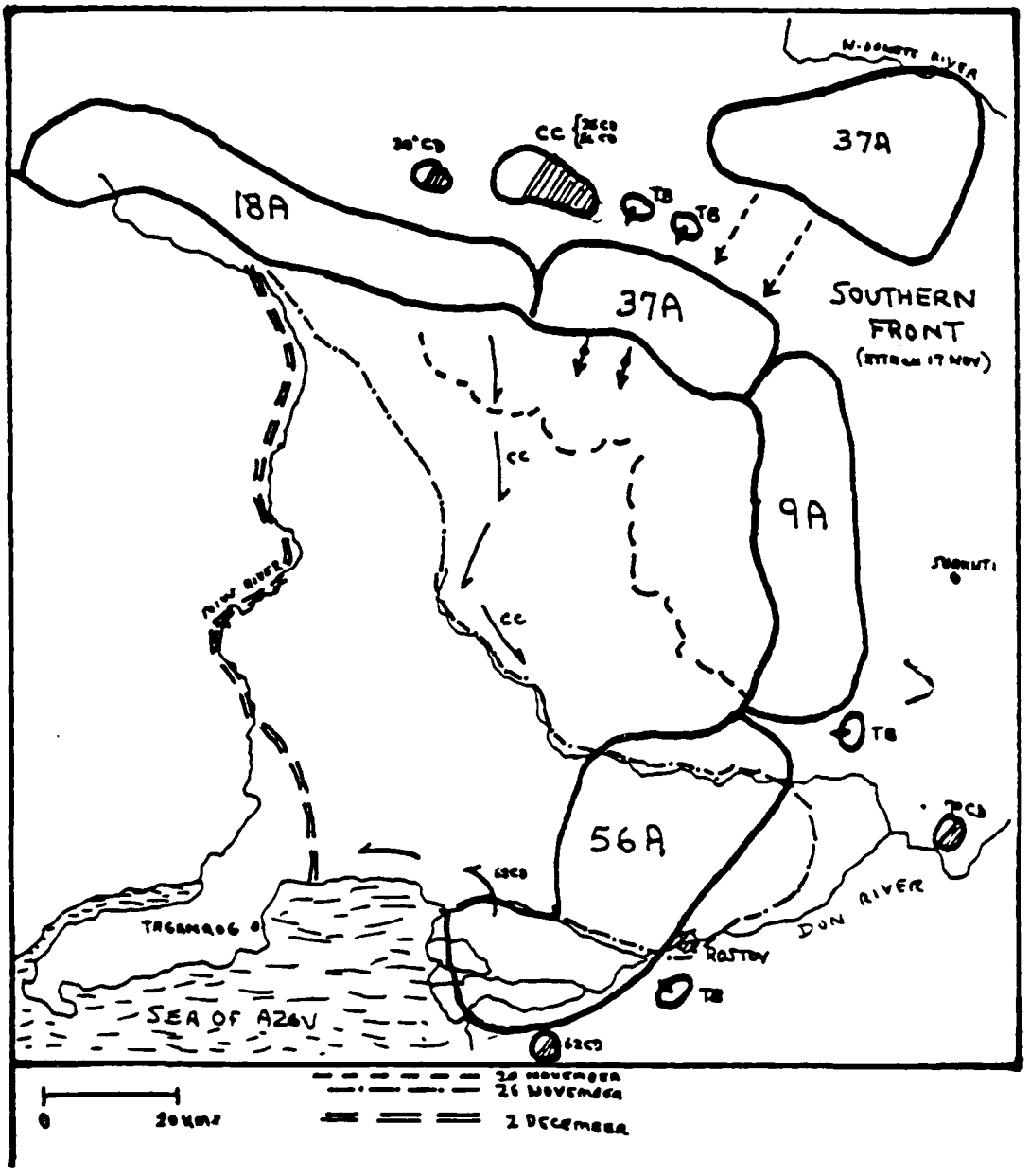
SMOLENSK OPERATION JULY 1941



Map 5

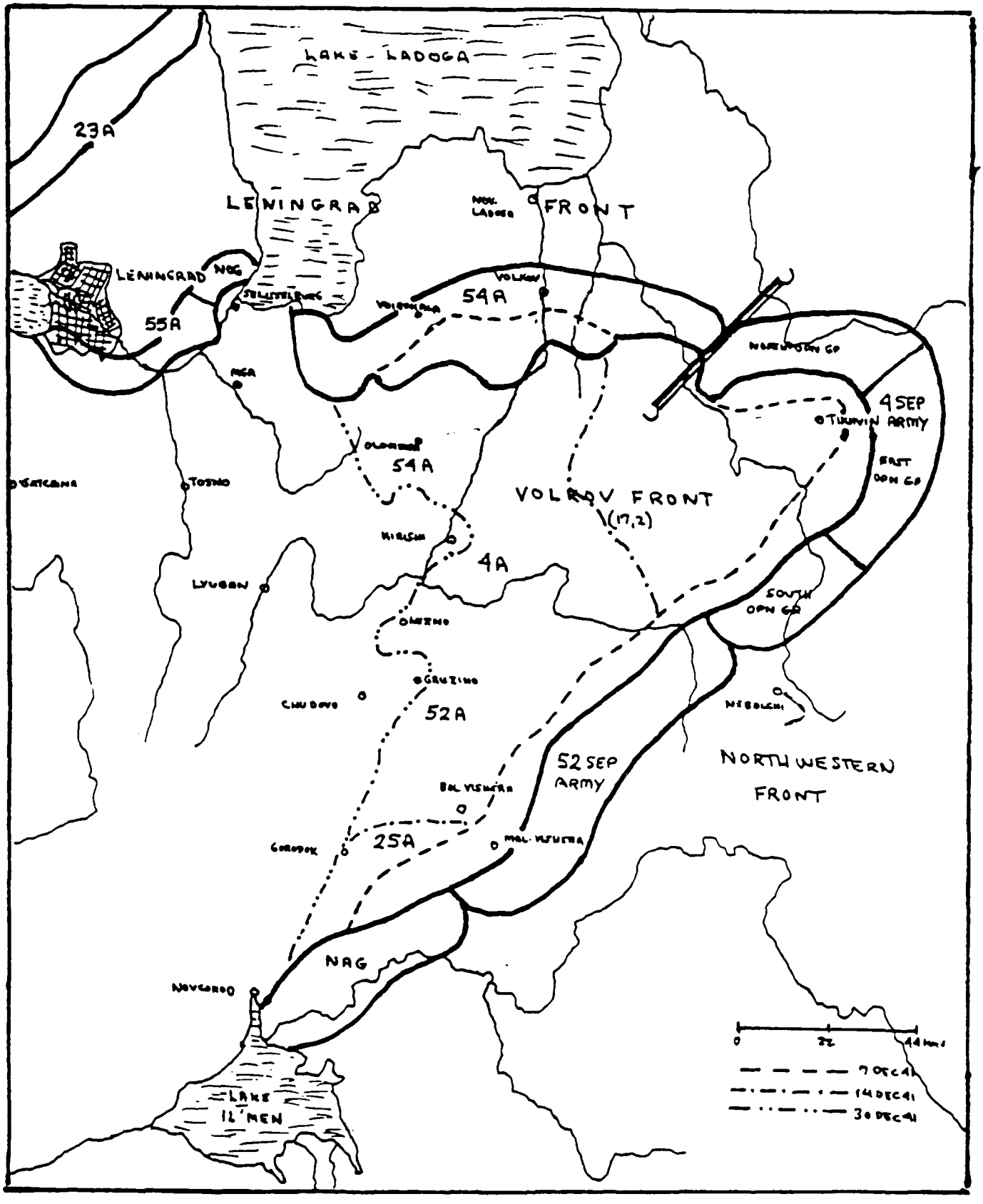
SOVIET OPERATIONAL FORMATION

— ROSTOV OPERATION NOV-DEC 1941



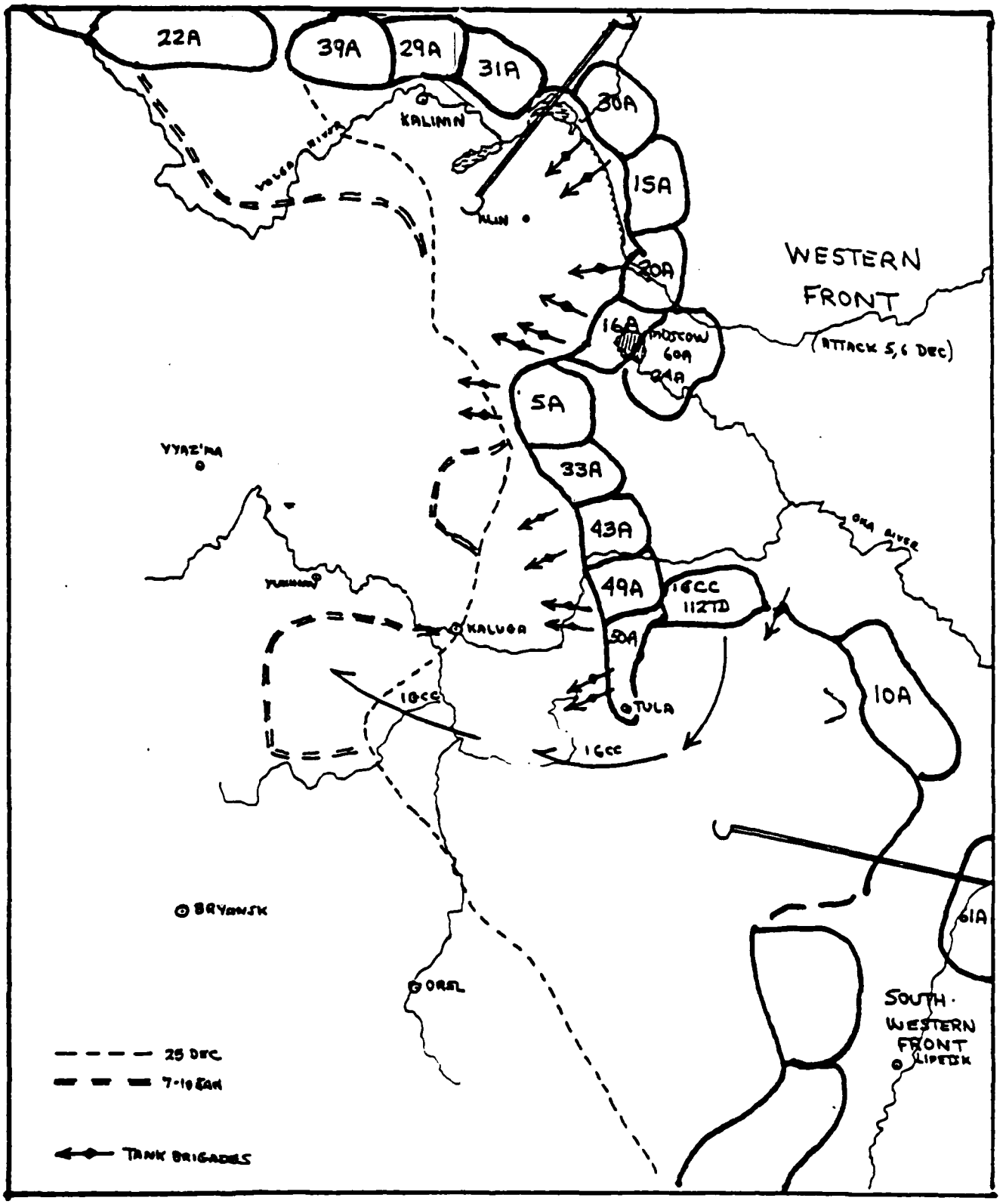
SOVIET OPERATIONAL FORMATION

TIKHVIN OPERATION 10 NOV - 30 DEC 1941



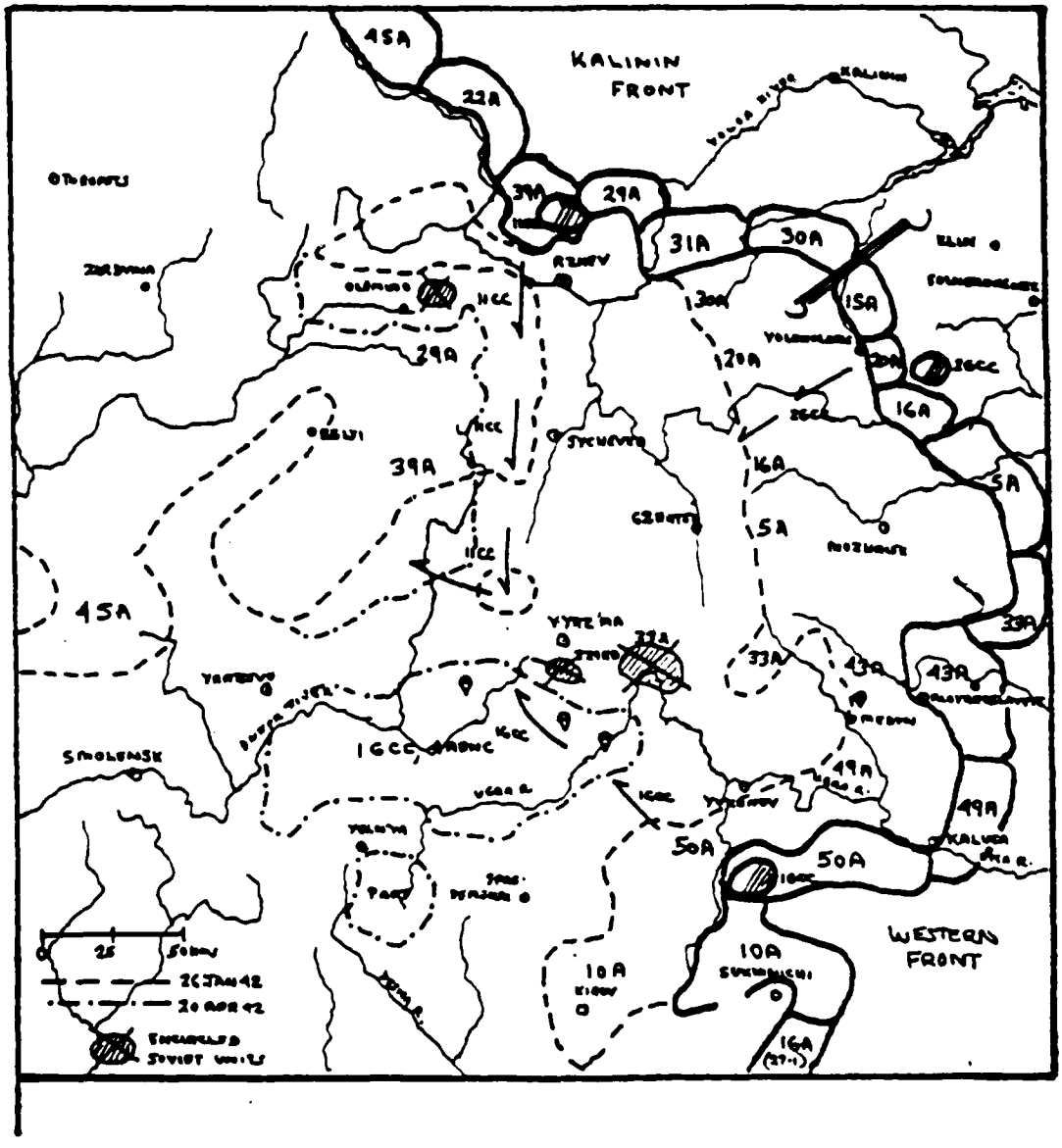
Map 11 SOVIET OPERATION FORMATION

MOSCOW OPERATION DEC 1941-JAN 1942



SOVIET OPERATIONAL FORMATION

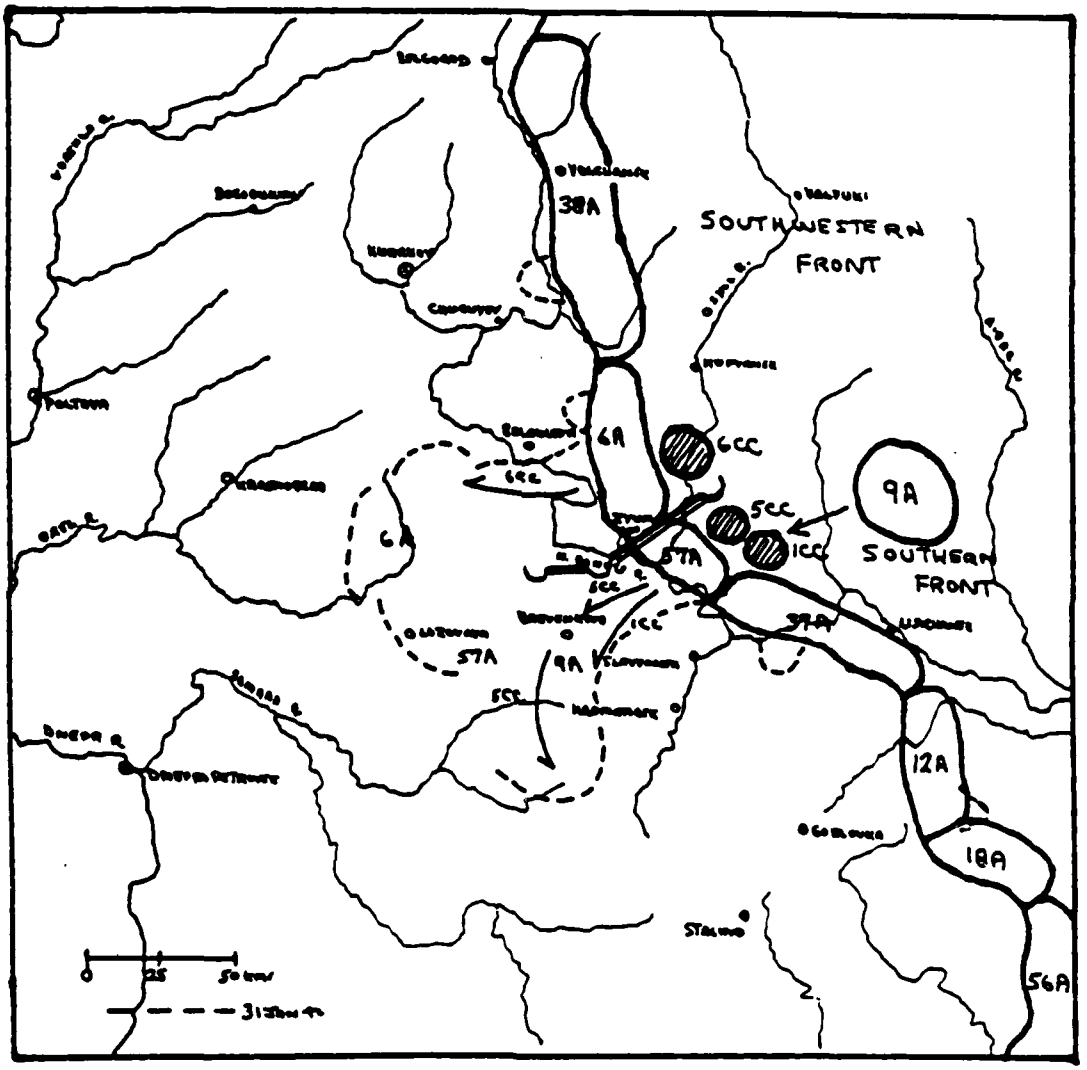
RZHEV - VYAZ'MA OPERATION 8 JAN - 20 APR 1942



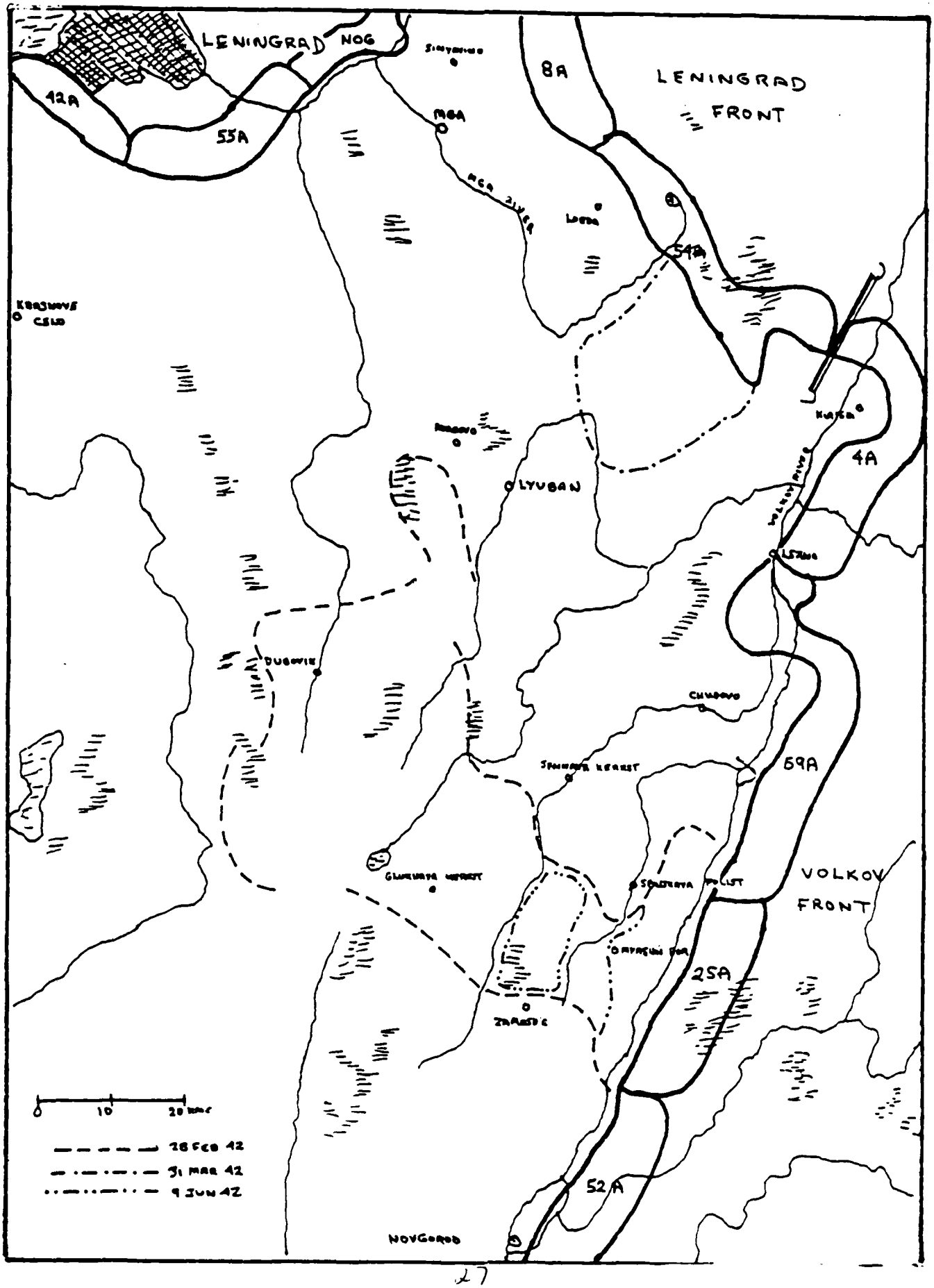
MAP 13

SOVIET OPERATIONAL FORMATION

BARVENKOVO - LOZOVAYA OPERATION 18-31 JAN 1942



LYUBAN OPERATION 7 JAN - 30 APR 1942



MAP 15 SOVIET OPERATIONAL FORMATION

KHAR'KOV OPERATION MAY 1942

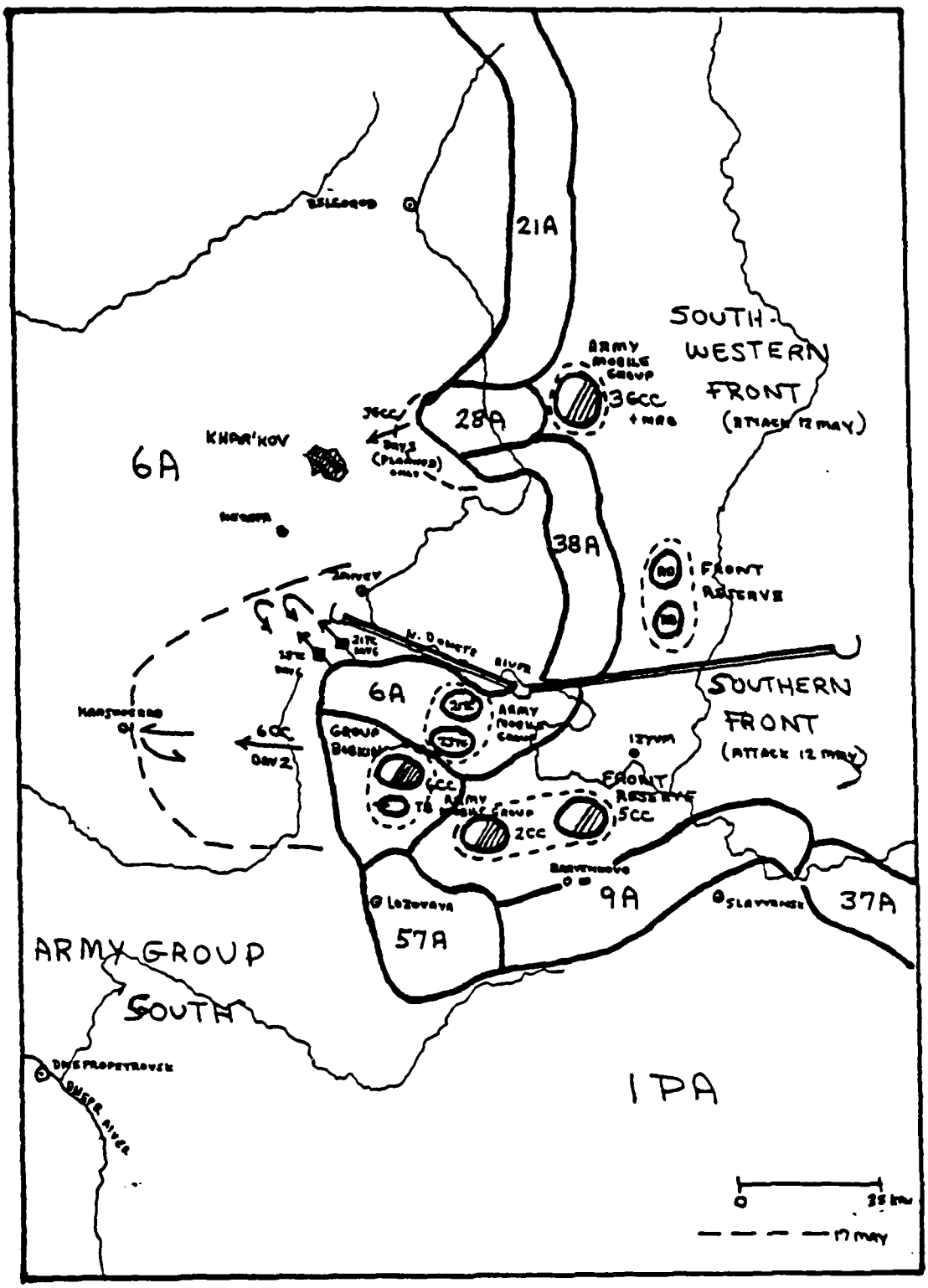


Table 52.

ARMY OPERATIONAL FORMATION 1941

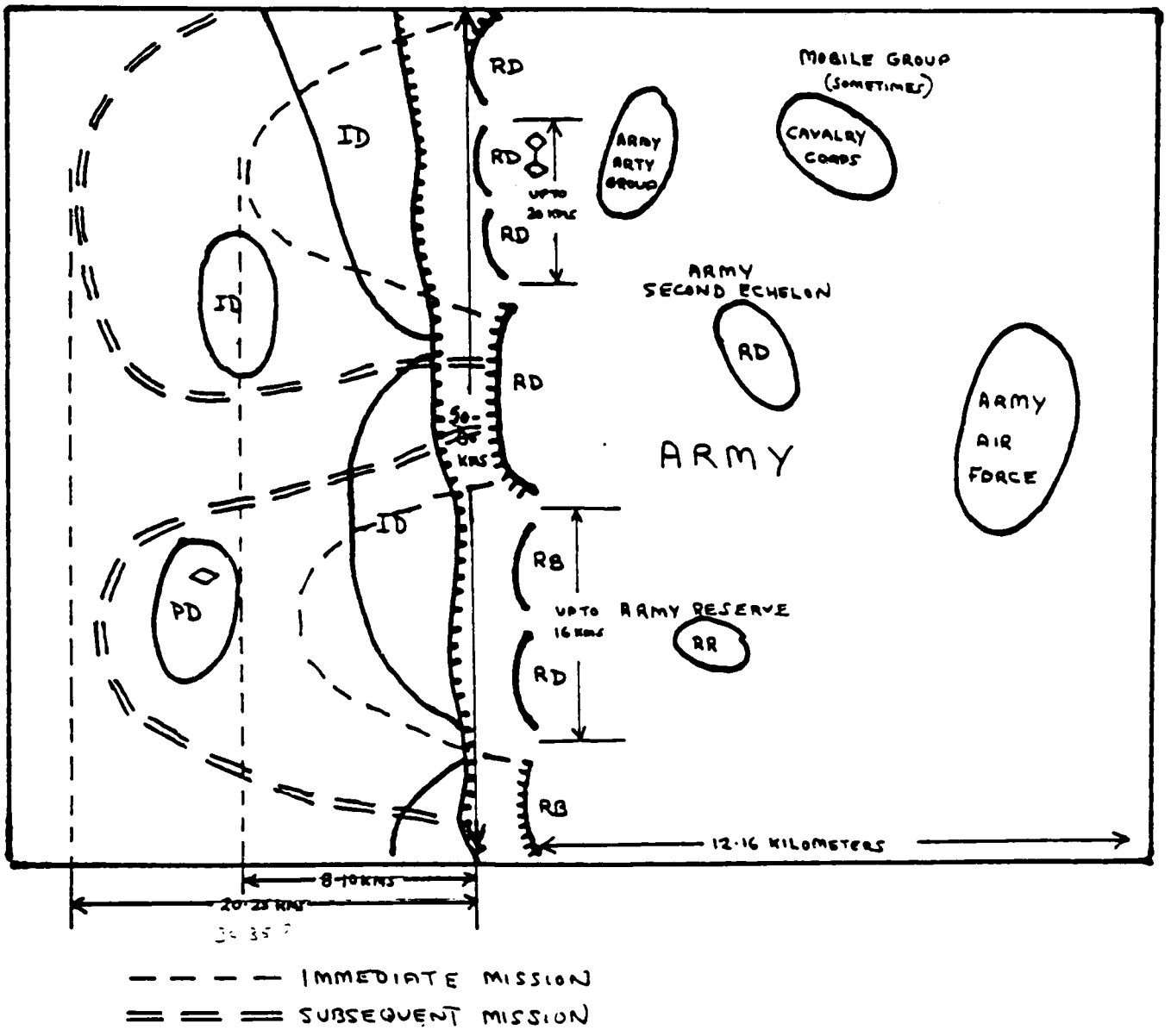
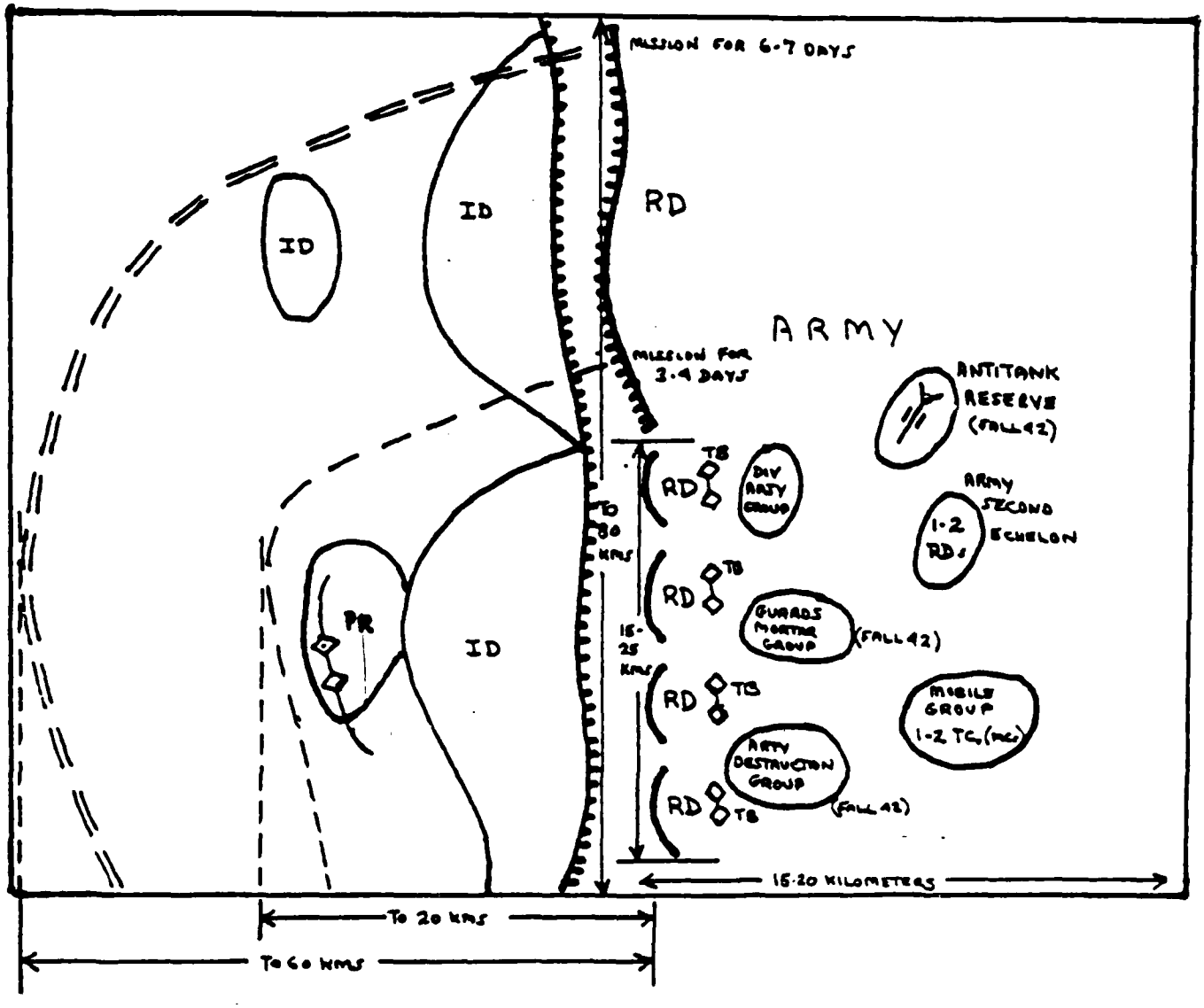


Table 53.

ARMY OPERATIONAL FORMATION 1942



cavalry (and air assault forces) to stiffen the infantry, launch counterattacks or spearhead pursuits. However, these mobile forces had limited sustaining power and they were difficult to resupply and coordinate with foot infantry. In 1942, the new tank armies, tank corps, and mechanized corps provided better means for countering German armored thrusts and exploiting success while functioning as mobile groups of fronts and armies. However, their composition was unbalanced by a marked shortage of mechanized infantry. Hence, they were difficult to coordinate with other types of forces; they were vulnerable when isolated from their supporting infantry, and Soviet commanders simply had not learned how to properly use them. A special order of the People's Commissariat of Defense (Order #325, 16 October 1942) pondered mobile group failures (such as the debacle at Khar'kov in May 1942), directed that tank and mechanized corps be used as single entities for powerful attacks or counterattacks, and prohibited the fragmented use of those valuable operational formations.[9]

At the outbreak of war, Soviet tactics suffered from the same general malaise as operational art. Understrength divisions (5000-6000 men) defending in extended sectors (14-20 kilometers) were forced to deploy in single echelon defenses with a depth of only 3-5 kilometers (see table 54). The small reserves had little capability for sustained counterattacking and infantry support artillery groups were weak. Inadequate tactical densities of .5 battalions and 3 guns/mortars per 1 kilometer of frontage resulted. Division defenses, subdivided into battalion defense regions were noncontiguous and had little engineer support or antitank defenses. By late 1941 more extensive engineer support permitted construction of trenches and the evolution of a truly interconnected first defensive position. Increases in manpower and weaponry improved the defenses in 1942. Divisions began creating second echelons, tank and antitank reserves, and stronger artillery groups (see table 55). Second echelons of rifle regiments and rifle divisions created battalion defense regions which later would become second and third defensive positions. Meanwhile, division

Table 54.

RIFLE DIVISION COMBAT FORMATION - DEFENSE

1941

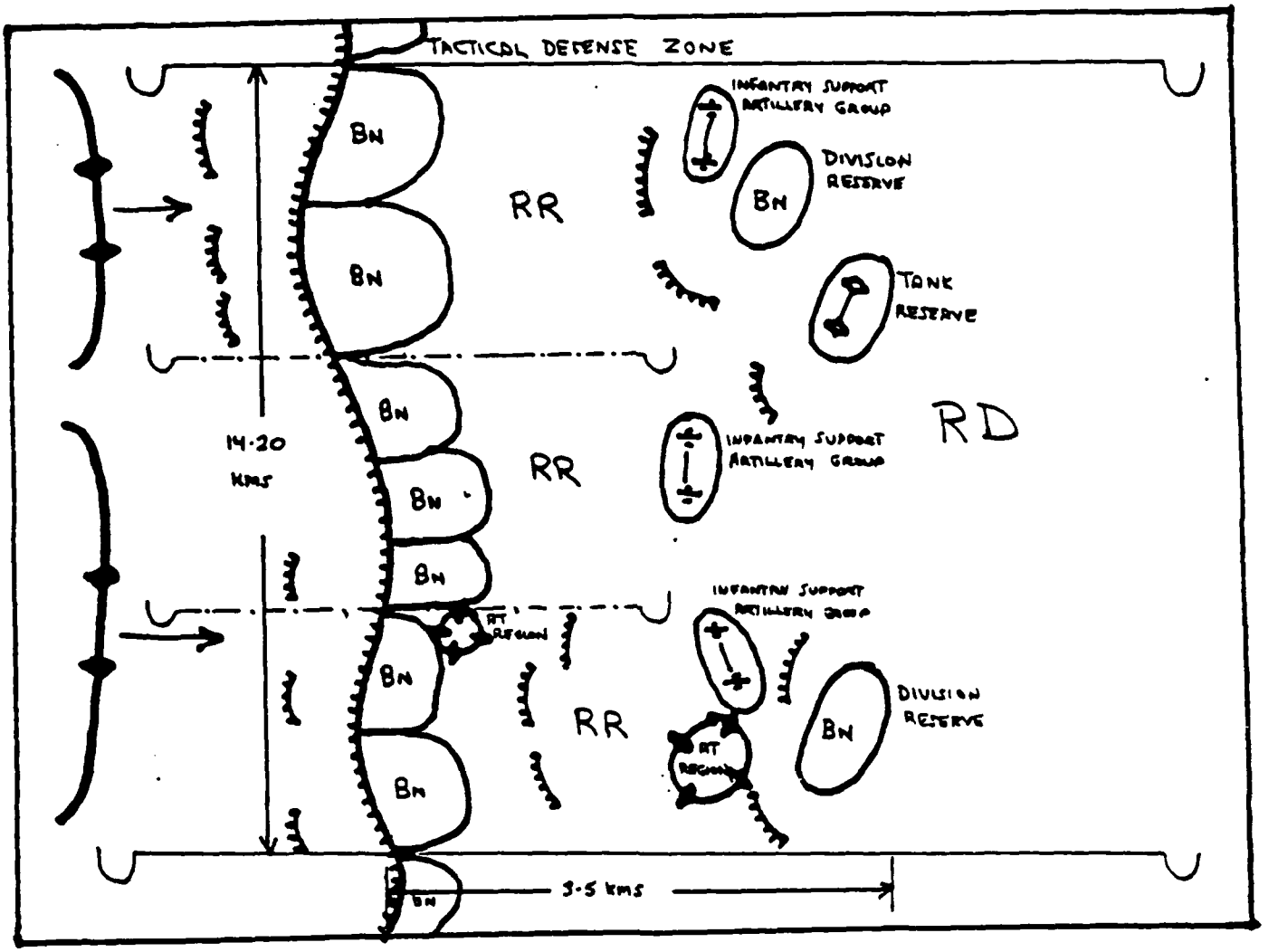
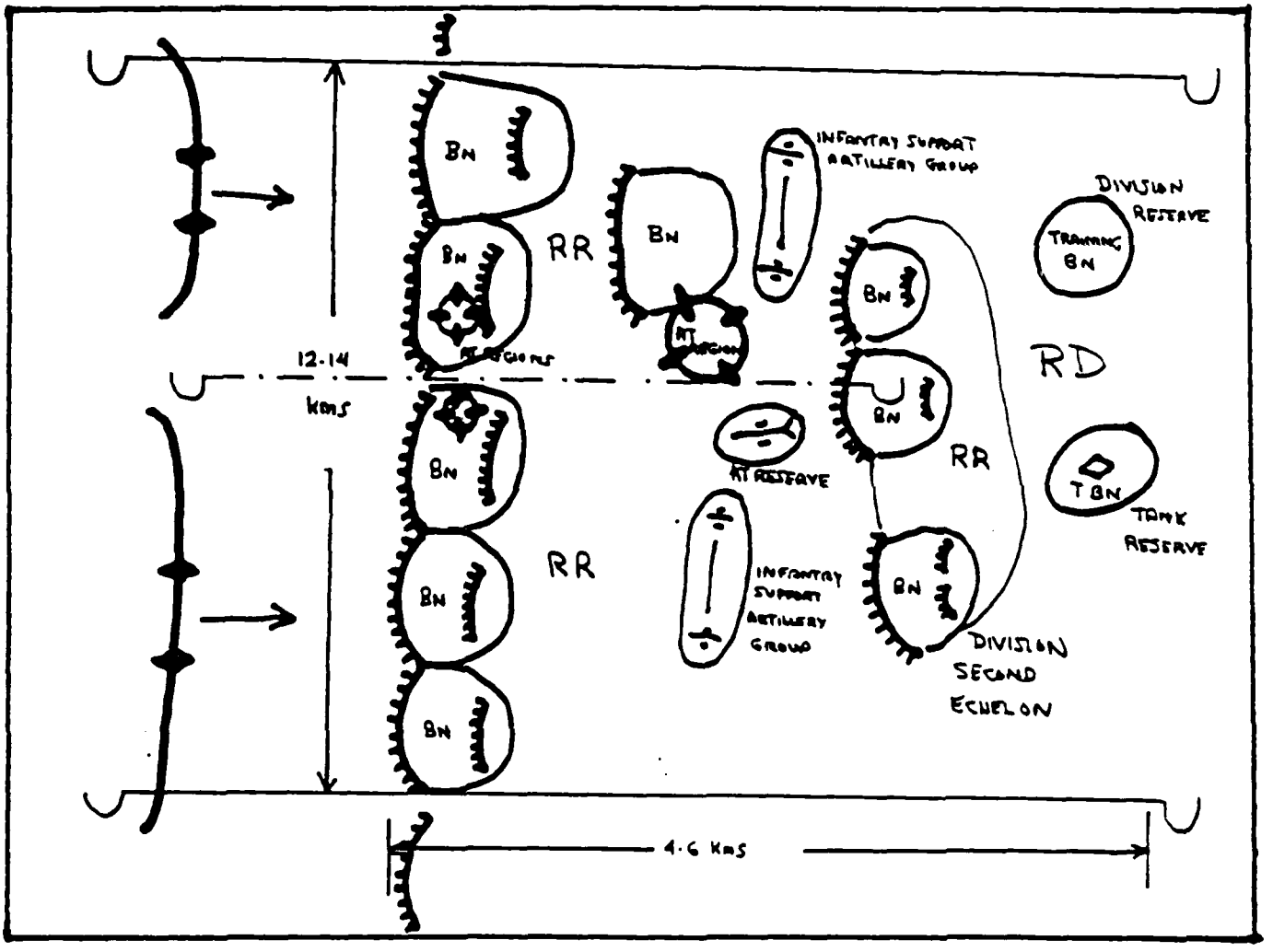


Table 55.

RIFLE DIVISION COMBAT FORMATION - DEFENSE

1942



defenses remained shallow (one defensive belt) and weak in antitank means. By the end of the first period of war, tactical densities rose to 1 battalion and 20 guns/mortars per kilometer of front.[10]

Soviet offensive tactics deviated from those recommended in prewar regulations. Rifle divisions at first deployed in the recommended two echelon formationm meaning that only eight of twenty-seven rifle companies actually participated directly in the attack. Because of the weakness of rifle divisions and the shallow enemy defenses this combat formation was futile and vulnerable as well to enemy air and artillery fire. Thus a Commissariat of Defense Order (No. 306 - 8 October 1942) required use of a single echelon combat formation in all units from company to division and creation of a reserve of 1/9th of the force.[11] This effectivelу mandated forward use of 80 percent of a division's combat power and facilitated achievement of penetrations, but it also made it difficult to sustain the attack. By the winter of 1941-42, rifle divisions attacked in sectors of from 5-6 kilometers (on occasions as much as 10 kilometers) to achieve objectives from 5-7 to 8-12 kilometers deep (in some instances 20 kilometers) (see table 56). After January 1942, when enemy defenses became deeper, rifle divisions attacked in sectors of 3-4 kilometers against objectives 5-7 kilometers deep which, in reality, took several days to secure (see table 57). Tactical densities increased from 1-2 rifle battalions, 20-30 guns/mortars and 2-3 tanks per 1 kilometer of frontage during the winter of 1941-1942 to 2-4 battalions, 30-40 guns/mortars, and 10-14 tanks per 1 kilometer of frontage in the summer of 1942.[12] Fire support increased in each division with the creation of infantry support artillery groups (PP) and, in some instances, long range action artillery groups (DD). Centralized artillery preparations before the attack were followed by decentralized support of each rifle battalion by one artillery battery during the attack. Armor support for attacking units in 1941 was poor and resulted in heavy tank losses. After Order No. 325 was issued in

Table 5

RIFLE DIVISION COMBAT FORMATION - OFFENSE

1941

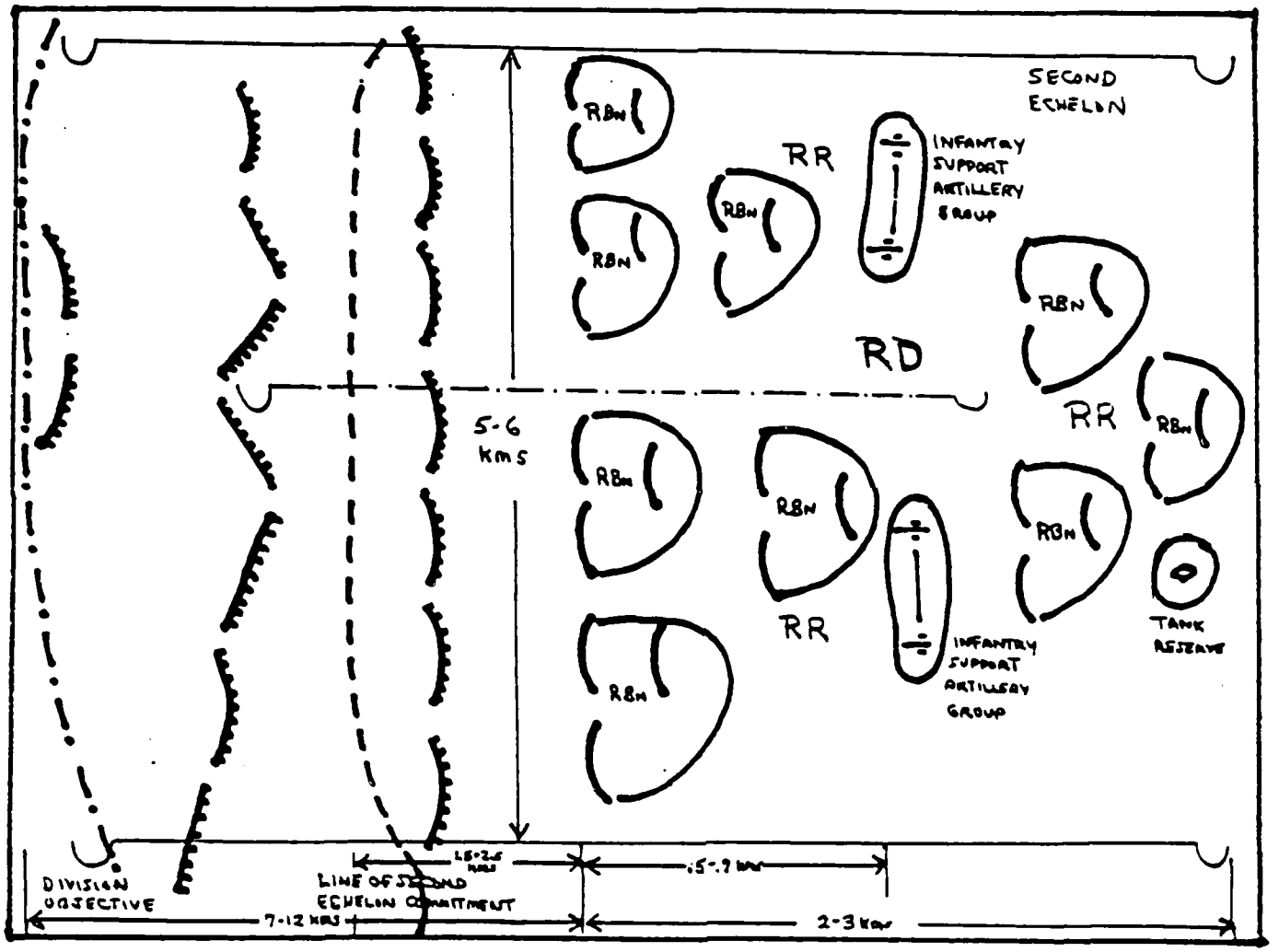
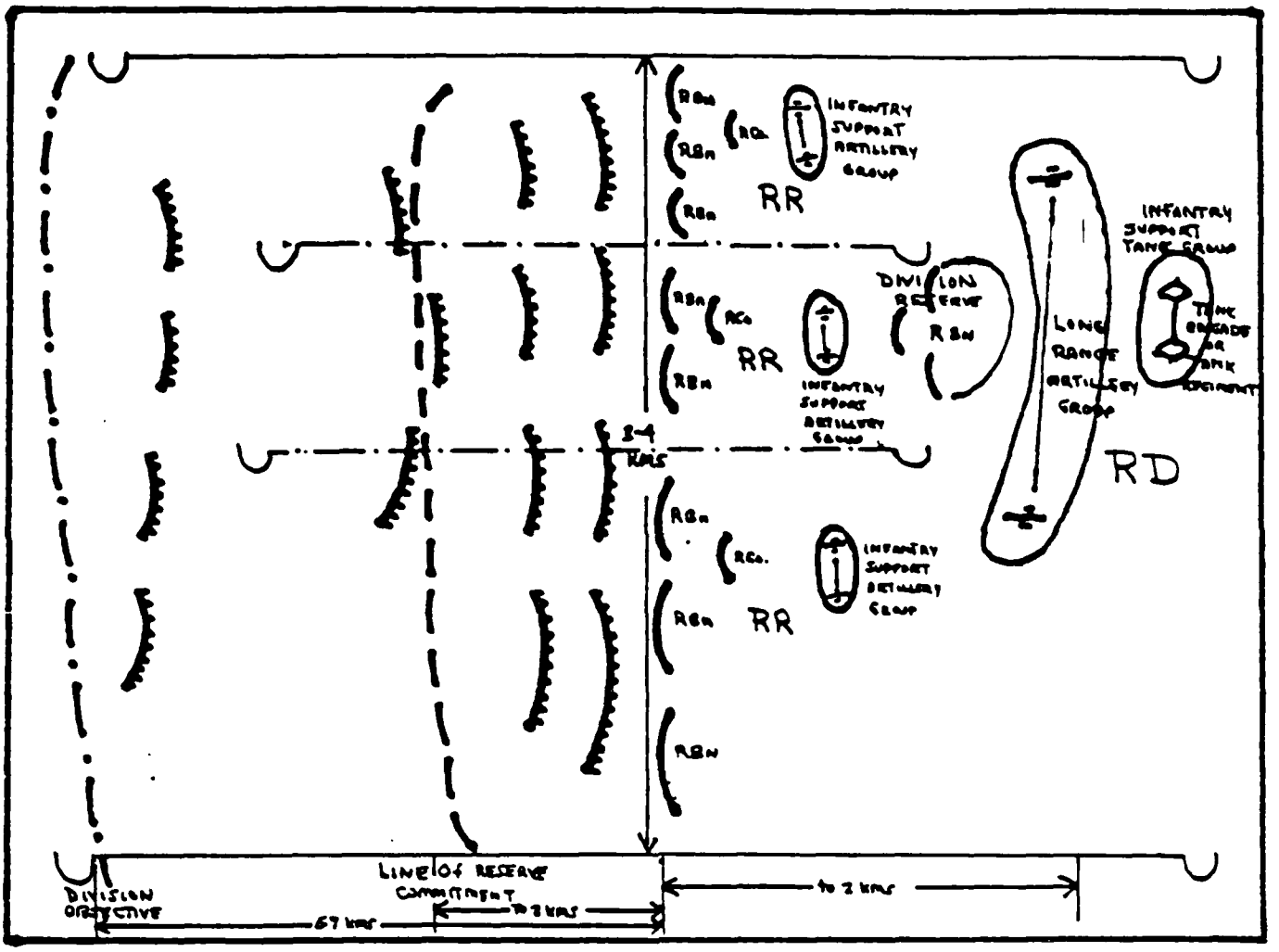


Table 57.

RIFLE DIVISION COMBAT FORMATION - OFFENSE

1942



October 1942, the Soviets used tank brigades and separate tank battalions as complete units to support attacking infantry, but only after proper reconnaissance and coordination with appropriate infantry/artillery and aviation commanders. After the spring of 1942, the rifle division received increased engineer support, and air support, virtually nonexistent before that time, began to contribute to preattack preparations and provide some tactical air support as well.

The first period of war was a harsh and costly experience for the Soviet nation and the military in particular. It pointed out vividly the gap between the promises of 1936 and the realities of 1941. But it was a necessary stage for future victory. The division, army and front commanders who emerged in 1942 would lead their units and the Red Army to victory in 1945. The rules, regulations and theoretical principles which emerged by 1942 would be adjusted in 1943 and perfected in 1944-45. The military weaponry flowing off Soviet assembly lines in 1942 would flood the theater by 1944 and swamp the best of German equipment by wars end. The prerequisites for eventual victory were established in 1942 and would be capitalized upon in 1943. The best indication of Soviet progress was the offensive that the Soviets unleashed in November 1942 to mark the opening of the second period of war -- the offensive at Stalingrad.

An Army in Transition (1943)

In November 1942 Stalin, using several reserve armies released from STAVKA control, one tank army and the majority of his tank and mechanized corps, struck back at overextended German, Rumanian, Hungarian and Italian forces in the Stalingrad area. The success of the ensuing operation exceeded Stalin's expectations and trapped the German 6th Army and a major portion of the 4th Panzer Army. This first successful Soviet encirclement operation wrested the strategic initiative from German hands. After the encirclement Stalin attempted simultaneously to reduce surrounded German forces at Stalingrad, defeat German relief

attempts, and expand the Soviet offensive to encompass the entire southern wing of the eastern front and thereby destroy German Army Group "Don." As was the case in the winter campaign of 1941-42, Stalin was overoptimistic and tried to achieve too much, too soon, with too little. The Soviet offensive reduced the Stalingrad "cauldron," forced the upper and middle Don River, cleared the Caucasus, and pressed westward through Khar'kov and into the Donbas region. Threadbare Soviet armies, led by weakened tank corps at the end of tenuous supply lines, advanced too far. A brilliant counter stroke delivered by Field Marshal Erich von Manstein's Army Group "South" struck the overextended Soviet force and drove it back across the N. Donetz River, liberating Khar'kov and forming the inviting yet ominous Soviet salient around Kursk. It was on that salient that the Germans next focused their attention. Hitler and the German High Command selected the relatively narrow Kursk sector for their next major offensive, an offensive finally launched in July 1943 in an attempt to crush Soviet operational and strategic reserves, restore equilibrium to the eastern front and, if possible, restore to Germany the strategic initiative. For the first time in the war the Soviets eschewed a preemptive offensive and instead prepared an imposing strategic defense unparalleled in its size and complexity in order to crush the advancing Germans. Once the German offense stalled, Soviet forces would go over to the offensive at Kursk and in other sectors. The script played as the Soviets wrote it. The titanic German effort at Kursk failed at huge cost, and a wave of Soviet counteroffensives rippled along the eastern front ultimately driving German forces back to the line of the Dnepr River. There, in a brilliantly conceived operation during the late fall Soviet forces suddenly forced the river north of Kiev, liberated the city, and created an extensive bridgehead on the right bank of the river. 1943 marked the beginning of the end for the Germans. Never again would they launch a major offensive. Stripped of a significant portion of their allied forces, increasingly bereft of operational reserves, the Germans could only defend and

delay, relying on scorched earth and strained logistics to impede the Soviet advance and a tenuous defense to further erode Soviet combat capability.

The Soviets used 1943 to complete reconstruction of their force structure in accordance with the refined operational concepts enunciated in 1942 orders and directives and incorporated into the 1942 Field Regulations. Those regulations updated the 1941 regulations and incorporated into one comprehensive document judgments made on the basis of analysis of the experiences of the first two years of war. Thus force structure changes evolved in tandem with the written regulations which in turn reflected the real experience of war (see tables 58-59). In early 1943, while combined arms armies increased in size, rifle corps headquarters were again formed as intermediate control headquarters under armies. Rifle divisions increased in size and armament while rifle brigades were upgraded to full rifle division strength. Tank forces were improved significantly (see table 60). Tank and mechanized corps increased in strength, but more important, in January 1943 the Soviets approved the TOE for a new type of fully mechanized tank army of two tank and one mechanized corps for a total of over 700 tanks each.[13] The five new tank armies created by the summer of 1943 were specifically created to function as front mobile groups destined to exploit success. These tank armies, along with the existing tank and mechanized corps at army level brought to full fruition the concepts enunciated in 1936 concerning the exploitation echelon designed to develop tactical success into operational success. These new tank forces, first unleashed in the Soviet counteroffensives at Kursk would spearhead Soviet offensive efforts for the remainder of the war.

At the same time, throughout 1943, a host of new units joined the Soviet force structure. Artillery breakthrough divisions, tank destroyer artillery regiments and brigades, self-propelled artillery regiments and brigades, guards mortar brigades and divisions, "high power" artillery brigades, "special power" artillery brigades, tank penetration regiments and other support units supplemented all elements of the force structure and provided

Table 58. Rifle Forces, 1942

April 1943 Rifle Army
- 3 rifle corps
  - 7-12 rifle divisions
- 4 artillery regiments
  - 1 gun artillery regiment (152mm)
  - 1 antitank artillery regiment (76mm)
  - 1 antiaircraft artillery regiment (37mm)
  - 1 mortar regiment (122mm)
- 1 signal regiment
- 1 line/communications battalion
- 1 telegraph company
- 1 aviation communications troop

reinforced by STAVKA units:
- 1-2 artillery penetration divisions
- 3 arillery regiments
- 3 tank destroyer regiments
- 3-4 tank or self-propelled gun brigades
- 10 separate tank or self-propelled gun regiments
- 2 antiaircraft divisions
- 1-2 tank or mechanized corps (mobile group)

strength: 80,000-130,000 men
1,500-2,700 guns/mortars
48-497 multiple rocket launchers
30-225 self propelled guns

- -

December 1943 Rifle Corps
- 3 rifle divisions
- 1 artillery regiment (122mm) (optional)
- 1 signal battalion
- 1 sapper battalion

- -

December 1942 Rifle Division
- 3 rifle regiments (4 X 76mm, 12 X 45mm)
- 1 artillery regiment (12 X 122mm, 20 X 76mm)
- 1 antitank battalion
- 1 sapper battalion
- 1 signal company
- 1 reconnaissance company

strength: 9,435 men
(10,670 in guards divisions)
44 AA guns
160 mortars
48 antitank guns

July 1943 Rifle Division
- 3 rifle regiments (4 X 76mm, 12 X 45mm)
- 1 artillery regiment
- 1 antitank battalion
- 1 sapper battalion
- 1 signal company
- 1 recon company

strength: 9,380 men
(same as Dec 1942)

Table 59. Cavalry Forces, 1943

1943 Cavalry Corps	1943 Cavalry Division
3 cavalry divisions	3 cavalry regiments (6 X 76mm, 6 X 45mm)
2 tank regiments (39 tanks each)	1 artillery regiment (16 X 76mm, 8 x 122mm)
1 self propelled artillery regiment	1 reconnaissance battalion
1 tank destroyer regiment	1 antiaircraft squadron
1 artillery regiment	1 engineer squadron
1 antiaircraft regiment	1 signal squadron
1 guards mortar regiment	
1 mortar battalion	
1 separate tank destroyer battalion	
strength: 14,000-15,000 men 90 tanks/SP guns	strength: 4,700 men 42 guns 18 anti-tank guns 6 anti-aircraft guns

Table 60. Mechanized and Tank Forces, 1943

July 1943 Tank Corps

- 3 tank brigades (65 tanks each)
- 1 motorized rifle brigade
- 1 mortar regiment (36 X 120mm)
- 1 antiaircraft regiment
- 1 self propelled artillery regiment (SU-76)
- 1 tank destroyer regiment (20 X 45mm)
- 1 tank destroyer battalion (12 X 85mm)
- 1 guards mortar battalion
- 1 motorcycle battalion
- 1 sapper battalion
- 1 signal battalion
- 1 armored car battalion
- 1 transport company
- 2 repair companies (1 artillery, 1 tank)
- 1 chemical defense company

strength: 10,977 men
209 tanks
21 SP guns
160 guns/mortars
8 multiple rocket launchers

December 1943 Tank Corps

- 3 tank brigades (65 tanks each)
- 1 motorized rifle brigade
- 1 mortar regiment
- 1 antiaircraft regiment
- 1 self propelled artillery regiment (SU-76)
- 1 self propelled artillery regiment (SU-85)
- 1 guards mortar battalion
- 1 motorcycle battalion
- 1 sapper battalion
- 1 signal battalion
- 1 transport company
- 2 repair companies
- 1 chemical defense company
- 1 aviation company

strength: 10,977 men
208 tanks
49 SP guns
152 guns/mortars
8 multiple rocket launchers

September 1943 Mechanized Corps

- 3 mechanized brigades
- 1 tank brigade
- 1 self propelled gun regiment (SU-76)
- 1 mortar regiment
- 1 antiaircraft regiment
- 1 guards mortar battalion
- 1 motorcycle battalion
- 1 sapper battalion
- 1 signal battalion
- 1 medical battalion
- 1 transport company
- 1 repair, reconstruction company

strength: 15,018 men
204 tanks
25 SP guns
108 guns/mortars
8 multiple rocket launchers

December 1943 Mechanized Corps

- 3 mechanized brigades
- 1 tank brigade
- 1-2 self propelled artillery regiments (SU-76, SU-85)
- 1 mortar regiment
- 1 antiaircraft regiment
- 1 tank destroyer regiment
- 1 guards mortar battalion
- 1 motorcycle battalion
- 1 sapper battalion
- 1 signal battalion
- 1 medical battalion
- 1 transport company
- 1 repair, reconstruction co

strength: 16,369 men
197 tanks
49 SP guns
252 guns/mortars
8 multiple rocket launchers

January 1943 Tank Army	July 1943 Tank Army
2 tank corps	2 tank corps
1 mechanized corps (optional)	1 mechanized corps (optional)
1 motorcycle regiment	1 motorcycle regiment
1 antiaircraft regiment	1 antiaircraft division (64 X 37mm)
1 tank destroyer regiment	2 tank destroyer regiments
1 howitzer artillery regiment	2 mortar regiments
1 guards mortar regiment	2 self propelled artillery regiments
1 signal regiment	1 guards mortar regiment (same svc spt as Jan)
1 aviation communications regiment	
1 engineer regiment	
1 transport regiment	
2 repair, reconstruction battalions	
1 separate tank brigade or regiment	
strength: 46,000-48,000 men 800 tanks (theory) 450-600 tanks/SP guns (practice) 500-600 guns/mortars	strength: 48,000 men 500-650 tanks/SP guns 550-650 guns/mortars

overwhelming firepower superiority over the Germans. In 1943, the Soviets developed procedures for the coordination and use of this burgeoning force structure.

The principal strategic aim of the Soviet armed forces in 1943 was to secure and maintain the strategic initiative by using all types of operations (defensive and offensive), by careful employment of field forces on critical directions, and by judicious use of strategic reserves. The basic form of strategic operation was the strategic offensive, exemplified by the two Soviet general counteroffensives conducted at Stalingrad and Kursk, and subsequent development of those counteroffensives. Each counteroffensive, launched by a group of fronts under control of a STAVKA representative, was larger in scale than any earlier counteroffensive and each involved simultaneous or successive blows (udar) across a broad front. The winter offensive involved four fronts and eighteen combined arms armies advancing in a sector 700-800 kilometers wide to a depth of 120-400 kilometers, while the summer offensive involved ten fronts, forty combined arms and five tank armies operating on a 2000 kilometer front to a depth of 600-700 kilometers.[14] While the winter offensive fell short of its ambitious objectives, the summer offensive succeeded in its aims. The strategic defense in 1943, unlike 1941, did not occur along the entire front. Rather, it occurred on one strategic direction involving a strategic defense by a group of fronts. Sufficient time existed to prepare and fully man a deeply echeloned and fortified defense extending over 100 kilometers deep. 1943 also marked the rise of a strategically important partisan movement which disrupted the German rear areas and tied down a considerable number of German troops.

Equipped with an almost completely revitalized force structure, manned by an increasingly experienced command cadre, and guided by new regulations generalizing war experiences, the Soviets used 1943 as an experimental year in the operational realm. Of particular importance was the problem of coordinating the more elaborate forces and evolving operational techniques for their use. The

Soviets focused on creating a capability to conduct large scale offensive operations on a broad front in order to achieve penetrations of German defenses in a number of sectors by proper concentration and use of shock groups. Mobile groups of armies (tank and mechanized corps) and fronts (tank armies) then developed the tactical successes into operational depths. A characteristic of 1943 offensive operations was the decisive conduct of the penetration and the subsequent use of maneuver to effect encirclement of the enemy. Unlike the first period of war, when attack sectors were wide and penetration sectors imprecise, in the second period these sectors narrowed and were well defined. Fronts attacked in sectors 150-200 kilometers wide and armies in 20-35 kilometer sectors with front penetration sectors of 25-30 kilometers and army penetration sectors of 6-12 kilometers. Offensive operational densities in penetration sectors increased to 2.5-3 kilometers per rifle division and 150-180 guns/mortars and 30-40 tanks per 1 kilometer of front.[15]

Operational formations also evolved (see tables 61-64). During the winter campaign of 1942-43, fronts deployed in a single echelon with a combined arms reserve; however, the single echelon was stronger than before, sometimes even comprising a tank army (of mixed composition) (see Maps 16-22). With the growth of German defenses, by the summer of 1943 fronts formed in two echelons with the mobile group (tank army) following the first echelon on the main attack axis (see Maps 23-30). Combined arms armies in the winter offensive organized in two echelons with an army mobile group (tank or mechanized corps). By the summer of 1943, armies often formed in a single echelon of rifle corps with artillery and antiaircraft artillery groups, mobile obstacle detachments and reserves in order to fulfill the close mission of the front at a depth of 60-90 kilometers. On the offense, armies used greater cover and deception and after October 1942 routinely practiced operational reconnaissance before an offensive.

Mobile groups increased in importance and expanded the scope of offensives. Army and front mobile groups usually were committed on the first day of the

Table 61.

FRONT OPERATIONAL FORMATION WINTER 1942-1943

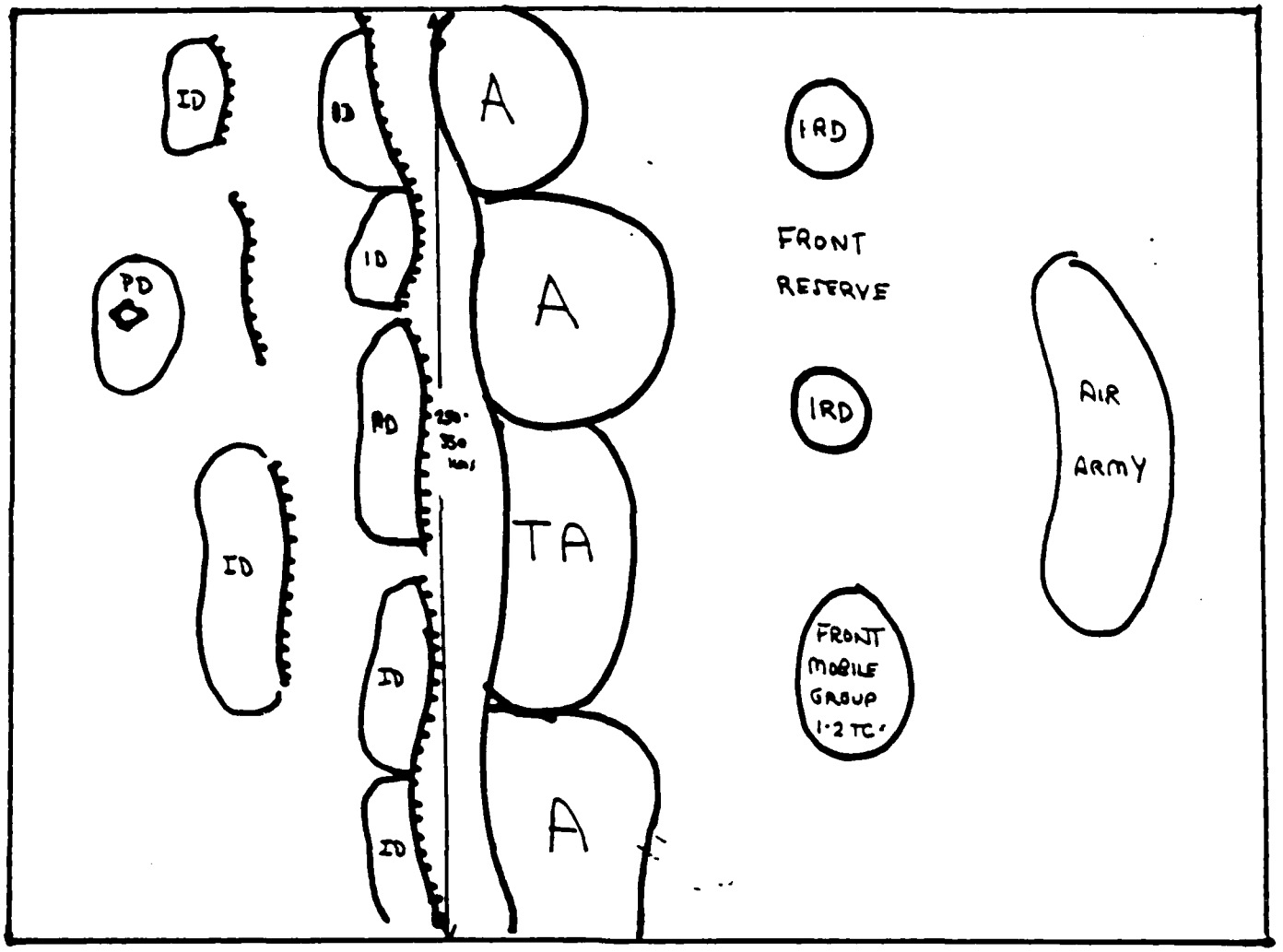


Table 62.

FRONT OPERATIONAL FORMATION 1943

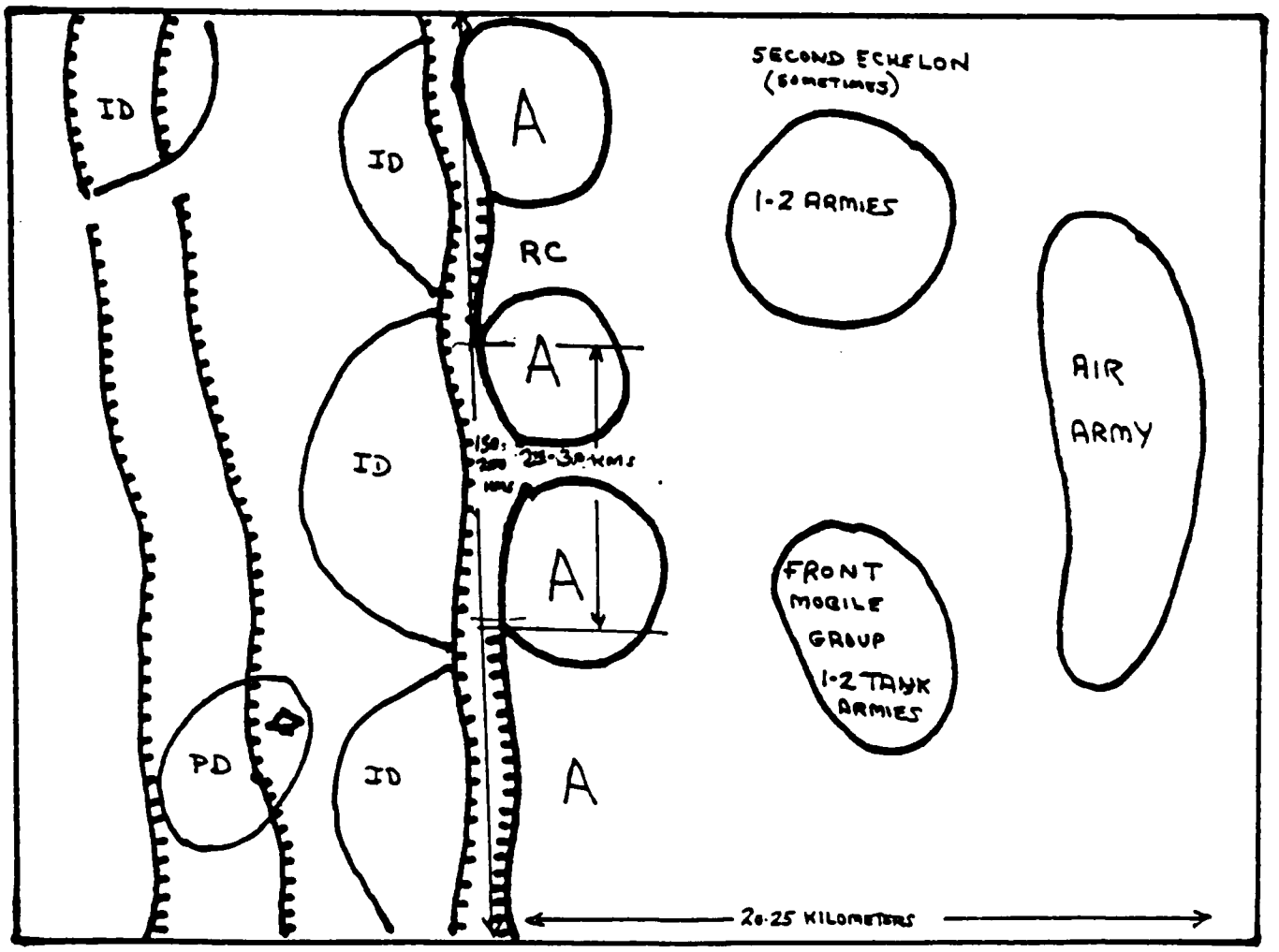
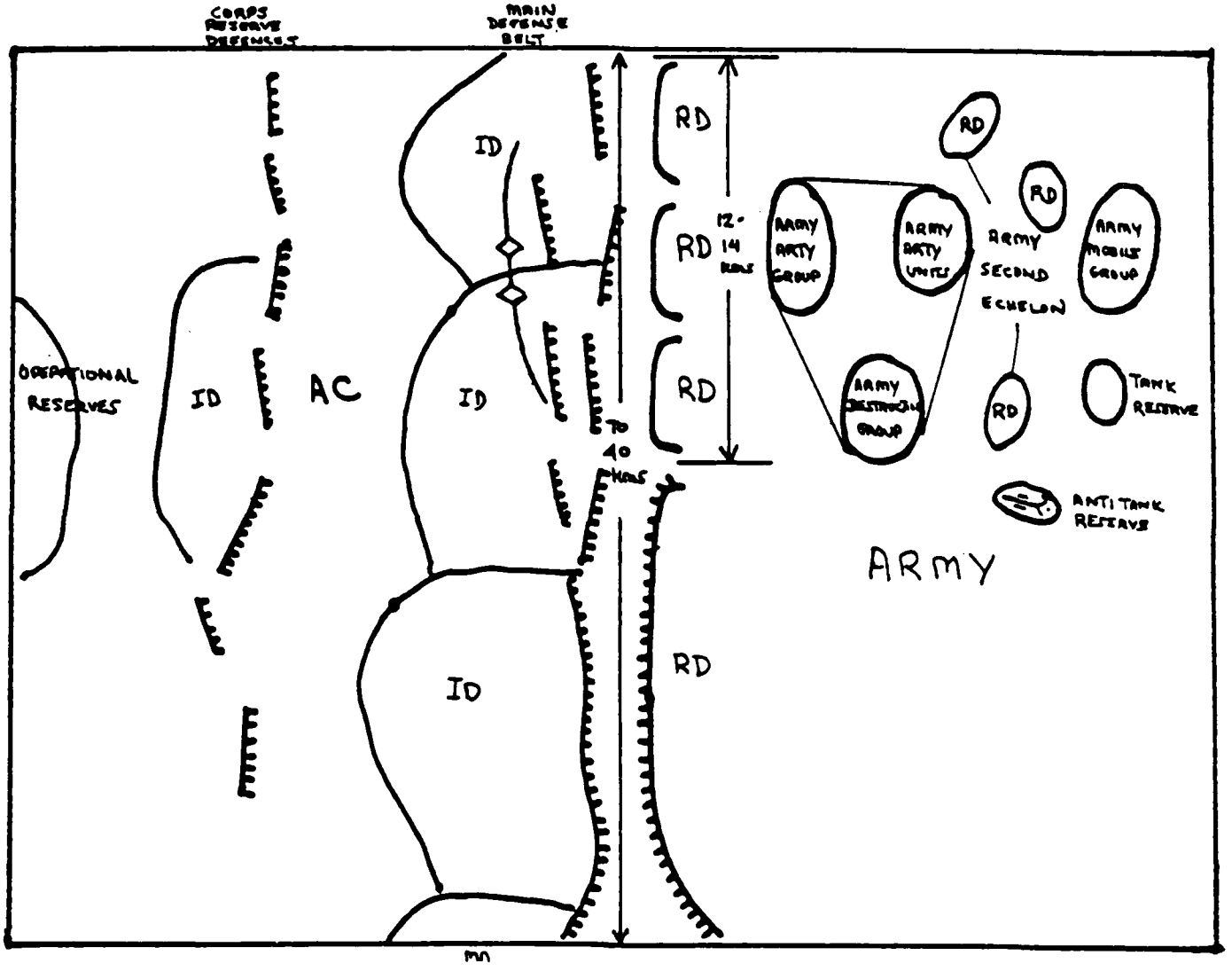


Table 63.

ARMY OPERATIONAL FORMATION WINTER 1942-1943



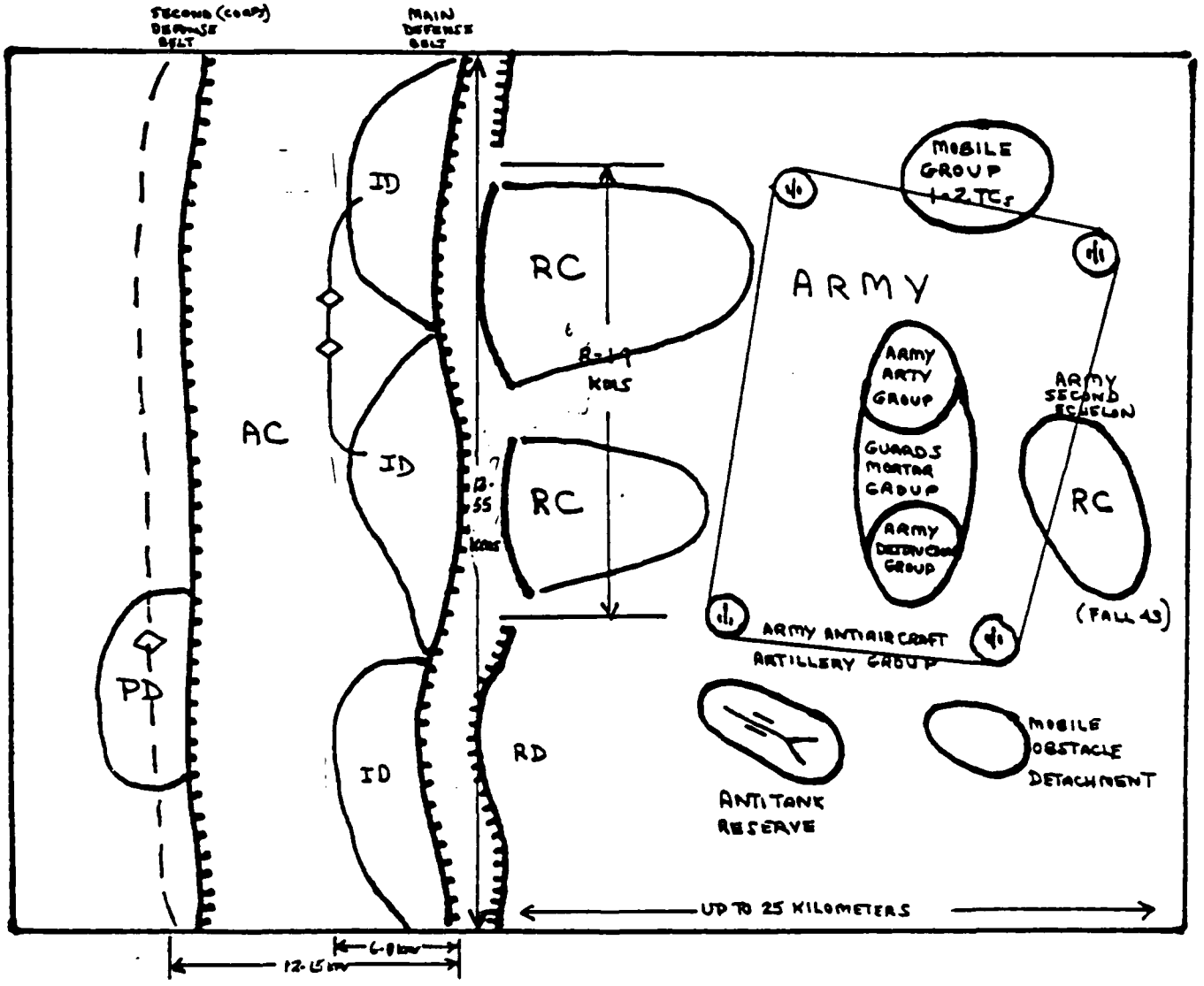
IMMEDIATE MISSION - 20-28 kms

SUBSEQUENT MISSION - 100-140 kms

LINE OF MOBILE GROUP COMMITMENT

Table 64.

ARMY OPERATIONAL FORMATION 1943-44



IMMEDIATE MISSION 12-15 kms

SUBSEQUENT MISSION 80-100 kms - 1943

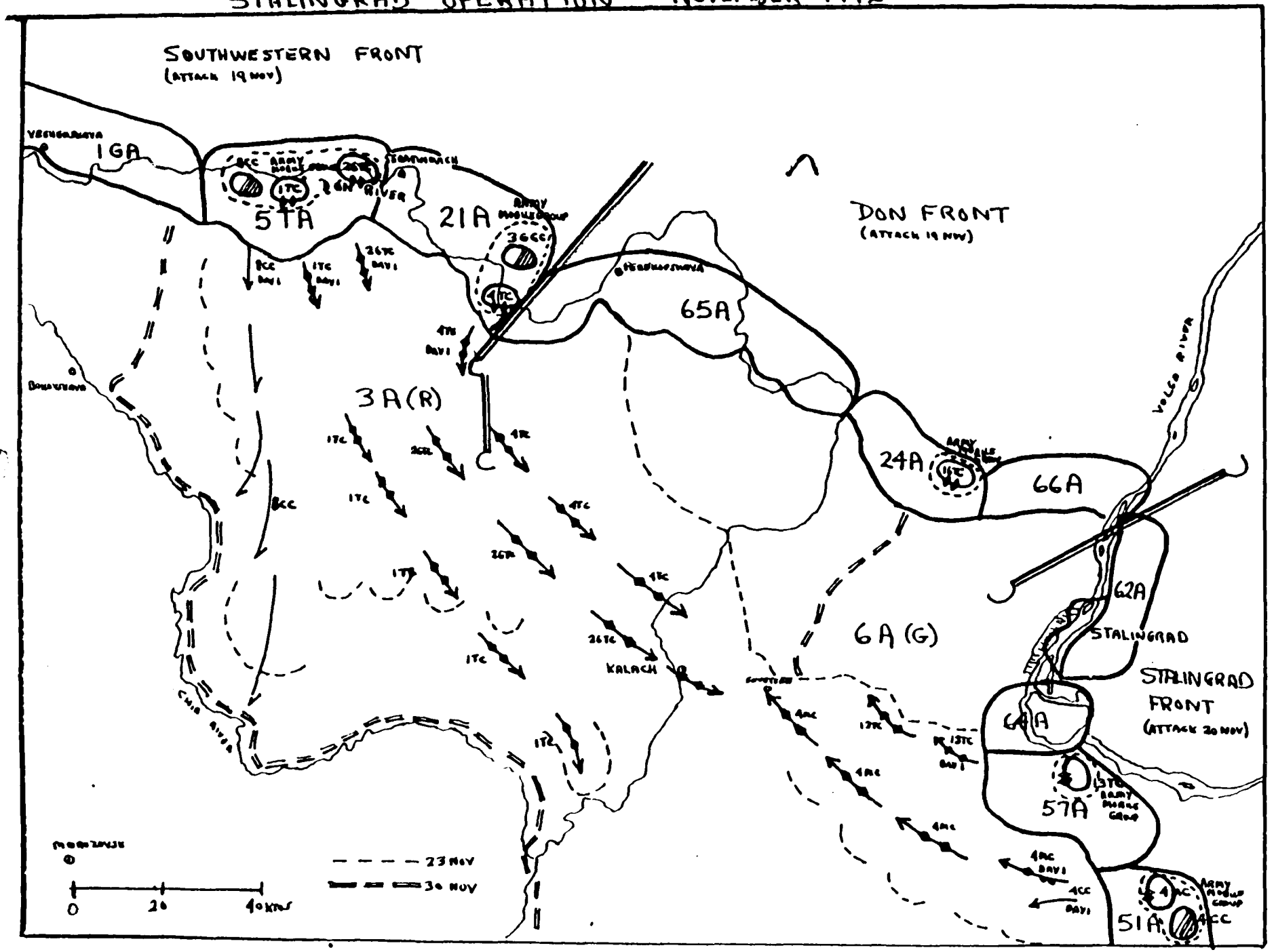
100-150 kms - 1944

— — — LINE OF SECOND ECHELON COMMITMENT

LINE OF MOBILE GROUP COMMITMENT

SOVIET OPERATIONAL FORMATION

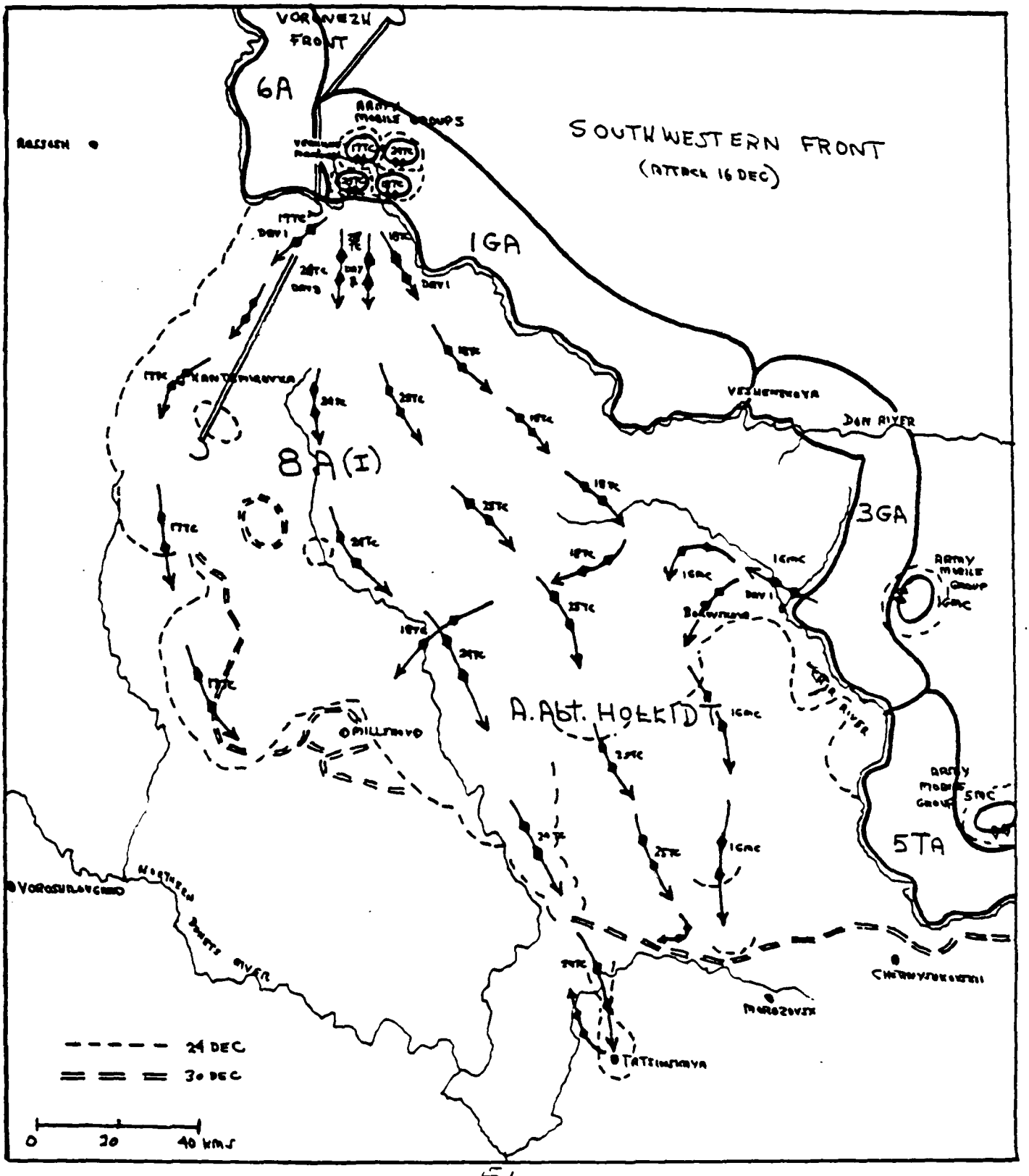
STALINGRAD OPERATION NOVEMBER 1942



Map 17

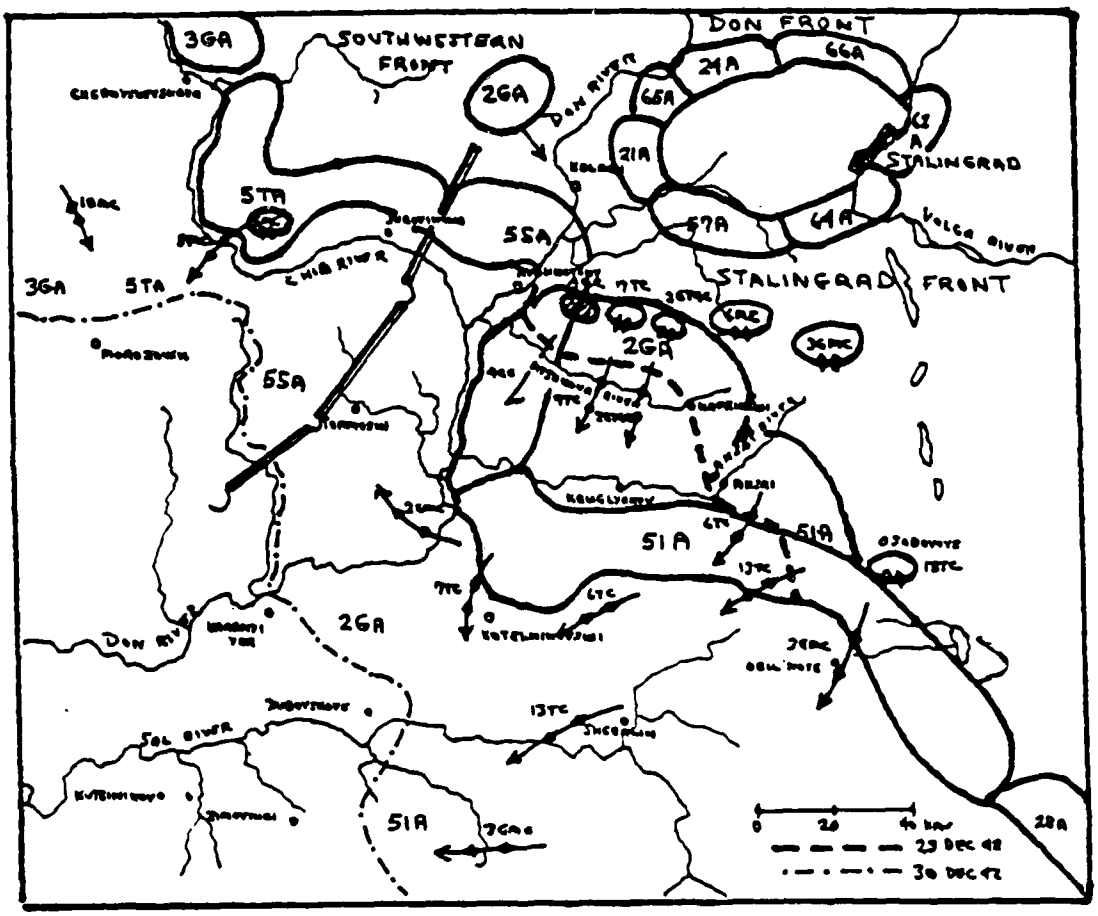
SOVIET OPERATIONAL FORMATION

MIDDLE DON OPERATION DECEMBER 1942



SOVIET OPERATIONAL FORMATION

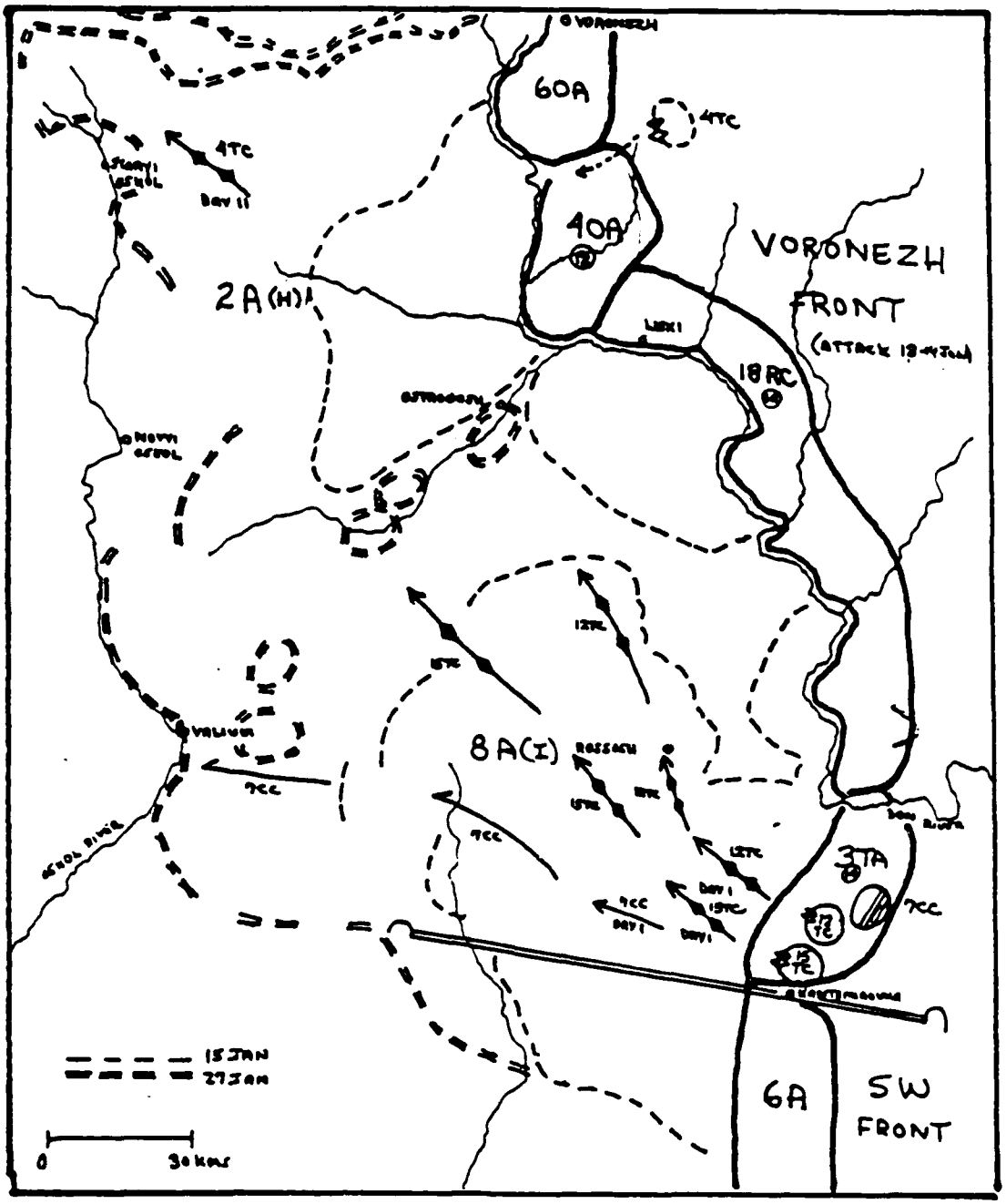
KOTELNIKOVSKII OPERATION 10-30 DEC 1942



MAP 19

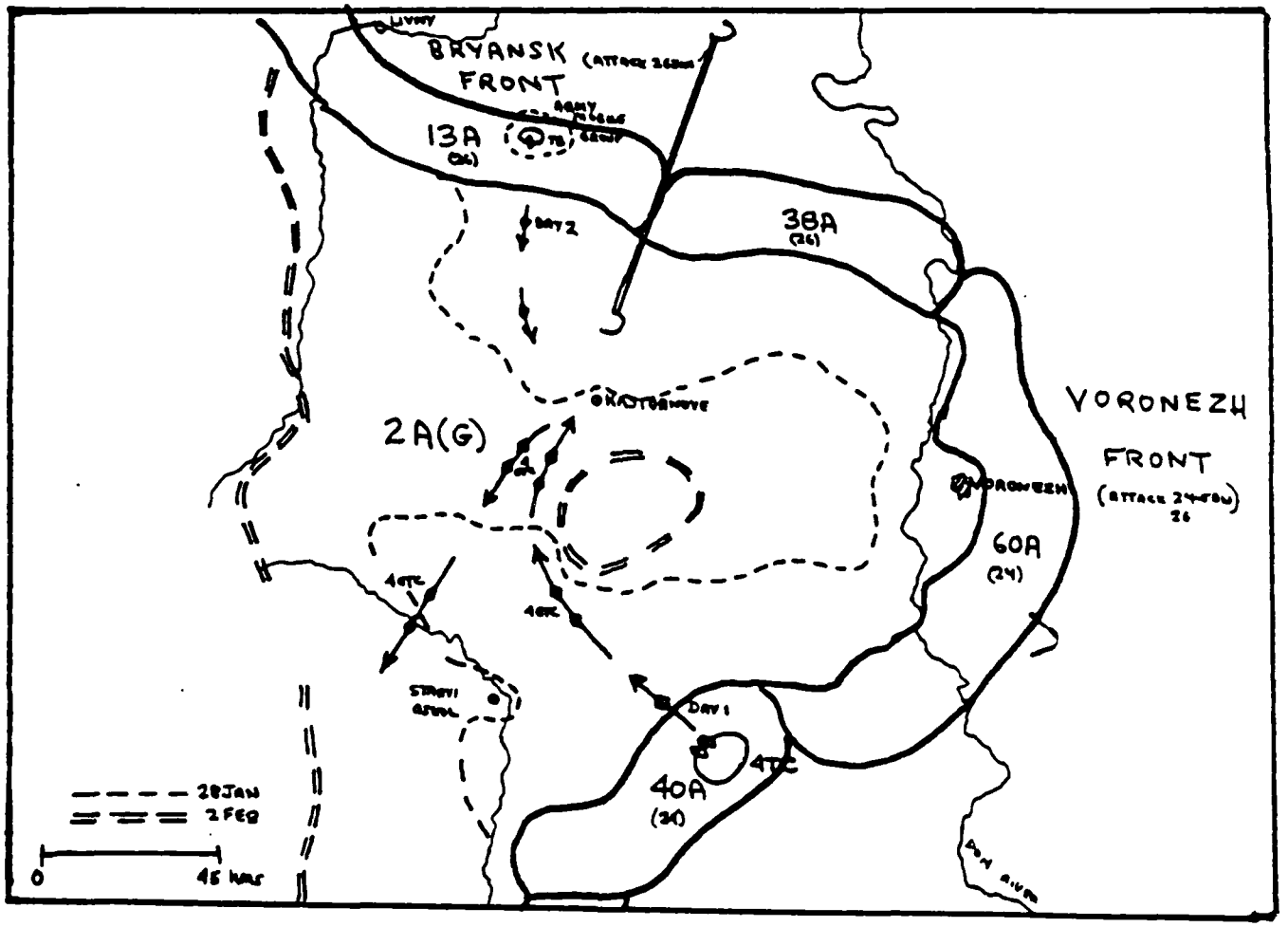
SOVIET OPERATIONAL FORMATION

OSTROGOSH - ROSSOSH OPERATION JAN 1943



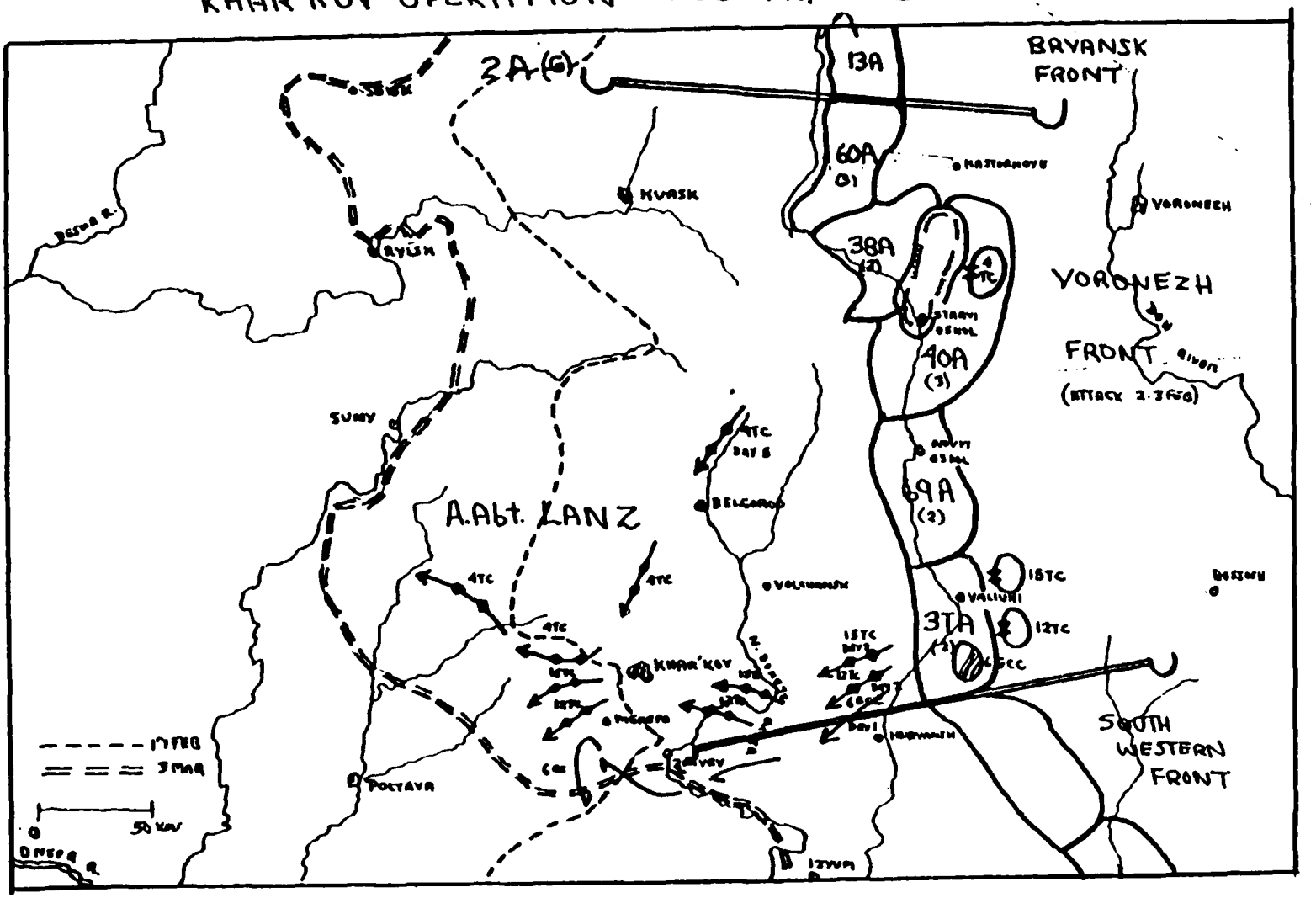
MAP 20 SOVIET OPERATIONAL FORMATION

VORONEZH - KASTORNOYE OPERATION JAN 1943



Map 21 SOVIET OPERATIONAL FORMATION

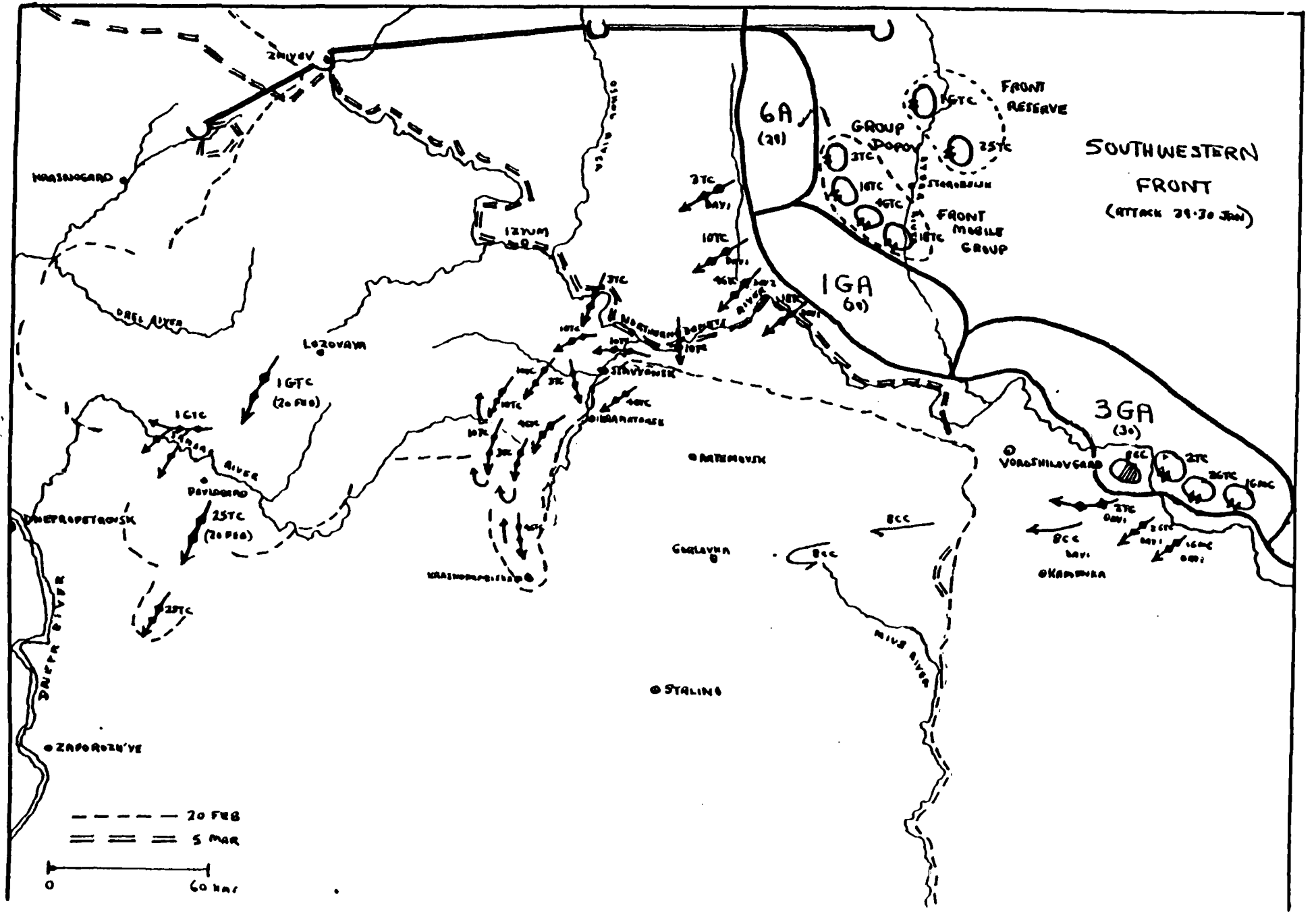
KHAR'KOV OPERATION FEBRUARY 1943



MAP 22

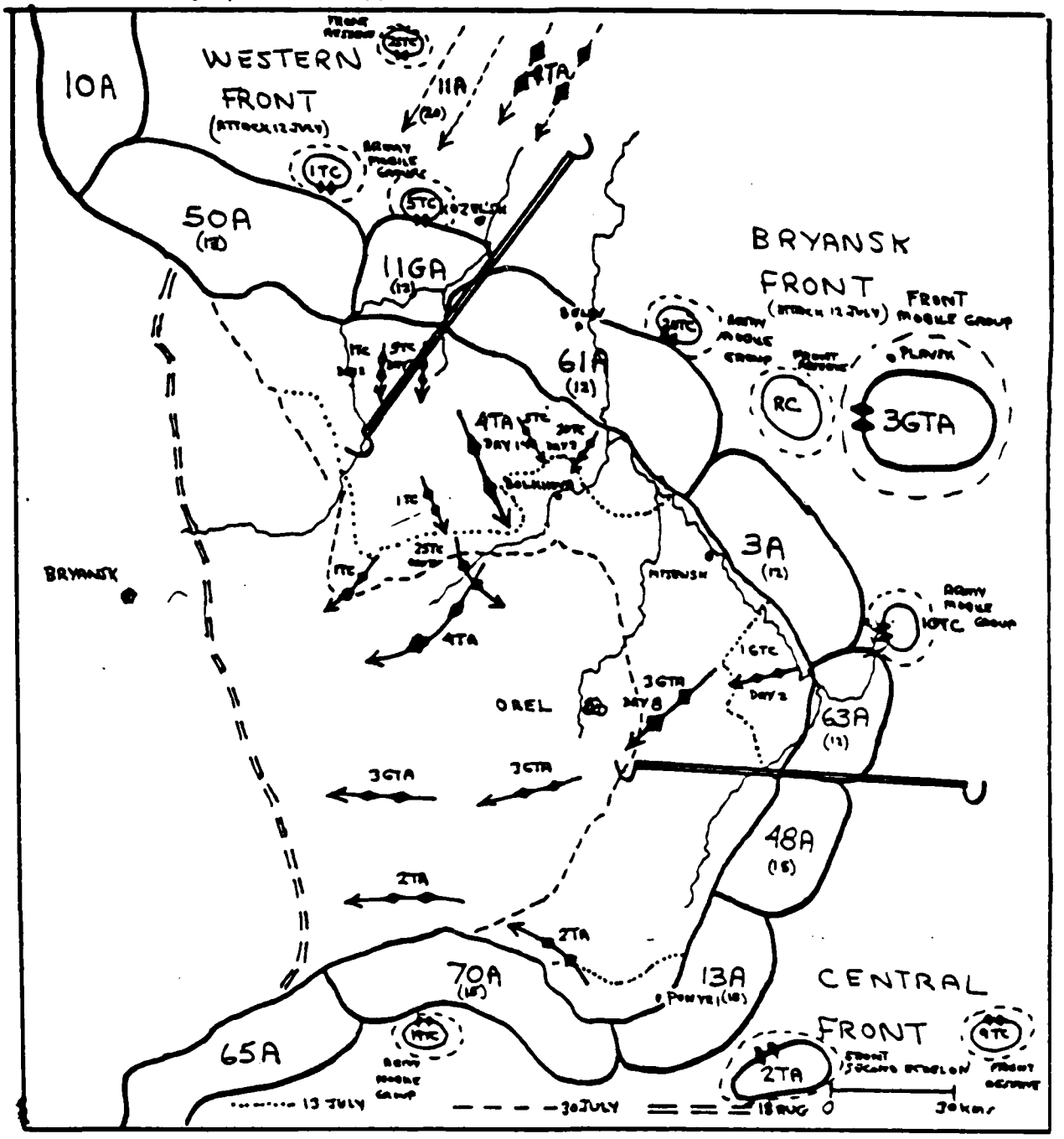
SOVIET OPERATIONAL FORMATION

DONBAS OPERATION JANUARY - MARCH 1943



MAP 23 SOVIET OPERATIONAL FORMATION

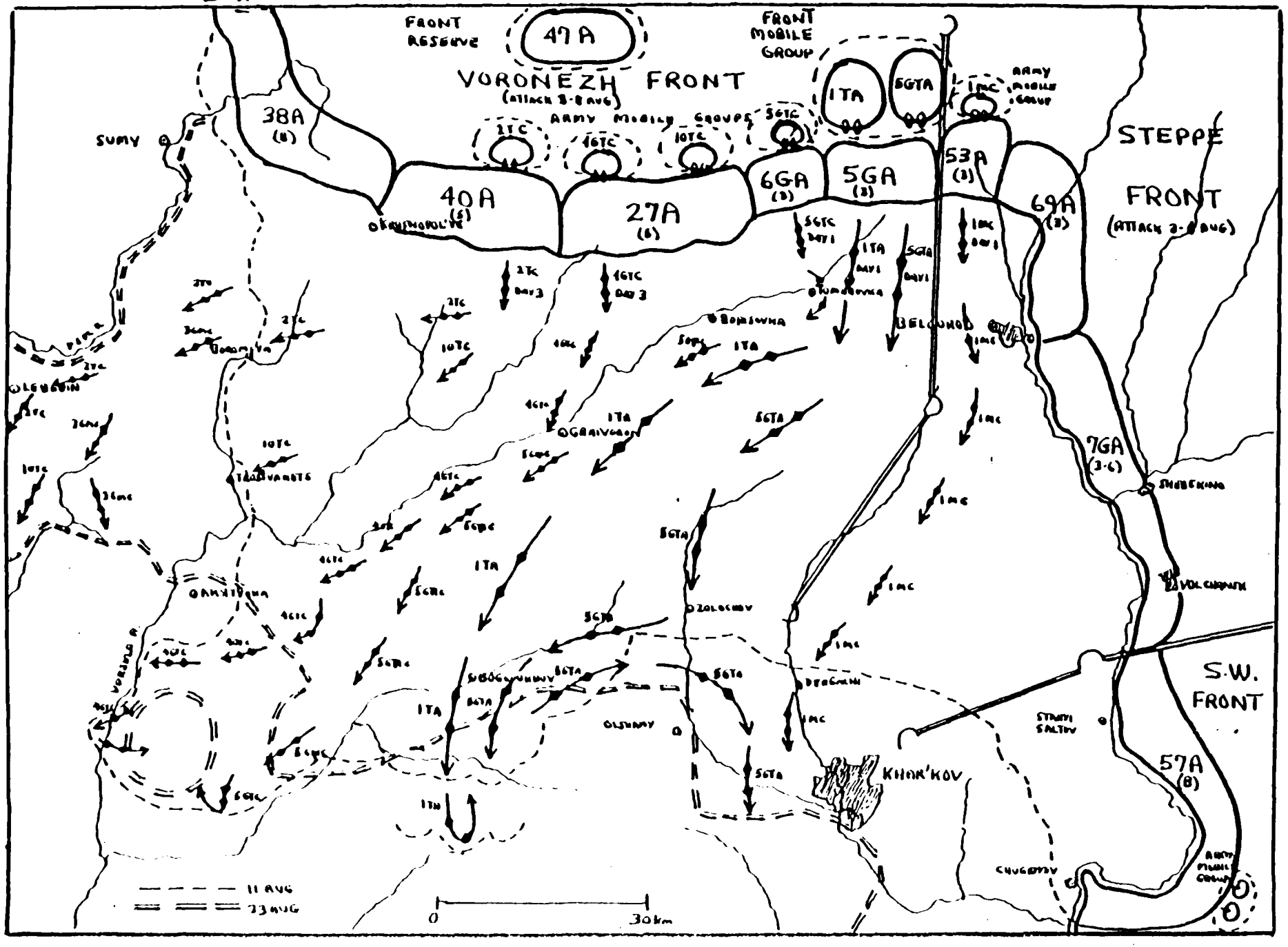
OREL OPERATION 12 JULY - 18 AUG 1943



MAP 24

SOVIET OPERATIONAL FORMATION

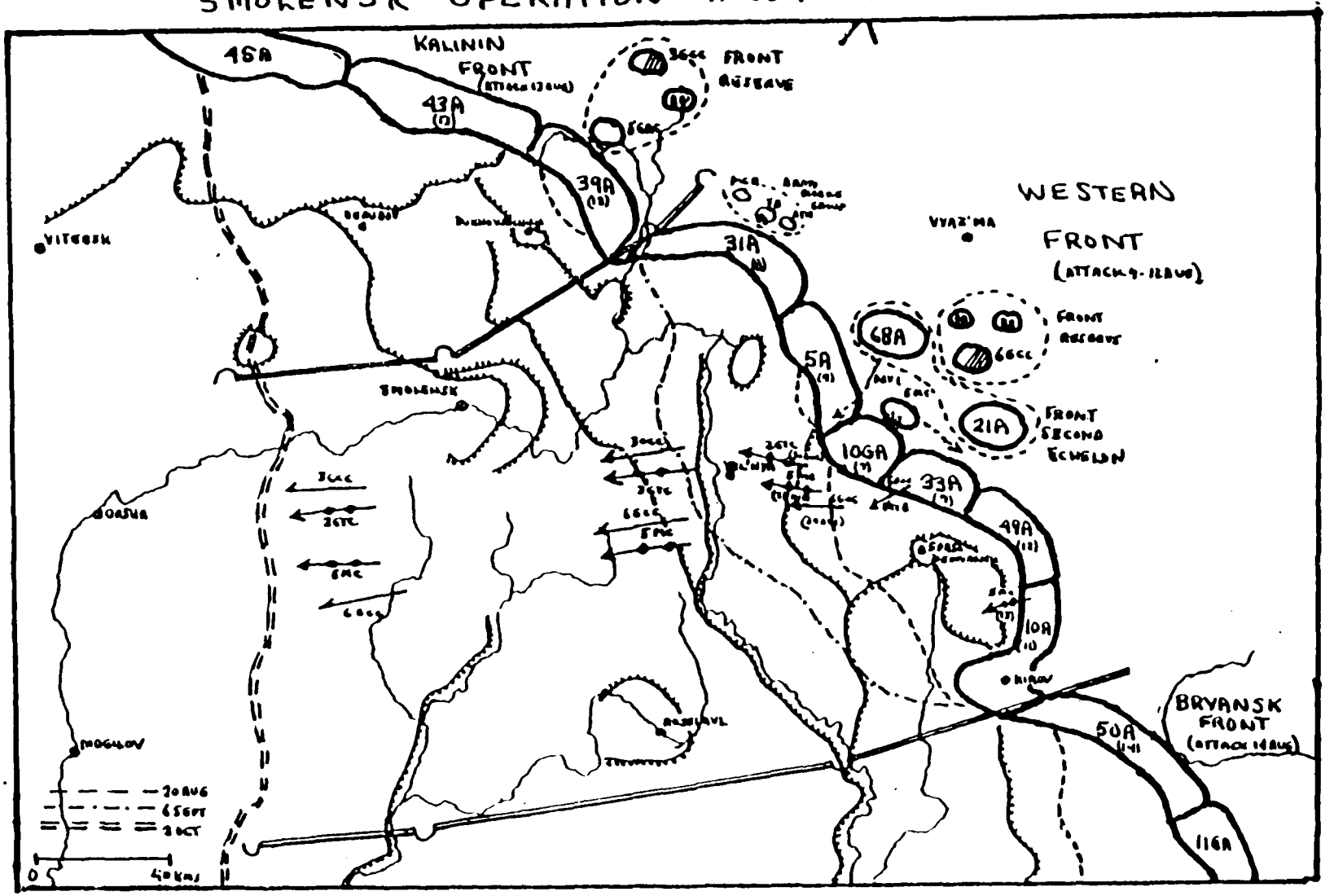
BELGOROD - KHAR'KOV OPERATION AUGUST 1943



Maps

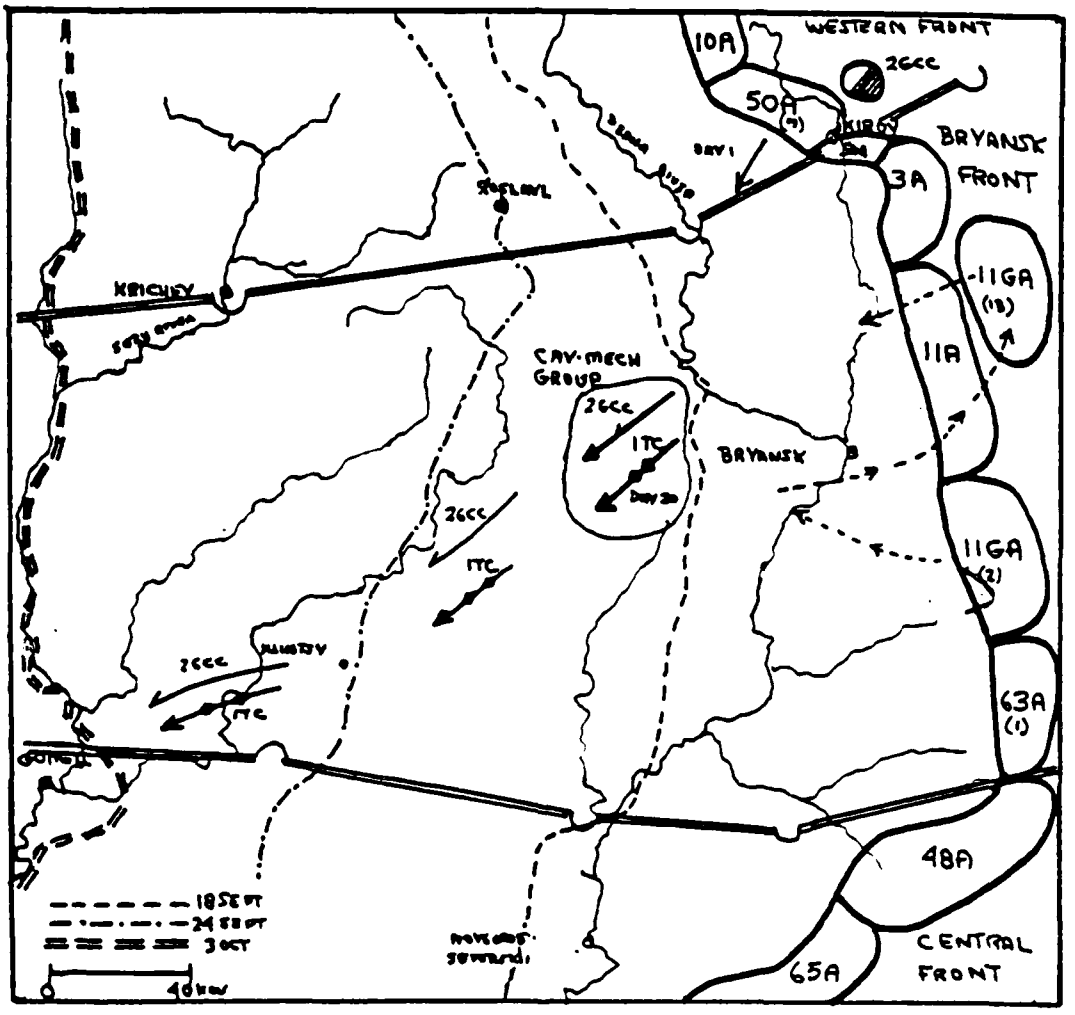
SOVIET OPERATIONAL FORMATION

SMOLENSK OPERATION AUGUST-OCTOBER 1943



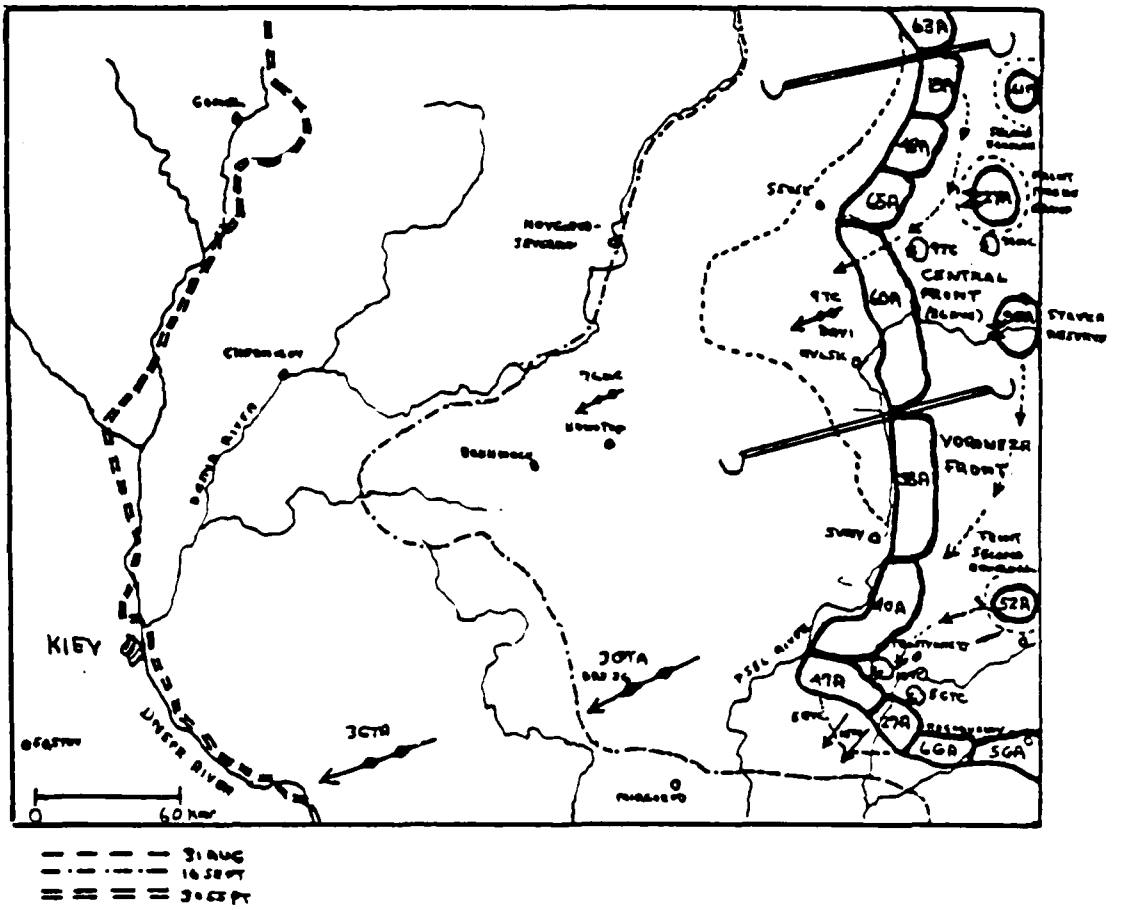
• MAP 26 SOVIET OPERATIONAL FORMATION

BRYANSK OPERATION 1SEPT-30CT 1943



SOVIET OPERATIONAL FORMATION

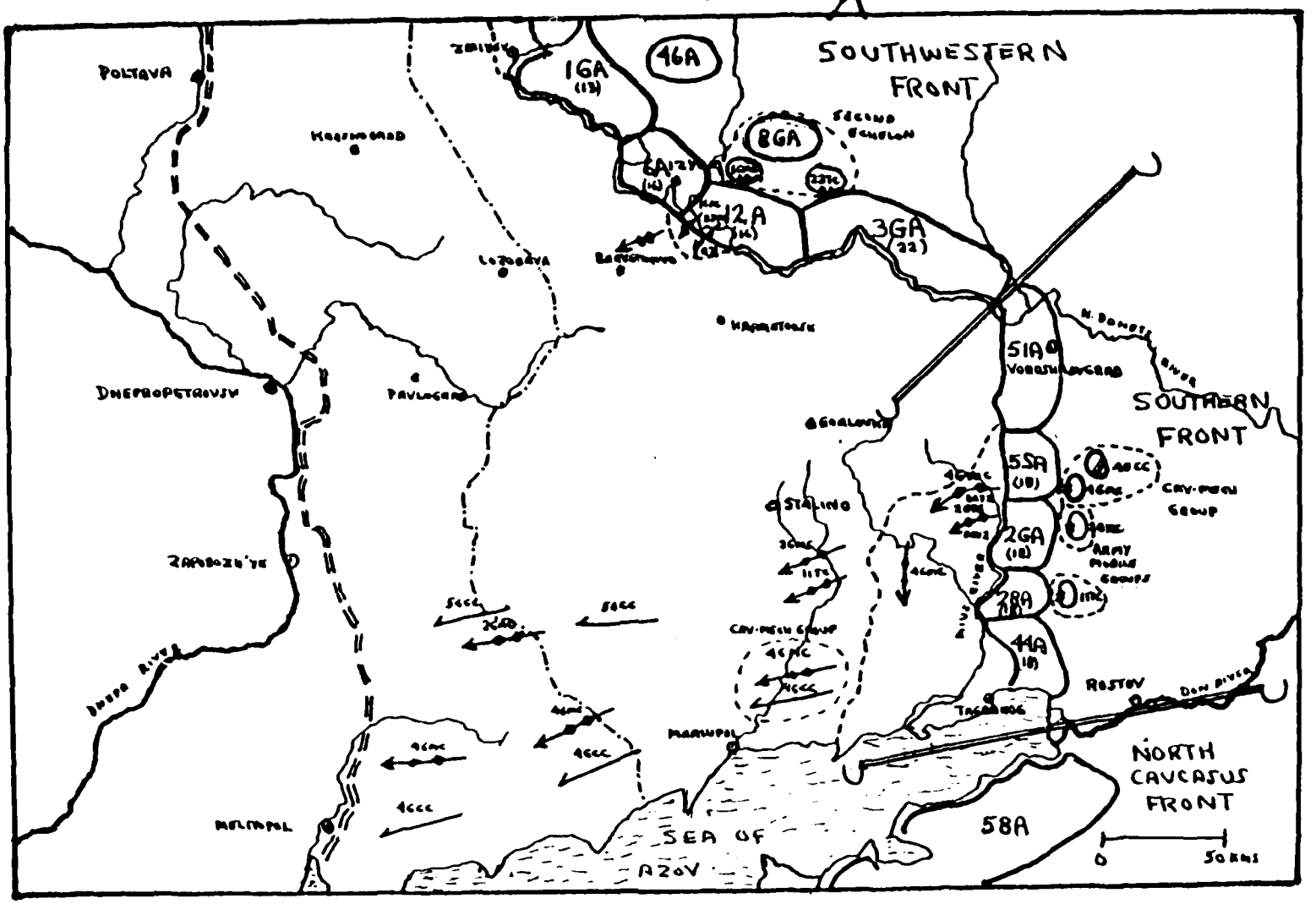
CHERNIGOV - PRIPYAT OPERATION 26 AUG - 30 SEPT 1943



MAP 28

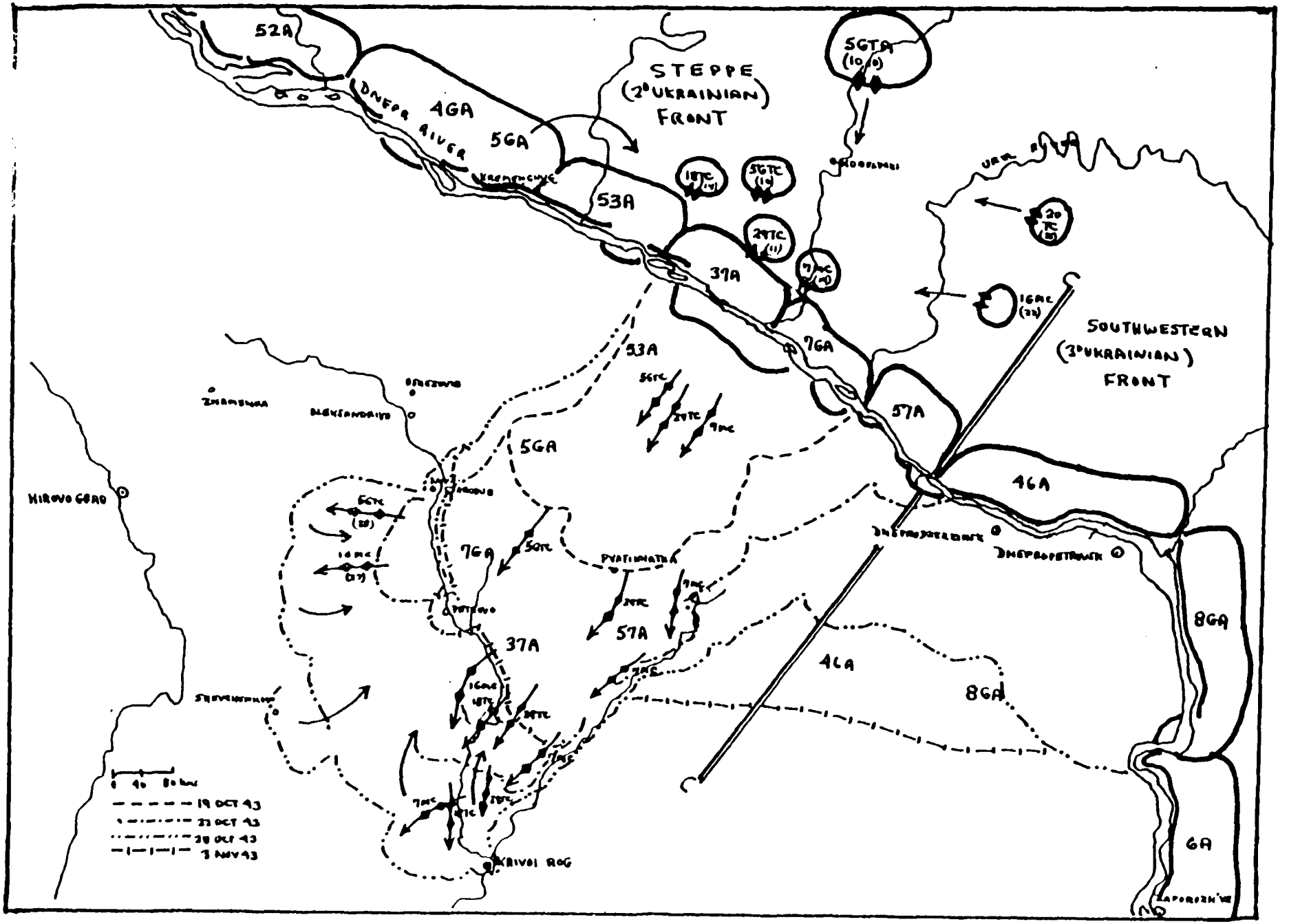
SOVIET OPERATIONAL FORMATION

DONBAS OPERATION 13 AUG - 22 SEPT 1943



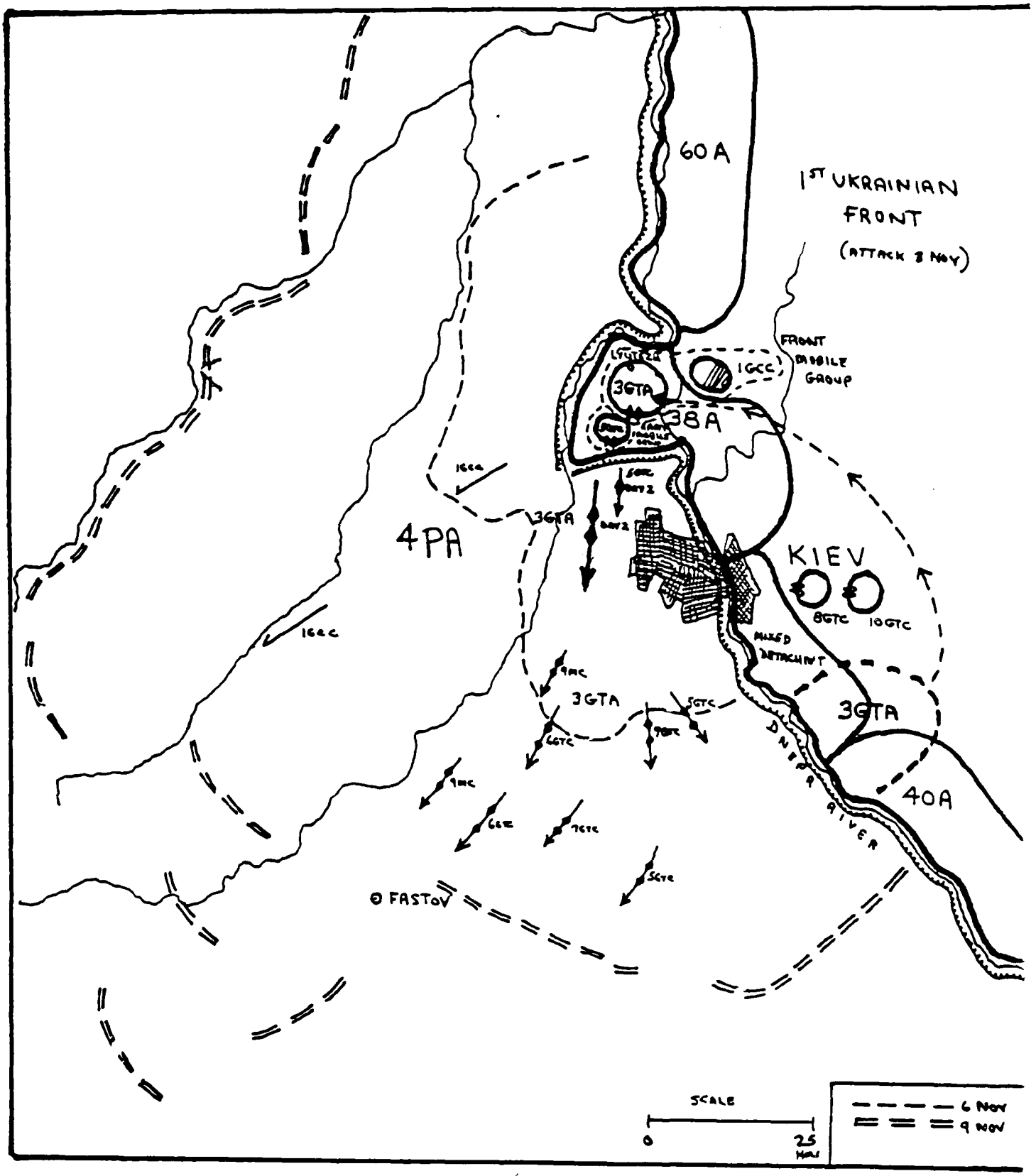
SOVIET OPERATIONAL FORMATION

KRIVOI ROG OPERATION 14 OCTOBER - 3 NOVEMBER 1943



MAP 30 SOVIET OPERATIONAL FORMATION

KIEV OPERATION 3-9 NOV 1943



offensive to complete the tactical penetration or exploit the penetration. TOE tank armies experimented with uninterrupted operations deep in the operational depth and these first experiences (not always fully successful) served as a basis for subsequent use of tank armies, singly or in combination. In sectors where mobile groups were not available, front and army commanders used second echelons to develop the attack, although at a slower pace.

Use of artillery and air power in offensives markedly improved through the development of the artillery offensive and air offensive. The centrally controlled artillery offensive provided closer support of ground troops by subdividing army artillery groups into support groups for first echelon rifle corps. Fires were designed to precede the attack, accompany the attack through the tactical defense, and provide artillery coverage for the advance into the operational depths.[16] The aviation offensive provided similar phasing of air support throughout the duration of the offensive.

During offensive operations, the Soviets indulged in significant regrouping of forces to develop success, to switch the impetus of attack to secondary directions or to defeat German counterattacks. High attack and pursuit tempos were achieved by forward detachments which raced ahead of main forces (in particular mobile groups) and secured key terrain features, river crossings and road junctions, and held them for the main force. While tempos of advance increased and the scale of operations grew, the corresponding growth of German defenses limited the scale of Soviet offensive success, as did the systematic German destruction of the regions they abandoned.

With the maturation of defensive principles and techniques in 1943 (both Soviet and German) the nature of Soviet defenses changed. Defensive frontages decreased as the depth of the defenses increased, thus improving defensive operational densities (see tables 65-66). By the summer of 1943, fronts defended in sectors of 250-300 kilometers width and the army in sectors 40-70 kilometers wide. Depths increased to 120-150 kilometers for a front and 30-40 kilometers for an army.

Tank 65.

FRONT OPERATIONAL FORMATION - DEFENSE

1943

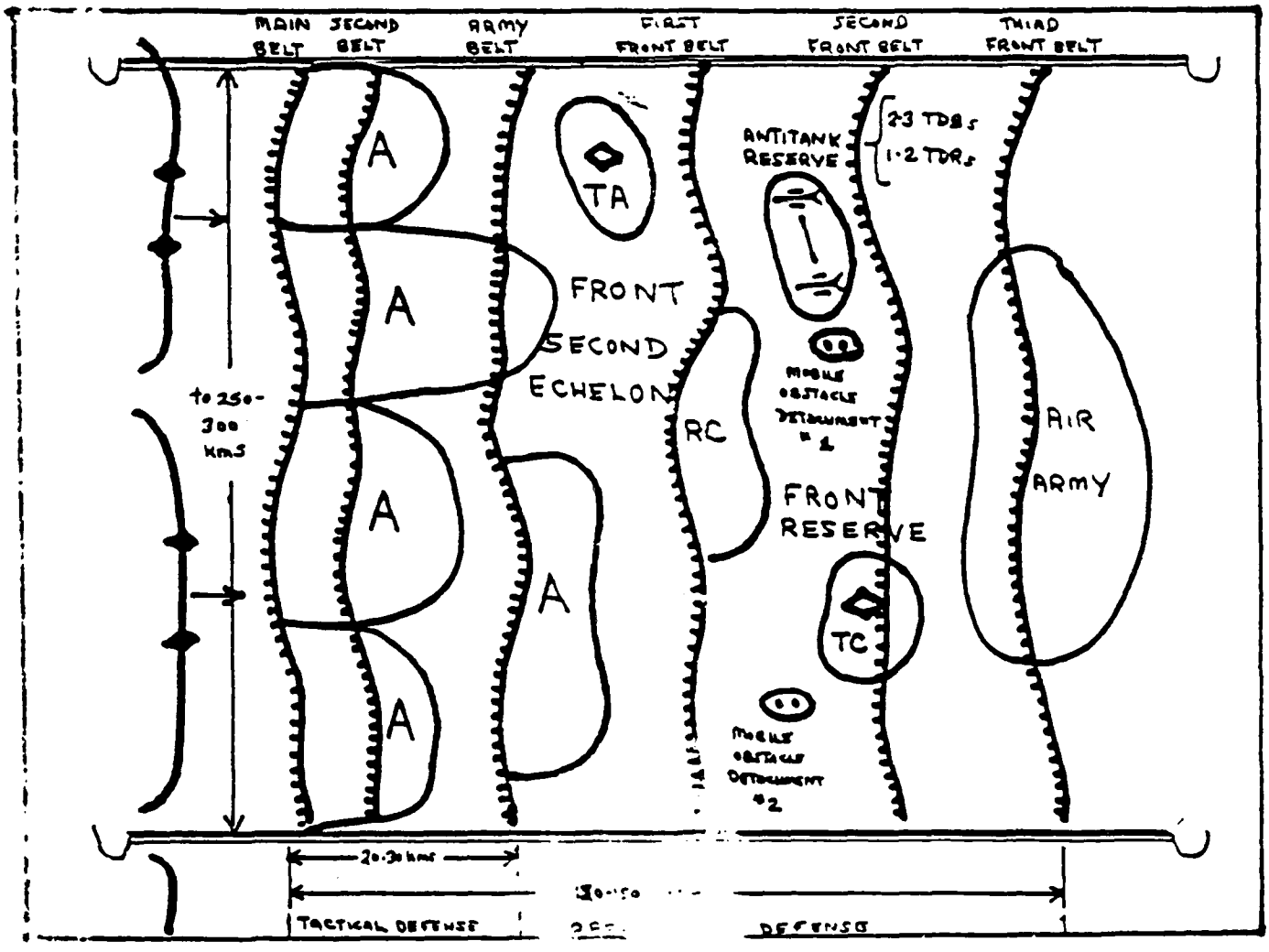
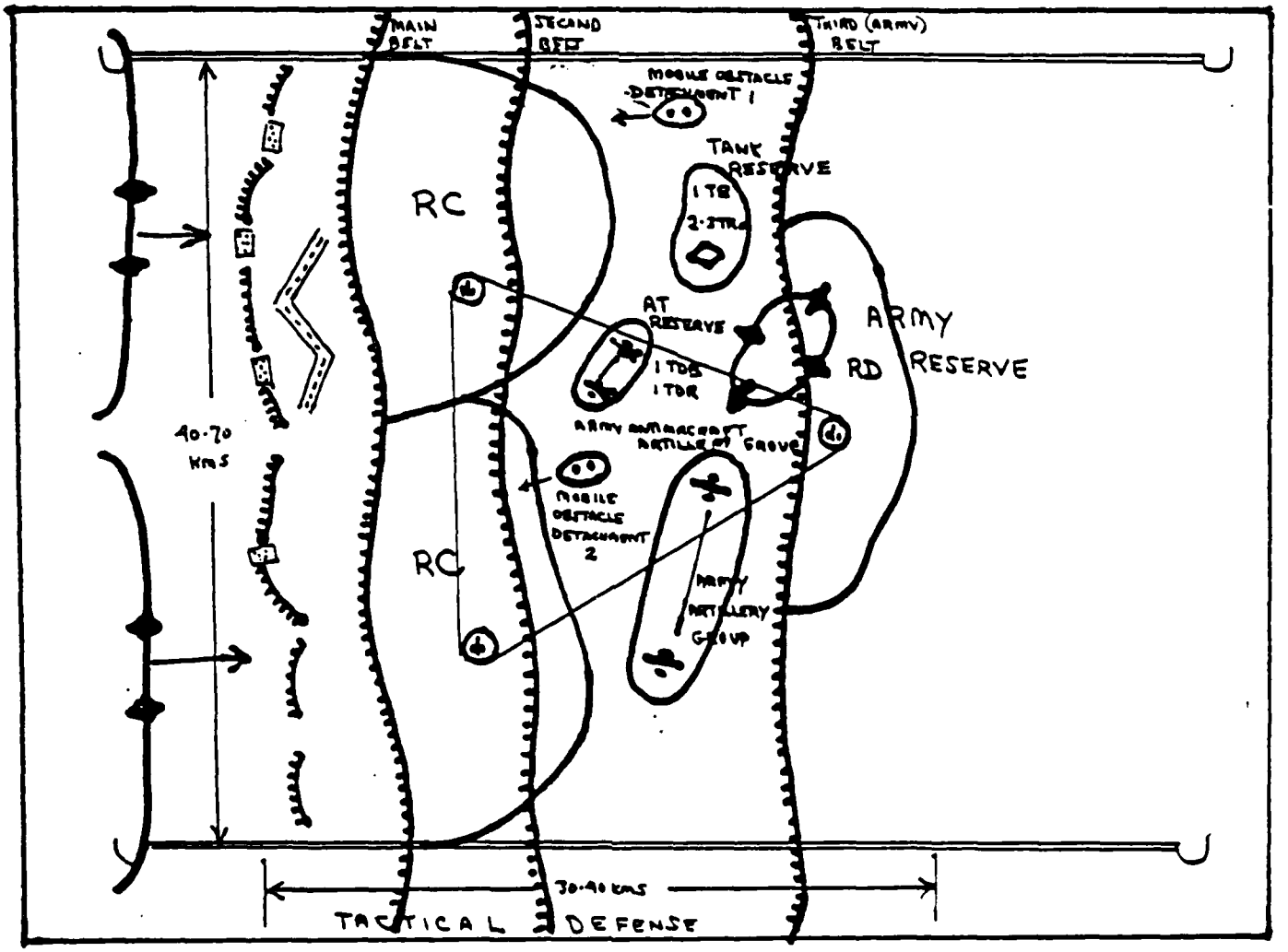


Table 66.

ARMY OPERATIONAL FORMATION - DEFENSE

1943



Resultant operational densities in main defensive sectors amounted to 7-13 kilometers per rifle divisions, 30-80 guns/mortars and 7-27 tanks/self-propelled guns per 1 kilometer of front. A front deployed in two echelons, often with a tank army in second echelon. The front reserve sometimes included tank and mechanized corps. Combined arms and tank armies defended in single echelon formation, supported by artillery and air defense artillery groups, antitank reserves, and mobile obstacle detachments. During the organization of a defense following an offensive operation a front formed in single echelon with a tank army defending on the main direction.[17]

Antitank defenses matured considerably in the second period of war, a consequence of the increased number of army antitank regions and the presence of front and army antitank reserves and mobile obstacle detachments. Antitank densities in main defense sectors grew to 20-25 guns per kilometer of front.[18] The general resilience of defenses also benefited from more extensive and sophisticated use of antiaircraft fire, engineer obstacles and artillery fire as well as from more extensive maneuvering on the part of defending units.

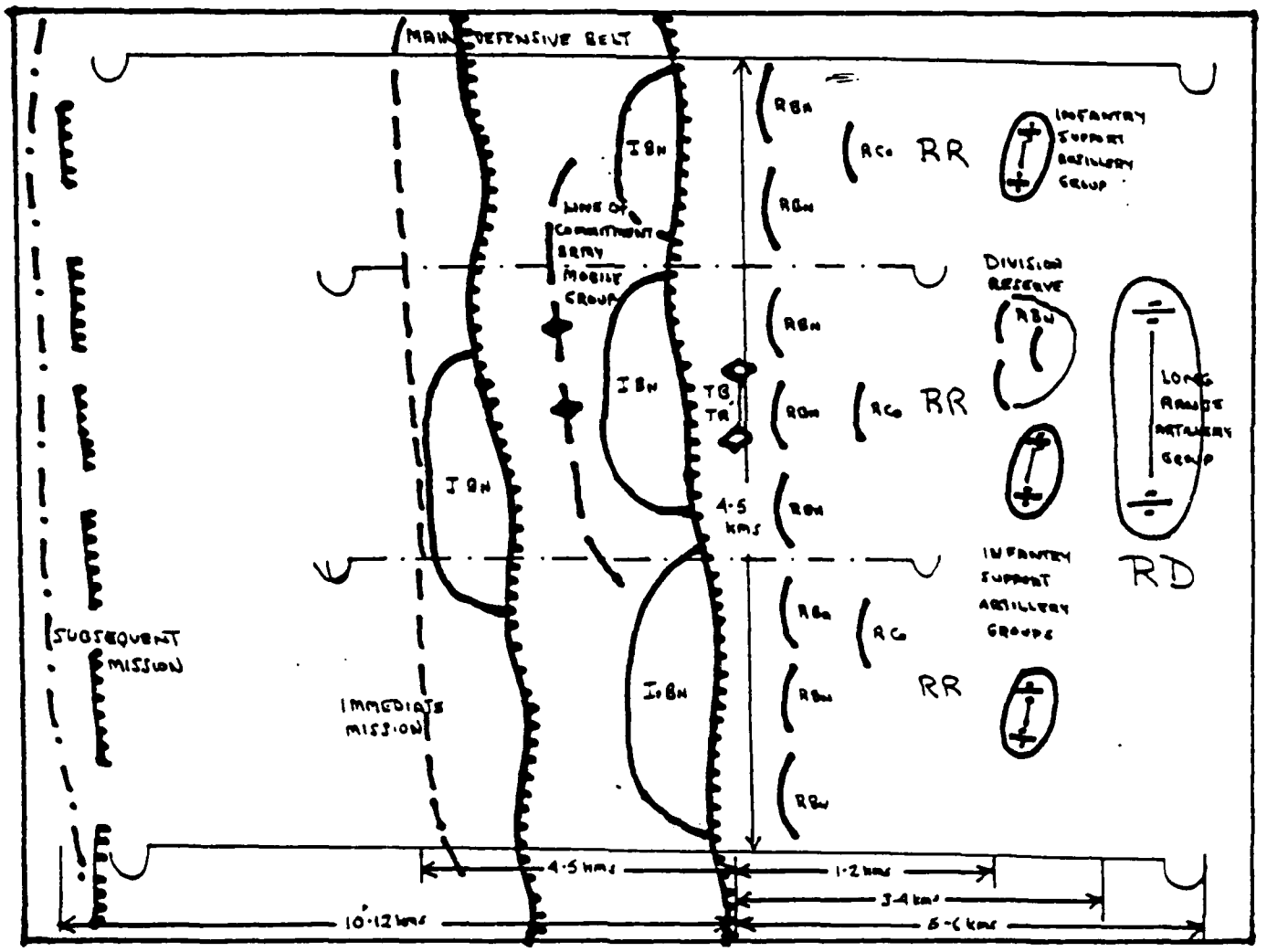
Command and control of operational forces improved with reintroduction of intermediate rifle corps command links and use of better communications security. Command posts, in particular on the offensive, were deployed closer to operating troops through use of main and reserve command posts, secondary command posts, and observation points.

During the second period of war Soviet tactics broke away from the linear forms of the earlier war years when forces were more equally distributed across the front, and Soviet commanders began to mass forces in distinct sectors as well as rely more on secret and rapid maneuver. In accordance with Order No. 306 and the 1942 Field Regulation, the Stalingrad counteroffensive was launched with rifle divisions attacking in single echelon against shallow and relatively weak enemy defenses (see table 67). A rifle division on the main direction attacked in a sector of 4-5 kilometers (regiment 1.5-2 kilometers; battalion 500-700 meters),

Table 67.

RIFLE DIVISION COMBAT FORMATION - OFFENSE

WINTER 1942 - 1943



sectors which were 1.5 to 2 times the width of attack for those units earlier in the war. Reinforced by artillery and infantry support tanks, the division was to achieve an immediate mission at a depth of 4 kilometers and a subsequent mission at a depth of 20 kilometers in the course of one day (the entire tactical depth of the defense). The depths turned out to be excessive and thus were rarely achieved. By the summer of 1943 enemy defenses were deeper and better prepared (see table 68). Thus, rifle division missions were decreased to 3-4 kilometers depth for close missions and 12-15 kilometers depth for the mission of the day. To accomplish these missions divisions were more deeply echeloned and the attack sector decreased to 3-4 kilometers with a corresponding increase in tactical densities.[19]

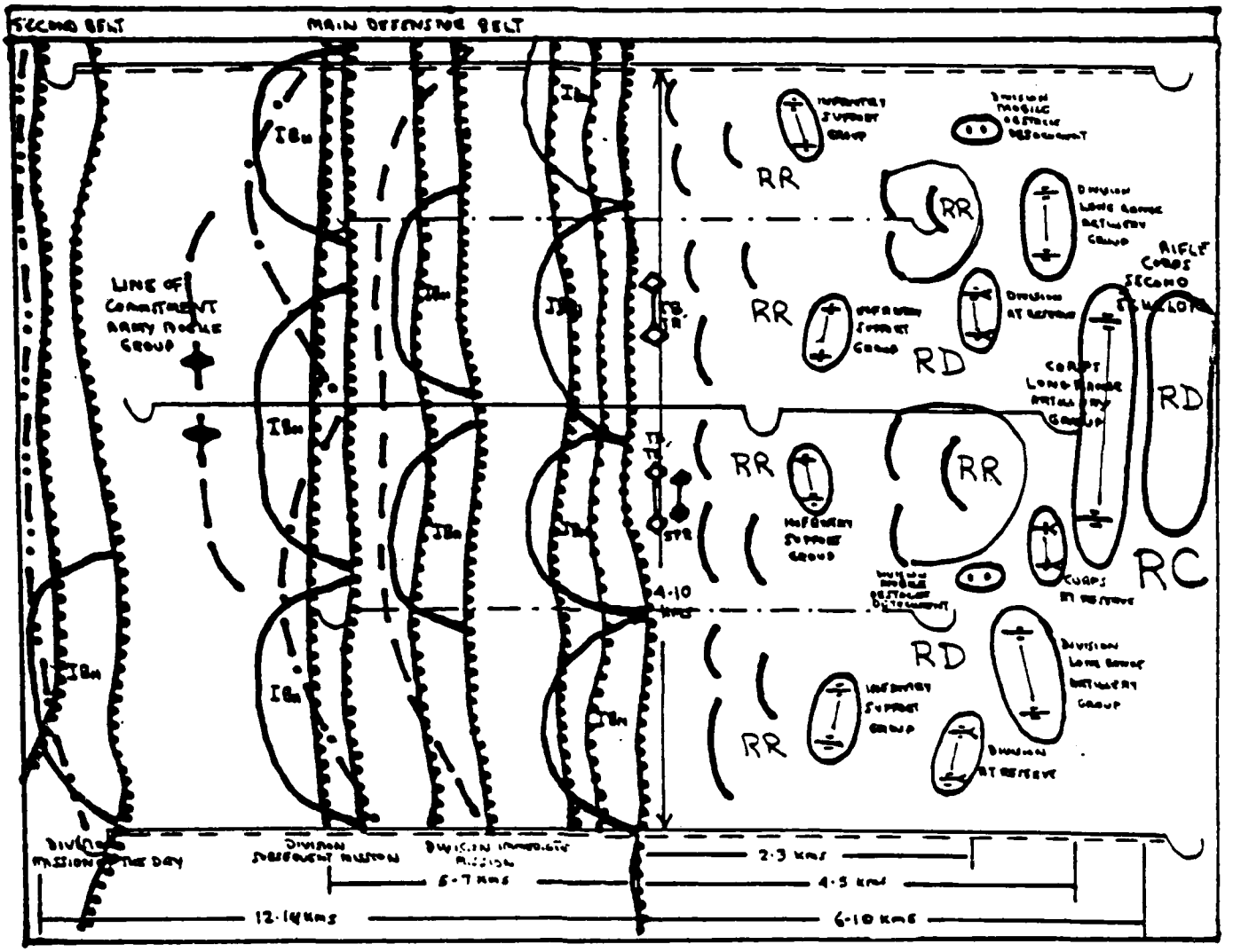
Tactical combat involved greater use of maneuver, increased reliance on night operations and more systematic reconnaissance. By the summer of 1943, divisions conducted reconnaissance using a reinforced rifle battalion from each first echelon regiment several days prior to the attack to determine enemy dispositions in the first defensive position, and to clarify enemy intentions to hold those positions (so as not to waste an artillery preparation on weakly held positions).

The tactical use of artillery, tanks and self-propelled artillery became more sophisticated. Although infantry support artillery groups (PP) of divisions supported each first echelon regiment, and long range artillery groups (DD) supported each division and rifle corps, an increasing number of infantry support artillery groups were subordinated directly to regimental commanders. The Soviets also assigned an increased number of tanks and self-propelled guns to first echelon rifle regiments operating on main attack axes. Tank brigades and regiments and self-propelled artillery regiments were echeloned in support of rifle divisions and rifle corps from the summer of 1943, to provide direct assault and covering fire for advancing infantry units. Engineer support for

Table 68.

RIFLE CORPS/DIVISION COMBAT FORMATION - OFFENSE

SUMMER - FALL 1943



rifle divisions also doubled in 1943 thus improving jumping-off positions, clearance of obstacles, and installation and removal of minefields. The cumulative effect of this increased fire and engineer support was an improved capability on the part of rifle divisions to overcome the first two enemy defensive positions. However, insufficient numbers of infantry support tanks and the reduced effectiveness of artillery fire at greater ranges left enemy third positions intact. Thus, army mobile groups often had to overcome the enemy third defensive position in the first defensive belt and the entire second defensive belt, by attack from the march. Water obstacles were crossed by makeshift means, or by forward detachments seizing bridges and crossing sites from the march.

Tactical command and control improved through greater use of radios, vehicles, aircraft and command points near the front. Armored forces often used special operational staff groups to control mobile operations at great distances. Especially important was the assembly of all participating force commanders at a single command post.

By the summer of 1943, Soviet tactical defense transitioned from its noncontiguous nature to a dense, deeply echeloned trench defense system providing greater security and more secure maneuver of forces and fire support along the front and in the depth (see tables 69-70). Widths of defensive sectors decreased while depths increased. A rifle corps deployed with two rifle divisions in the first defense belt and one rifle division in the second belt. Rifle divisions defended in one or two echelons and rifle regiments in two echelons. Each were supported by artillery groups, antitank strong points (regions), artillery antitank reserves, and mobile obstacle detachments. A first echelon rifle division (for example, at Kursk) in a main defense sector defended on a front of 8-15 kilometers to a depth of 5-6 kilometers. On secondary directions divisions occupied 25 kilometer sectors.[20]

Antitank defenses matured further with the integration of antitank strong points and regions throughout the entire depth of the defense. Separate

Table 69.

RIFLE CORPS/DIVISION COMBAT FORMATION - DEFENSE
SUMMER - FALL 1943

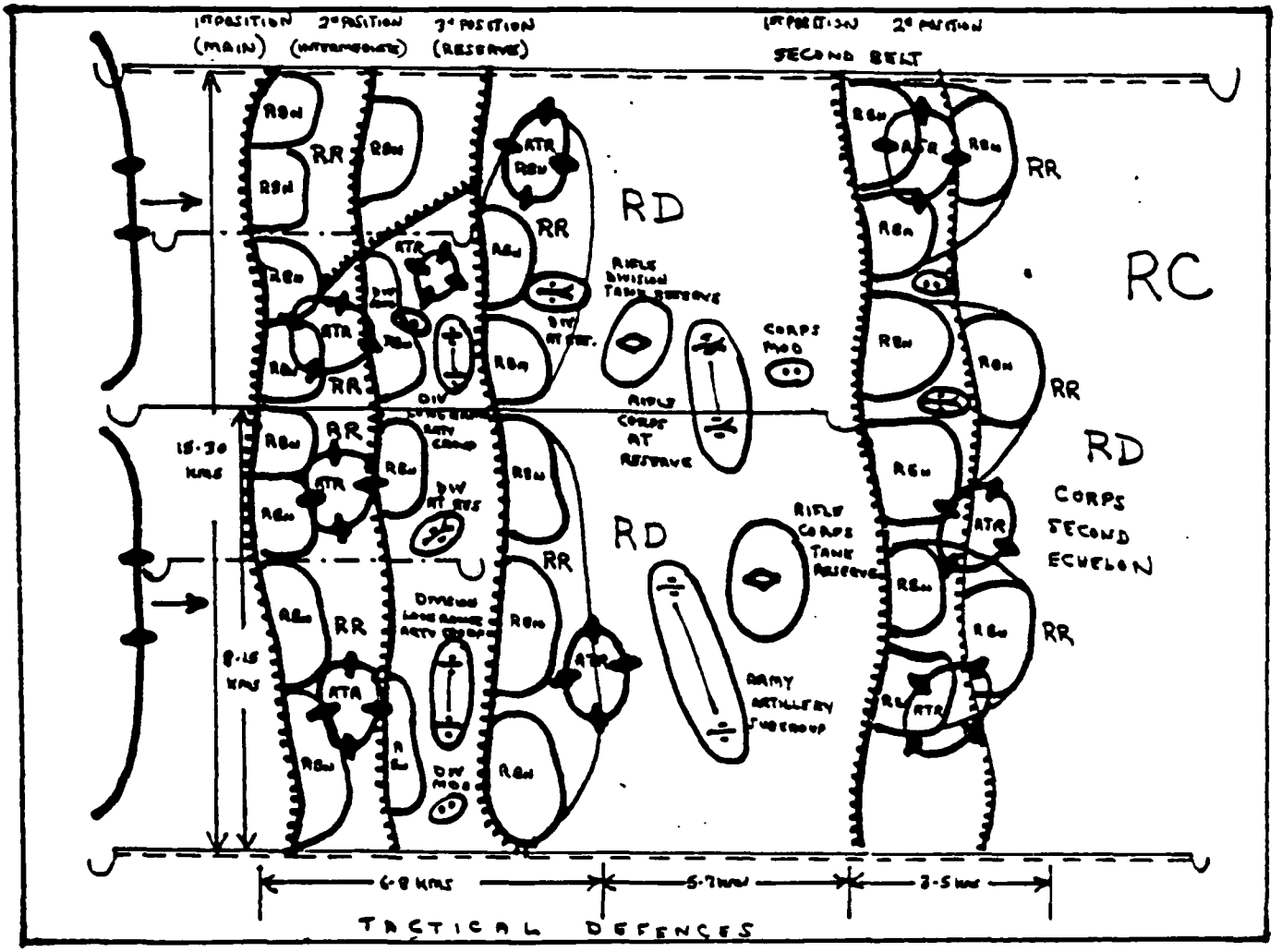
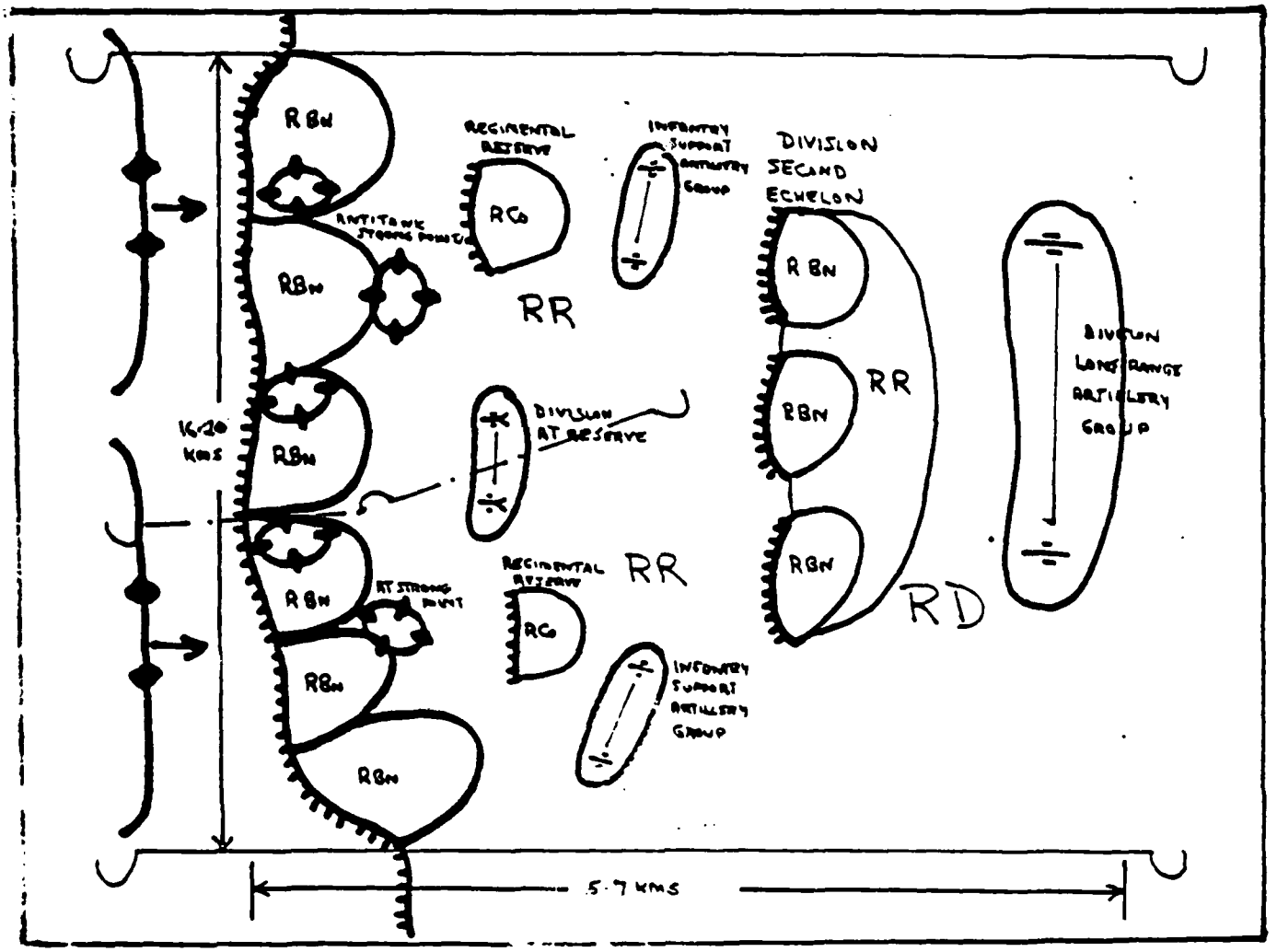


Table 70.

RIFLE DIVISION COMBAT FORMATION - DEFENSE

WINTER 1942 · 1943



tank brigades, tank regiments, and self-propelled gun regiments of the rifle division reserve delivered counterattacks or reinforced first echelon regiments by deploying as mobile or fixed firing points. Defense in general became more durable and mobile, in terms of ground units and supporting fires. Above all, integration of all types of units was more thorough. Greater force availability permitted even army and front-scale counterattacks in support of defending forces.

The transitional year of 1943 was decisive for the Soviet war effort. Seizing the strategic initiative, the Soviets would never again lose it. By year's end the force structure was virtually perfected. Only minor adjustments would occur in 1944 and 1945. Most important, Soviet commanders learned to use those forces. The occasional operational failures of 1943 produced smoother operations in 1944. The patient conduct of the strategic defenses in 1943 (Kursk) insured that ensuing years would be offensive ones, without need to resort to the strategic defense. The offensive operations of 1943 paved the way for the successive offensives of 1944 and the simultaneous offensives of 1945. Operational and tactical techniques tested and smoothed out in 1943 would be refined and perfected in 1944 and 1945. The elementary education the Red Army received in 1941-42 gave way to the secondary education of 1943. In 1944 and 1945 the Soviets would accomplish graduate and post-graduate study in the conduct of war.

Triumph of Arms (1944-45)

The Soviets opened 1944 with the first of a series of offensives which would continue unabated until wars end. The January offensives at the extremities of the eastern front against German forces around Leningrad and at Krivoi-rog and Nikopol, south of the Dnepr River, gave way in early spring to the multi-front Korsun-Shevchenkovskii encirclement operation. Unlike the case in previous springs, the Soviets ignored the thaw (razputitsa) and continued a

series of front offensive operations which liberated the right bank of the Ukraine and brought Soviet forces to the Rumanian borders by the end of April. While Soviet armies chopped away at the German northern flank, ultimately driving Finland from the war, a multi-front offensive in June 1944, using successive encirclement operations, crushed German Army Group "Center" in Belorussia and penetrated to the East Prussian borders. A subsequent blow in the Ukraine brought Soviet forces deep into Poland with bridgeheads across the Vistula River above Warsaw. By August, reflecting Soviet strategic concerns, the Soviets launched a series of offensives into and through the Balkans that drove Rumania from the war and propelled Soviet forces into Hungary and Yugoslavia while other Soviet fronts ground up German forces in the Baltic region. The Soviets opened 1945 with a series of simultaneous strategic operations from the Baltic to the Balkans. The Vistula-Oder thrust placed Soviet troops across the Oder only 40 kilometers from Berlin while in the south Soviet forces parried a German counteroffensive at Budapest and then continued the advance into Austria. After operations in February and March designed to clear German forces from the flanks of the Soviet main thrust, the Soviets commenced the titanic, almost ceremonial, struggle to conquer Berlin and liquidate the Nazis in their own lair, thus ending the Great Patriotic War. However, combat for Soviet forces was not over. In August 1945, responding to requests for assistance from their allies, the Soviets organized and conducted the largest scale strategic operation of the war (in terms of space) which crushed Japanese forces in Manchuria and won for the Soviet Union a place in subsequent negotiations for peace and postwar reconstruction in the Far East.

During the third and final period of war, the Soviets perfected their existing combat force structure and added logistical and combat support forces to better sustain offensive operations. A steady stream of modern equipment and weapons flowed into the Soviet inventory, much of which would provide a base for

the postwar equipping of the armed forces. Combined arms armies, rifle corps and rifle divisions became more refined on their equipment and occasional attachments of additional artillery, tanks and self-propelled guns became customary in the last year of the war (see tables 71-72). Many of these attachments (tank and self-propelled gun regiments and battalions) were integrated fully into post war unit TOEs. In the last two years of war, the Soviets tailored units more extensively to suit the terrain over which they operated and the enemy they opposed. Armored forces became more sophisticated with the addition of self-propelled artillery units, additional anti-tank artillery, and greater engineer support to tank and mechanized corps and tank armies (see table 73). The Cavalry-Mechanized Group* became a regular feature of operations in terrain and weather conditions which inhibited operations of regular tank armies. Combat support units increased in size as the Soviets formed artillery breakthrough corps and larger, often mechanized, engineer formations to support strategic operations.

Techniques for the creative use of this elaborate force structure appeared in a number of important regulations issued in 1944. These regulations, derived from those of 1942, incorporated the lessons of 1943 into a comprehensive view on the nature of operations and the role of all types of forces in those operations. The Field Regulation of 1944 (PU-44), without specifically resurrecting the earlier watchword of "deep operations," nevertheless stated "the regulations conceive of tank action as that of a group of direct support for infantry and cavalry and as an echelon for exploiting successes into the strategic depths with the support of powerful aviation."[21] The 1944 regulation's concept of operations and its assignment of tasks to units marked the full realization of the aims of the 1936 Field Regulation. A central theme of the 1944 Regulation was the achievement of tactical penetrations and the exploitation of those penetrations by mobile groups into the operational (and sometimes strategic)

*comprised usually of one mechanized or tank corps and one cavalry corps

Table 71. Rifle Forces, 1944-1945

August 1944 Rifle Army
- 3 rifle corps
  - 7-12 rifle divisions
- 1 artillery brigade
  - 2 gun artillery regiments
- 1 tank destroyer regiment
- 1 antiaircraft artillery regiment
- 1 mortar regiment
- 1 engineer/sapper brigade
- 1 tank regiment
- 1 signal regiment
- 1 tank or mechanized corps (optional)

strength: 80,000-120,000 men
300-460 tanks
1700-2000 guns/mortars
30-225 SP guns

January 1945 Rifle Army
- 3 rifle corps
  - 7-12 rifle divisions
- 1-2 gun artillery brigades
  - 2 gun artillery regiments
- 1 tank destroyer brigade
- 1 antiaircraft artillery division
- 1 mortar regiment
- 1 engineer/sapper brigade
- 1 signal regiment
- 2-3 tank brigades or regiments
- 1 tank or mechanized corps (attached)

strength: 80,000-100,000 men
300-460 tanks
1900-2500 guns/mortars
100-225 SP guns

1944 Rifle Corps
- 3 rifle divisions
- 1 artillery brigade (guards Corps)
- 1 artillery regiment (regular corps)
- 1 self propelled artillery regiment
- 1 guards mortar regiment
- 1 antiaircraft artillery battalion
- 1 sapper battalion
- 1 signal battalion

strength: 20,000-30,000 men

December 1944 Rifle Division
- 3 rifle regiments (4 X 76mm, 12 X 45mm)
- 1 artillery brigade
  - 1 gun artillery regiment (32 X 76mm)
  - 1 howitzer artillery regiment (20 X 122mm)
  - 1 mortar regiment (20 X 120mm)
- 1 antiaircraft artillery battalion (12 X 37mm) (in guards divisions)
- 1 tank destroyer battalion (18 X 45, 57, 76mm)
- 1 sapper battalion
- 1 signal company
- 1 reconnaissance company

strength: 11,706 men*
64 guns
127 mortars
12 AA guns
54 AT guns

June 1945 Rifle Division
- 3 rifle regiments (4 X 76mm, 12 X 45mm)
- 1 artillery brigade
  - 1 gun artillery regiment (20 X 76mm)
  - 1 howitzer artillery regiment (20 X 122mm)
  - 1 mortar regiment (120mm)
- 1 self propelled artillery battalion (16 X SU-76)
- 1 antiaircraft artillery battalion (12 X 37mm)
- 1 tank destroyer battalion
- 1 sapper battalion
- 1 signal company
- 1 reconnaissance company

*Rifle division strengths are by TOE - Actual strengths much smaller

June 1945 Rifle Division

3 rifle regiments (4 X 76mm, 12 X 45mm)
1 artillery brigade
  1 gun artillery regiment (20 X 76mm)
  1 howitzer artillery regiment (20 X 122mm)
  1 mortar regiment (120mm)
1 self propelled artillery battalion (16 X SU-76)
1 antiaircraft arillery battalion (12 X 37mm)
1 tank destroyer battalion
1 sapper battalion
1 signal company
1 reconnaissance company

strength: 11,780 men
52 guns
16 SP guns
136 mortars
12 AA guns
66 AT guns

Table 72. Cavalry Forces, 1944-1945

1945 Cavalry Corps

3 cavalry divisions
2 tank regiments
1 reconnaissance battalion
1 tank destroyer regiment
1 mortar regiment
1 guards mortar battalion
1 self propelled artillery regiment
1 engineer regiment
1 signal battalion

strength: 18,700 men
103 tanks, SP guns
268 guns/mortars
48 AT guns
34 AA guns

1945 Cavalry Division

3 cavalry regiments
(6 X 76mm, 6 X 45mm)
1 artillery regiment
1 reconnaissance battalion
1 antiaircraft squadron
1 engineer squadron
1 signal squadron

strength: 4,700 men

Table 73. Mechanized and Tank Forces, 1944-1945

December 1944 Tank Corps

3 tank brigades (65 tanks each)
1 motorized rifle brigade
1 mortar regiment
1 antiaircraft artillery regiment
1 light self propelled artillery regiment (SU-76)
1 med self propelled artillery regiment (SU-85/122)
1 heavy self propelled artillery regiment (SU-152)
(in some corps)
1 light artillery regiment
1 guards mortar battalion
1 motorcycle battalion
1 transport company
2 repair companies (artillery,tank)
1 medical battalion (May 1944)
1 sapper battalion
1 signal battalion
1 aviation company
1 chemical defense company

strength: 12,010 men
207 tanks
63 SP guns
182 guns/mortars
8 multiple rocket launchers

August 1945 Tank Corps

3 tank brigades (65 tanks each)
1 motorized rifle brigade
1 mortar regiment
1 antiaircraft artillery regiment
1 light self propelled artillery regiment (SU-76)
1 med self propelled artillery regiment (SU-100)
1 light artillery regiment
1 heavy tank regiment
1 guards mortar battalion
1 motorcycle battalion
1 transport company
2 repair companies (artillery, tank)
1 medical battalion
1 sapper battalion
1 chemical defense company
1 aviation company

strength: 11,788 men
207 tanks T-34
21 tanks IS-2
42 SP guns
182 guns/mortars
8 multiple rocket launchers

December 1944 Mechanized Corps

3 mechanized brigades
  3 motorized rifle battalions
  1 tank regiment (35 tanks)
1 tank brigade (65 tanks)
1 light self propelled artillery regiment (SU-76)
1 med self propelled artillery regiment (SU-85)
1 heavy self propelled artillery regiment (SU-152)
    (in some corps)
1 mortar regiment
1 antiaircraft artillery regiment
1 guards mortar battalion
1 motorcycle battalion
1 signal battalion
1 sapper, engineer battalion
1 medical battalion
1 transport company
1 repair, reconstruction company

strength: 16,442 men
  183 tanks
  63 SP guns
  234 guns/mortars
  8 multiple rocket launchers

August 1944 Tank Army

2 tank corps
1 mechanized corps (optional)
1 motorcycle regiment
1 light artillery brigade
  2 gun artillery regiments (76mm)
  1 gun artillery regiment (100mm)
1 self propelled artillery brigade
  3 self propelled artillery battalions (SU-76)
  1 machine gun battalion
  1 antiaircraft machine gun company
2 mortar regiments
1 guards mortar regiment
1 antiaircraft artillery div
  4 antiaircraft art rgmts
1 motorized engineer brigade
  2 motorized engineer bns
  1 pontoon bridge battalion
1 signal regiment
1 aviation communications rgt
1 transport regiment
2 repair/reconstruction battalions

strength: 50,000 men
  1,000 tanks, SP guns
  850 guns/mortars

depth of the defense. Other regulations and instructions on specific aspects of military operations supplemented the main 1944 Field Regulation.

Soviet military doctrine changed little in substance in the second and third periods of war. The theoretical Marxist-Leninist basis remained intact as the political focus for doctrinal analysis. While major military leaders constructively pondered all aspects of military art and tested the results of their analysis on the battlefield, Stalin retained his dominant position at the "commanding heights" of doctrine. He firmly made all high level decisions and contributed to Marxism-Leninism-Stalinism by his articulation of the "permanent operating factors" that governed the course and outcome of war in general. These factors listed below reflected Lenin's broad view of the nature of war and the classic Marxist-Leninist laws of war.

- the stability of the rear
- the morale of the army
- the quantity and quality of divisions
- the armament of the army
- the organizing ability of the command personnel[22]

The permanent operating factors, Stalin's legacy to military doctrine, persisted into the postwar years as a veneer over Soviet military thought until critiqued (though never rejected) in the post-Stalinist years. Soviet military doctrine, although not significantly changing, took on a more international Socialist character as the Soviet Army began incorporating forces from future Socialist states into its ranks (Polish armies, Bulgarian armies, Czech and Rumanian forces) thus presaging the future military cooperation of Warsaw Pact states.

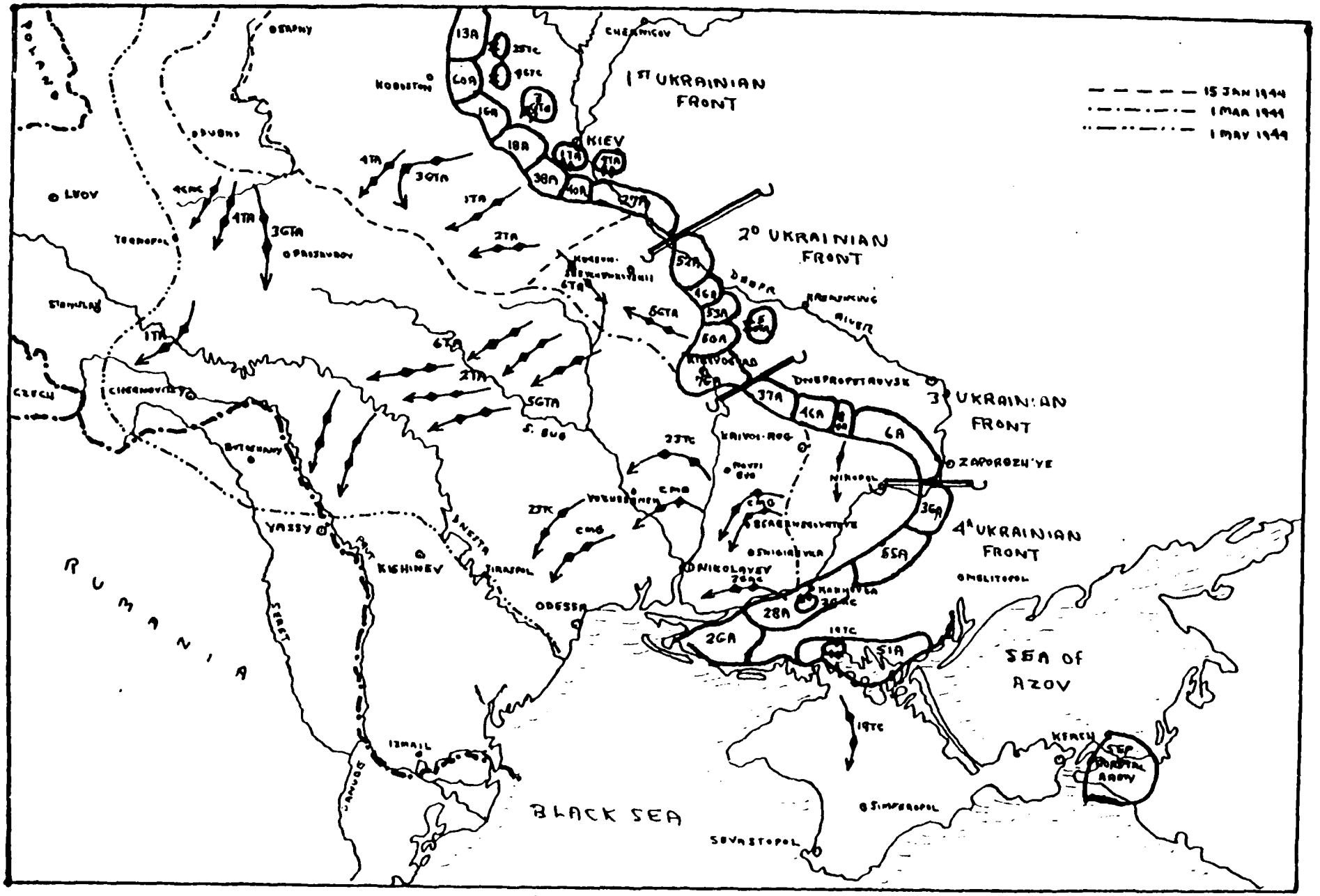
Soviet strategy in the third period of war grew in scope and ambitiousness, and took on a more subtle political flavor. With the strategic initiative firmly in Soviet hands, strategic operations became totally offensive, more grandiose, and incessant. While earlier operations occurred on separate strategic directions, by 1944 they took place along the entire strategic front,

successively in 1944 and simultaneously in 1945. By war's end operations of groups of fronts involved from 100-200 divisions, up to 2.5 million men, 20,000-40,000 guns/mortars, 3,000-6,000 tanks/self-propelled guns and 2,000-7,500 aircraft. These operations had decisive objectives (usually the encirclement and destruction of large enemy groups), huge scope, high maneuverability, and significant military-political or economic results. They spanned frontages of from 450-1400 kilometers (4400 kilometers in Manchuria) and thrust to a depth of 500-600 kilometers while destroying as many as 50-100 enemy divisions.[23] Often the political and economic goal of the operation was as important as the military goal and these goals effected the nature of military operations (operations against Finland, the drive into the Balkans, and the Manchurian offensive).

Strategic offensive operations sought to achieve multiple penetrations of the enemy front and subsequent rapid encirclement of enemy forces (see Maps 31-39). The Korsan-Shevchenkovskii operation and subsequent operations on the right bank of the Ukraine encircled large German groups. A series of successive encirclement operations in Belorussia in June-July 1944 destroyed German Army Group Center and the Yassy-Kishinev operation encircled and destroyed Rumanian forces and German units in Rumania. The East Prussian and East Pomeranian operations pinned large German forces against the Baltic Sea. The pace of offensive operations increased in accordance with their increased depth to achieve a rate of advance of 15-20 kilometers per day, with armored units advancing at even higher rates (up to 100 kilometers per day).

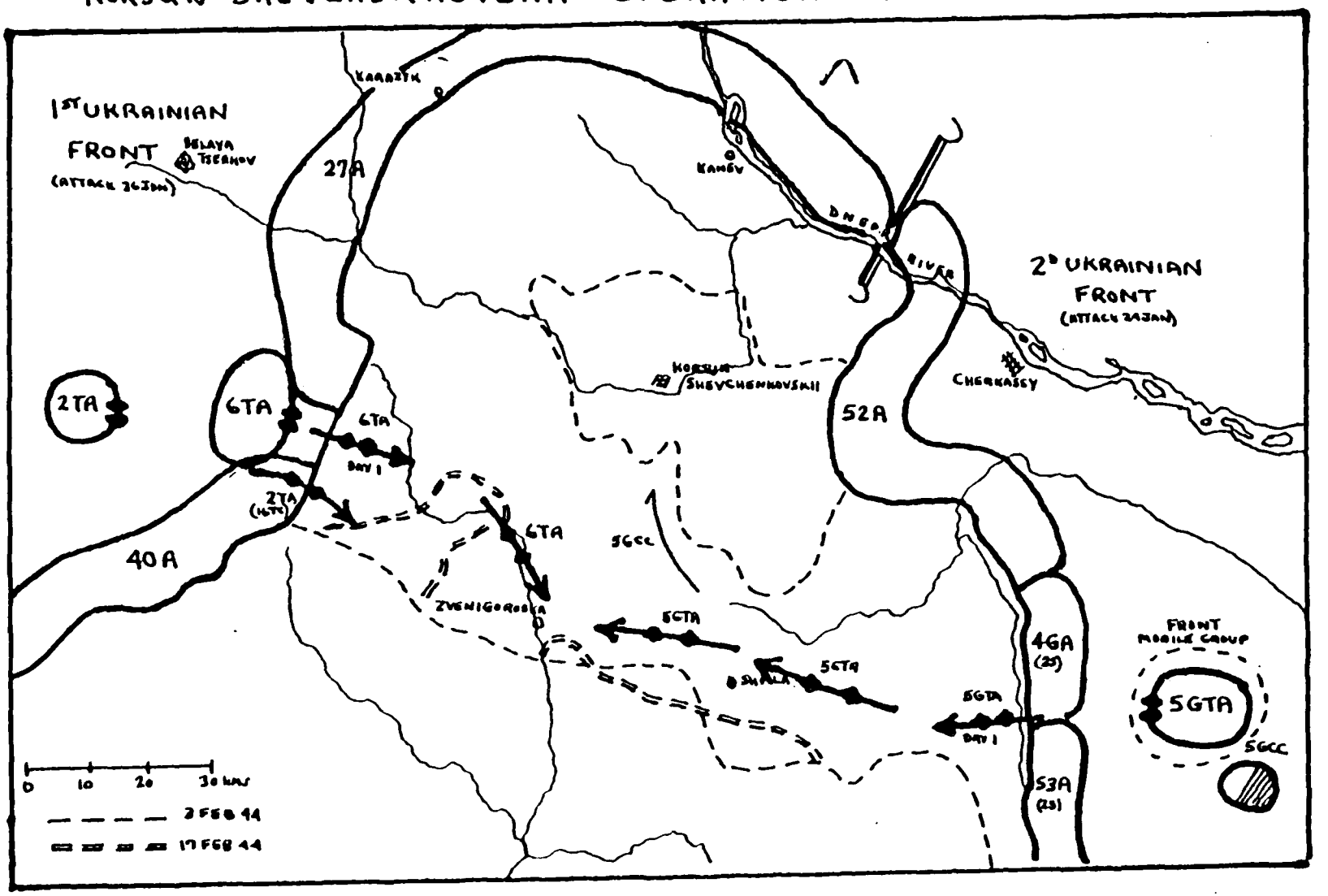
Soviet operational art matured with the refinement of operational techniques developed in 1943 and the creation of new techniques in the last two years of war. Front operations, an integral part of strategic operations, were conducted to depths of 150-300 kilometers to destroy 16-18 enemy divisions. Armies within the fronts attacked to depths of 100-150 kilometers to destroy enemy operational forces (3-6 divisions).[24] During a front operation each army

RIGHT BANK OF THE UKRAINE. OPERATIONS 31 DEC 1993 · 1 MAY 1944



SOVIET OPERATIONAL FORMATION

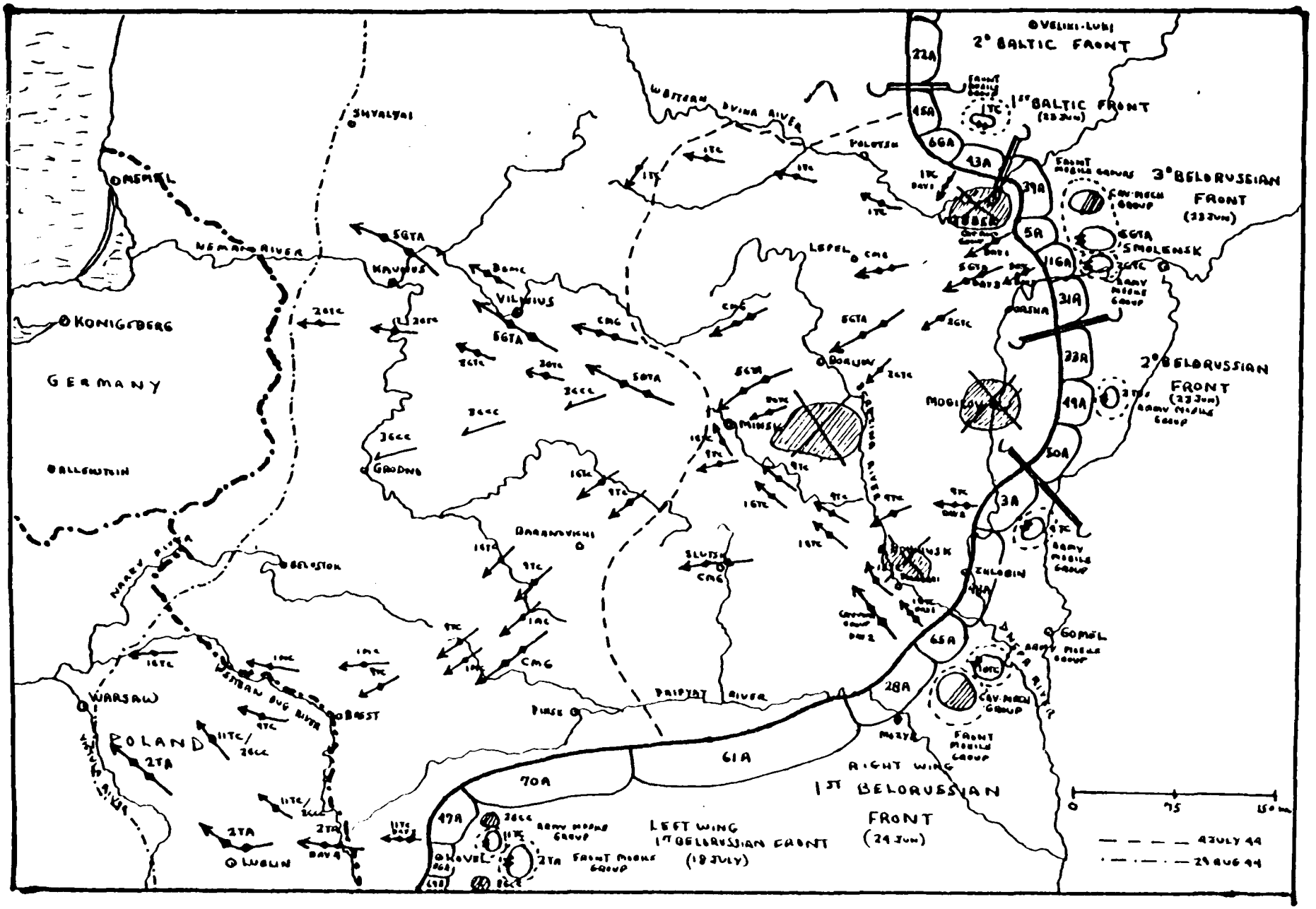
KORSUN SHEVCHENKOVSKII OPERATION 24 JAN - 17 FEB 1944



Map 33

SOVIET OPERATIONAL FORMATION

BELORUSSIAN OPERATION 23 JUN - 29 AUG 1944



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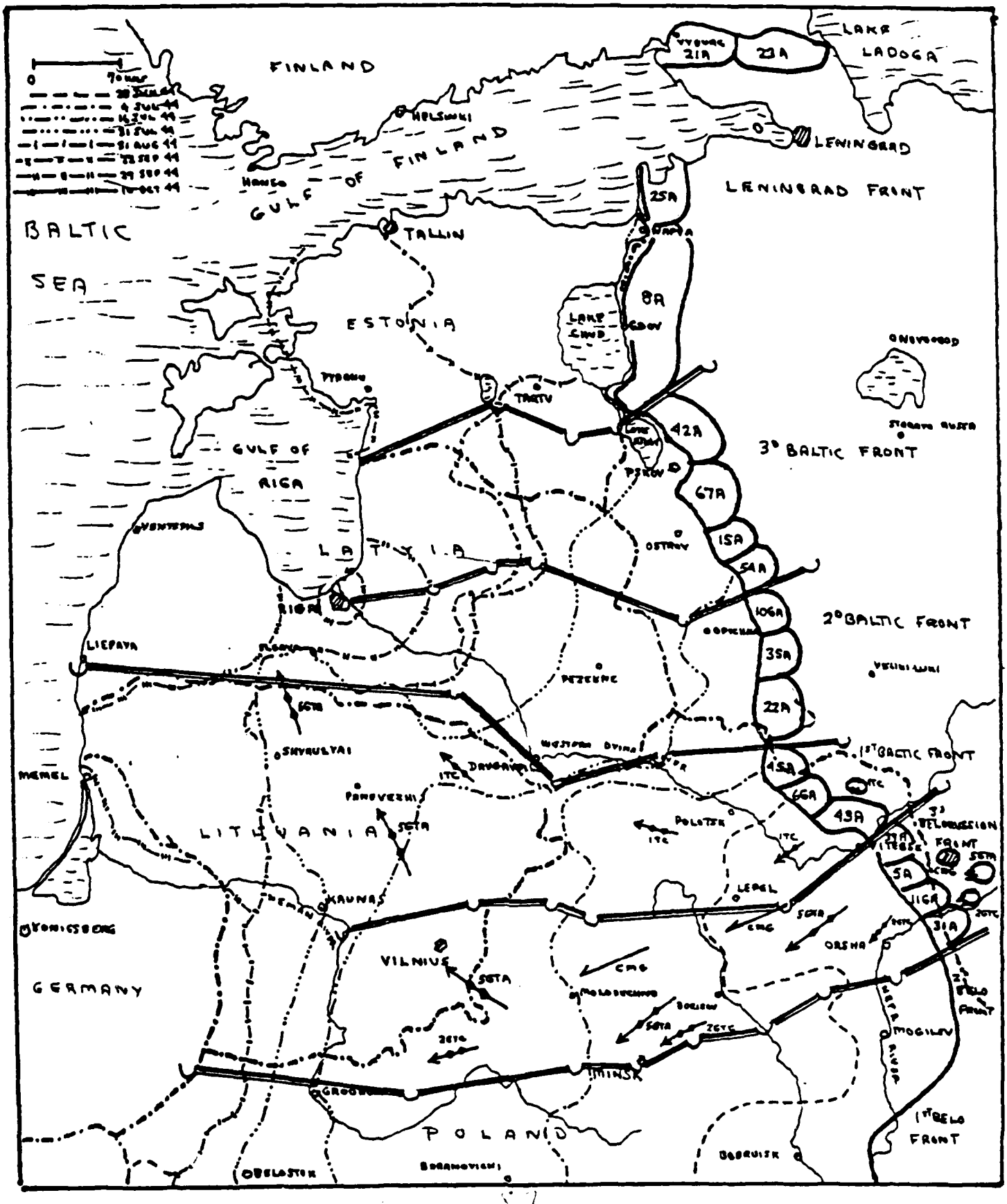
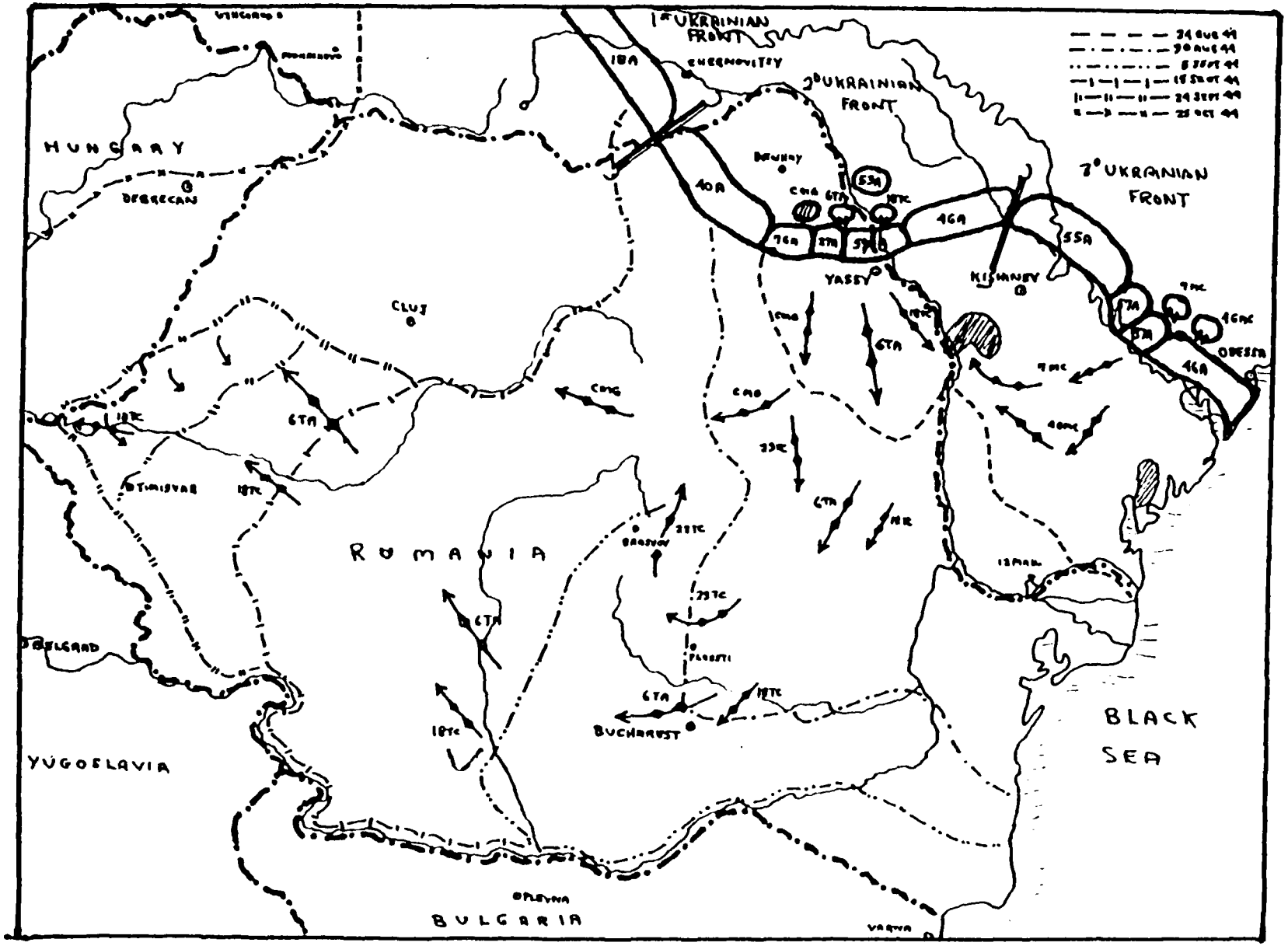
SOVIET OPERATIONAL FORMATION

BALTIC OPERATIONS JULY - OCTOBER 1944



Map 35

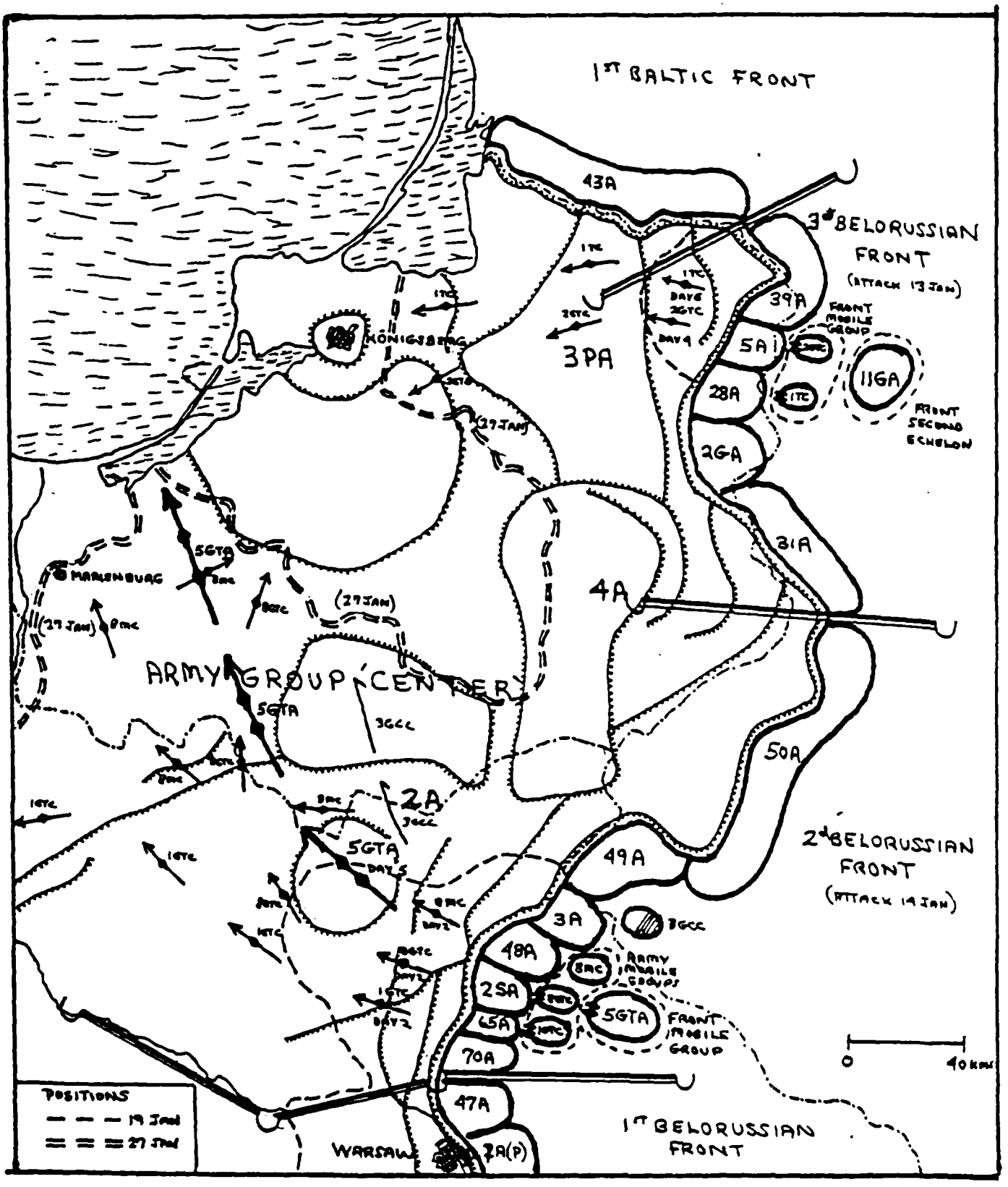
RUMANIAN OPERATION 20 AUG - 25 OCT 1944



MAP 36

SOVIET OPERATIONAL FORMATION

EAST PRUSSIAN OPERATION 13-27 JANUARY 1945



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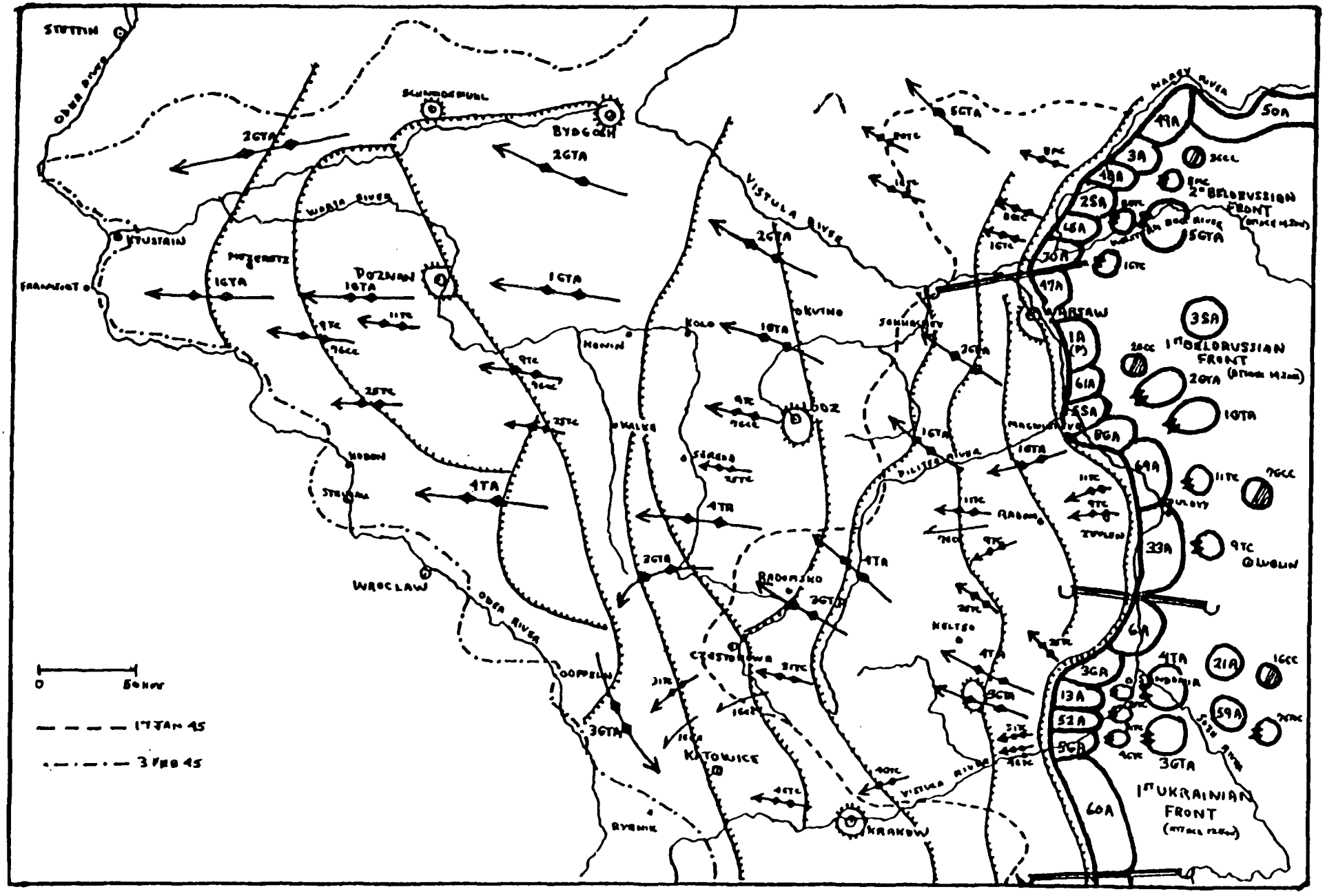
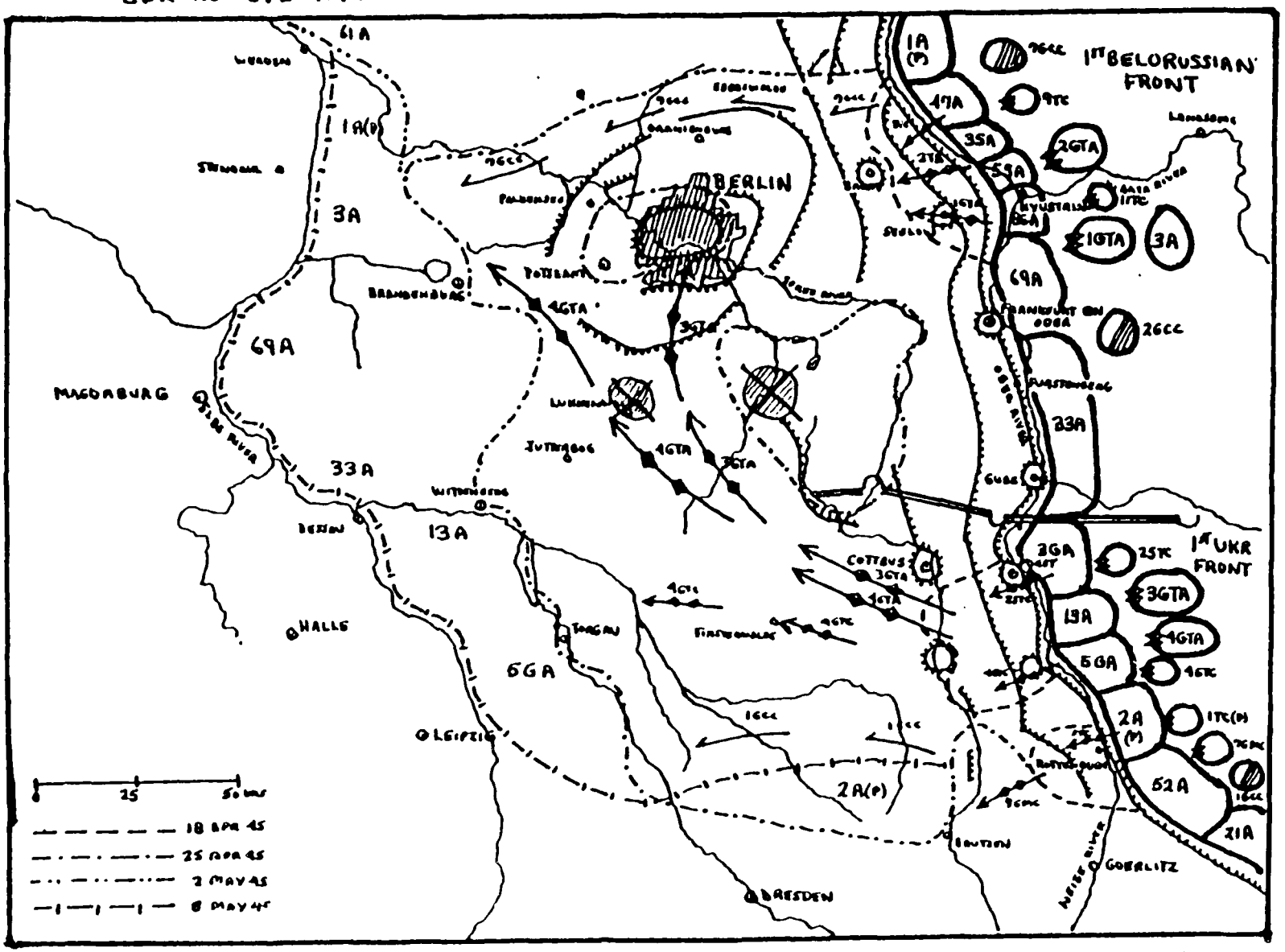
SOVIET OPERATIONAL FORMATION

VISTULA-ODER OPERATION 12 JAN - 3 FEB 1945

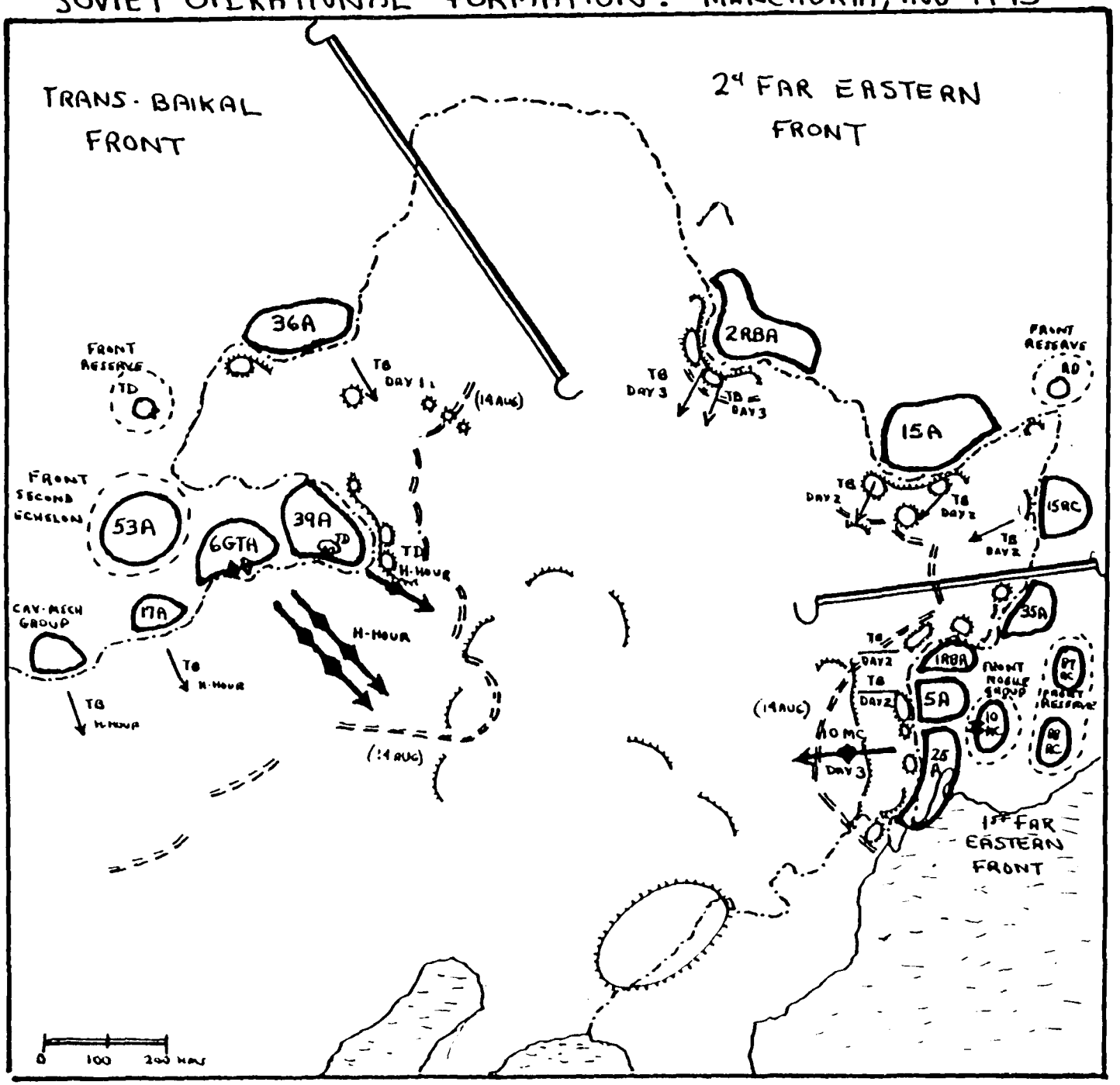


SOVIET OPERATIONAL FORMATION

BERLIN OPERATION 16 APR - 8 MAY 1945



SOVIET OPERATIONAL FORMATION: MANCHURIA, AUG 1945



conducted one or two successive operations. The form of front operations progressed. While in the first two periods of war, front offensives were carried out by several armies attacking on separate directions, in the third period of war, because of increased men and weapons, fronts conducted frontal strikes against the enemy center and one or both of the enemy flanks to encircle and destroy multiple enemy groups (Belorussia 1944). Multiple fronts cooperated to achieve larger encirclements. In instances where encirclement operations were impossible or infeasible, fronts supported by heavy fires delivered one or two frontal blows to a great depth, cut up enemy forces, and destroyed them piecemeal (Vistula-Oder 1945). Armies customarily struck one blow against the enemy center or along the enemy flank and advanced into the depth of the defense to cooperate with other armies in encircling enemy forces. By the third period of the war fronts could launch, in addition to a main attack, a strong secondary attack and one or two supporting attacks.

The increased strength of fronts and greater concentration of forces permitted greater operational densities and increased superiority over the enemy. Major operations achieved operational densities of 200-250 guns/mortars and 70-85 tanks/self-propelled guns per 1 kilometer of frontage and superiorities were attained amounting to 3-5x1 in manpower, 6-8x1 in tanks and artillery and 3-5x1 in combat aircraft.[25] Operational formations also increased in depth and complexity (see tables 74-75). The front operational formation include a strong first echelon; a second echelon of one or sometimes two combined armies; a mobile group of one, two or sometimes three tank armies, or in the absence of a tank army, one or two tank corps or one or two cavalry-mechanized groups; strong reserves of all types; and mobile obstacle detachments. The army operational formation was similar, with one or two tank or mechanized corps functioning as mobile groups and with army artillery and antiaircraft groups in support. The depth of the front operational formation reached 70-100 kilometers and that of the army 30 kilometers. Operational formations were flexible and tailored

Table 94.

FRONT OPERATIONAL FORMATION 1944-1945

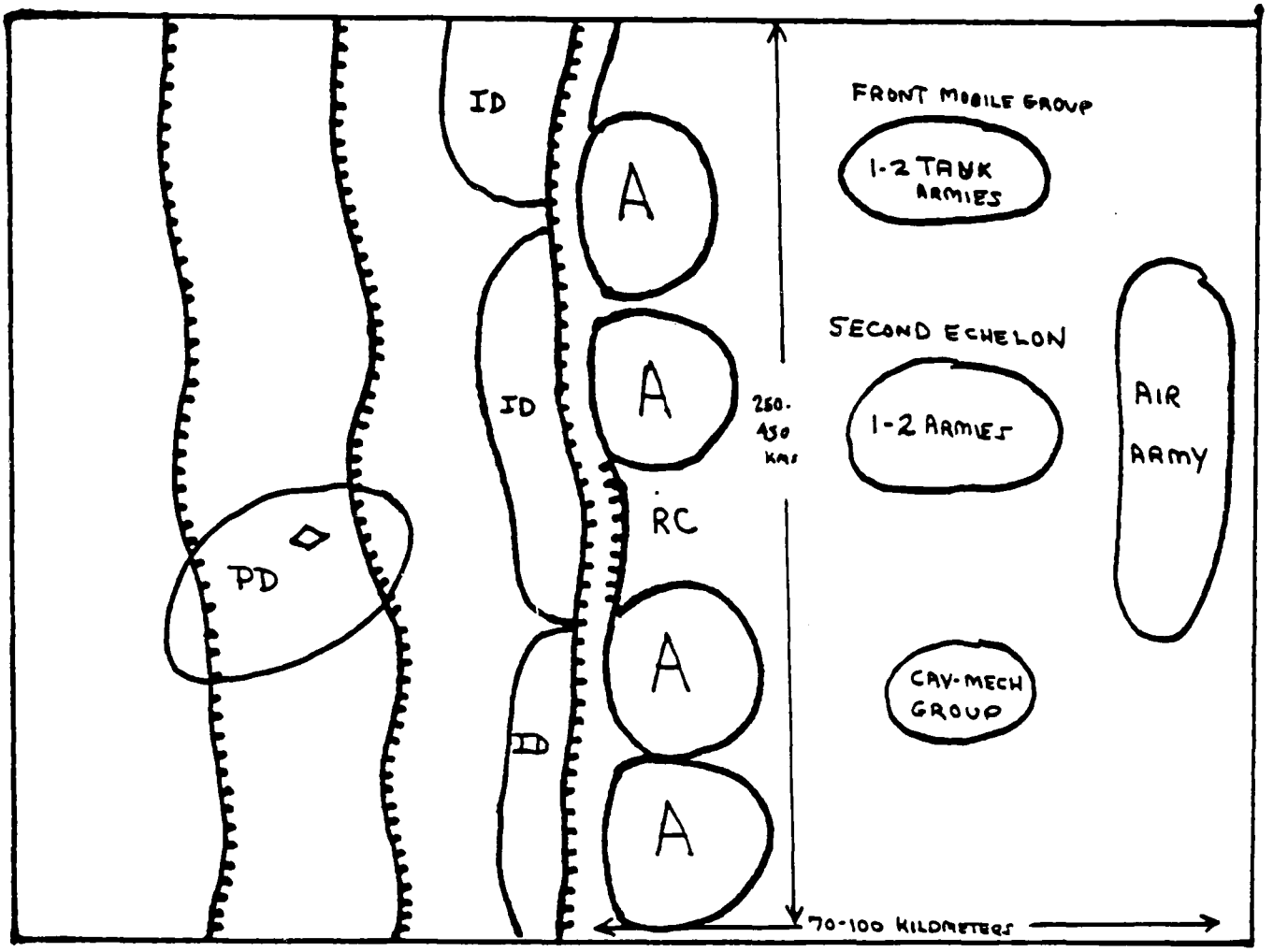
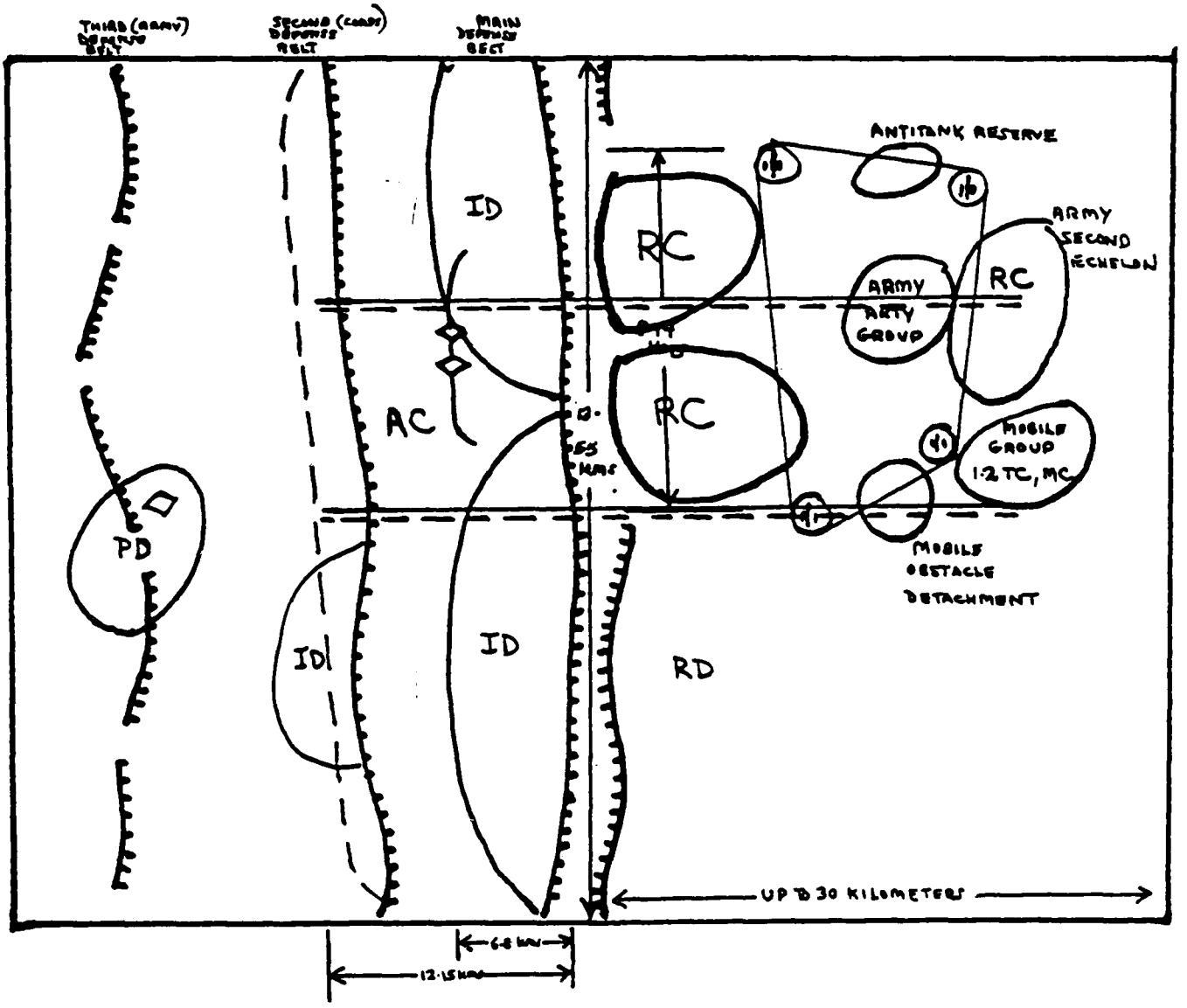


Table 75.

ARMY OPERATIONAL FORMATION 1945



IMMEDIATE MISSION - 12-15 kms

SUBSEQUENT MISSION - 100-180 kms

— — — — LINE OF SECOND ECHELON COMMITMENT

LINE OF MOBILE GROUP COMMITMENT

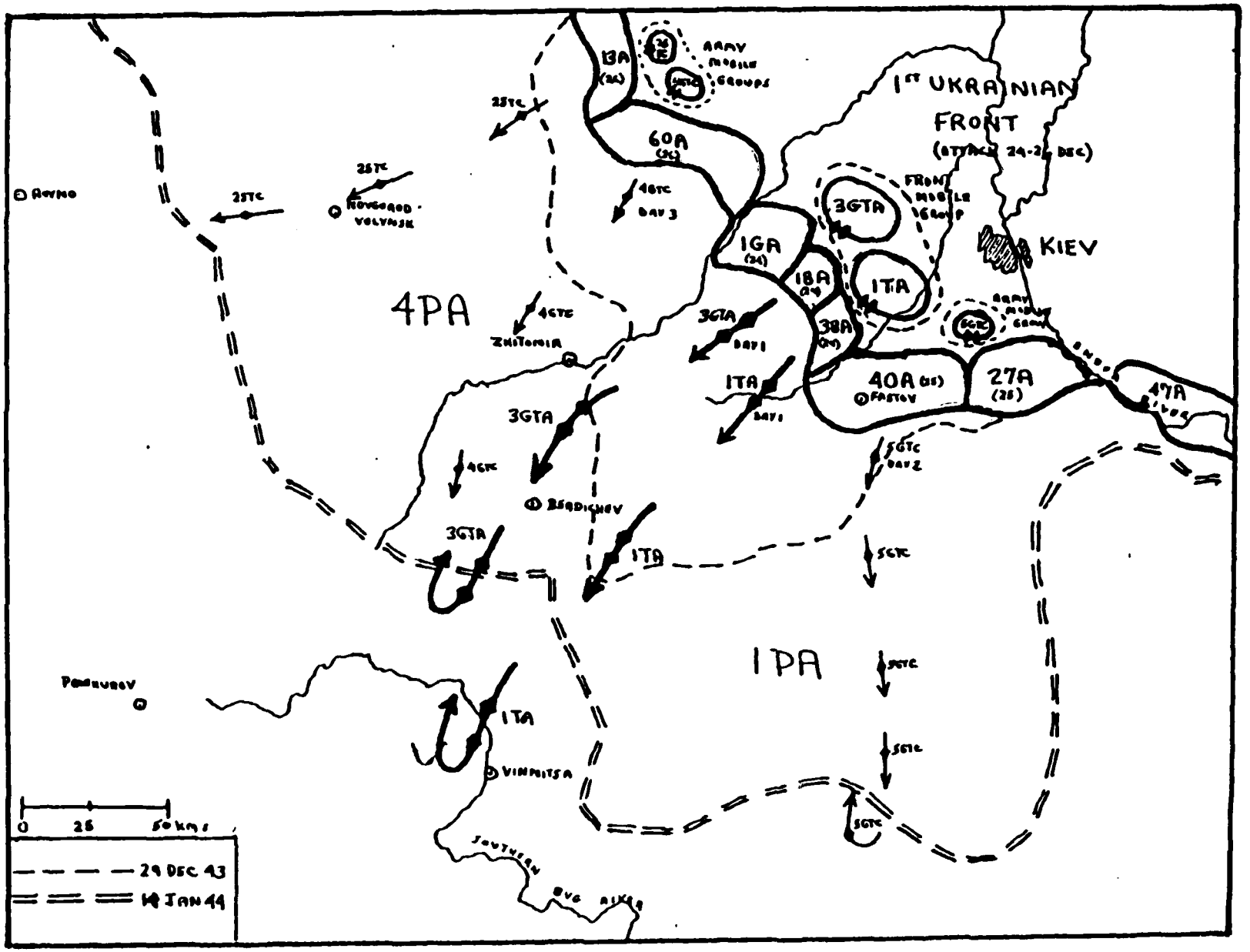
the existing situation (see Maps 40-51). Thus, in Manchuria, two of three fronts attacked in single echelon formation as did the majority of armies. Front air armies (generally one) supported front and army operations.

Offensive operations began with penetration operations which by 1944 were conducted using shock groups, heavy artillery concentrations, artillery and air offensives, and a greater number of infantry support tanks. By 1945, infantry support tanks were often attached in company to regiment strength to individual rifle battalions. As a rule, the Soviets overcame the enemy's first defensive belt on the first day of operations and the second belt on the second or third day. By the third period of war, penetration was followed by encirclement of the enemy and creation of an inner encircling line to choke those entrapped, and an outer encircling line to hold off enemy relief attempts (Korsun-Shevchenkovskii). By mid-1944, the outer encircling line continued the offensive while encircled enemy forces were destroyed. (Belorussia, Yassy-Kishinev). Operational pursuit became important, for it determined the ultimate depth of the operation. While earlier in the war pursuit rates amounted to 8-12 kilometers per day on distinct directions in close contact with the enemy, by the third period pursuit occurred on a wide front, at day or night, on separate directions and at high tempos. Tank armies and tank corps led the pursuit along parallel routes separated by 60-80 kilometers or more from the main rifle forces. Strong tank-heavy task-organized forward detachments* led the pursuit and also the advance of main rifle forces and contributed to maintaining the high momentum of the advance. By August 1945, forward detachments, in some instances, initiated offensive operations to preempt or disrupt enemy defenses before they solidified.[26] Aviation units supported all elements of the pursuing force. The numerous river crossings required in pursuit operations were performed by the decisive advance of forward detachments or by careful planning and conduct of river crossing operations. Offensive operations, in

*Distinct from advanced guards, these units led the advance with the mission of seizing key terrain features to facilitate the advance of main force units. Later, these detachments also disrupted enemy defenses before they jelled. Tank armies and tank corps used tank corps and tank brigades as forward detachments. Rifle corps used tank brigades and rifle divisions used reinforced rifle battalions, self propelled artillery battalions or tank brigades.

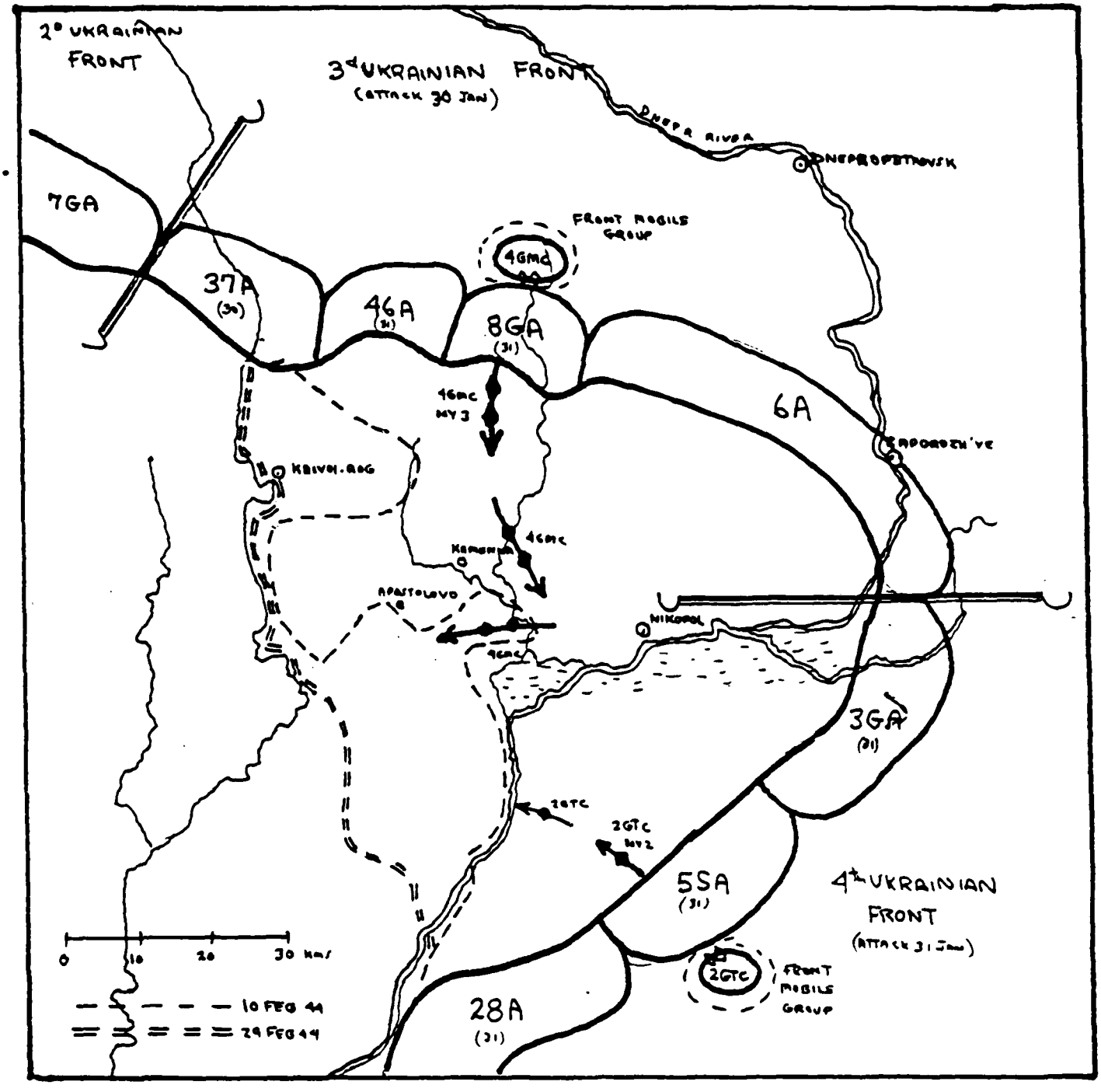
SOVIET OPERATIONAL FORMATION

ZHITOMIR - BERDICHEV OPERATION 24 DEC 43 - 14 JAN 44



Map 41 SOVIET OPERATIONAL FORMATION

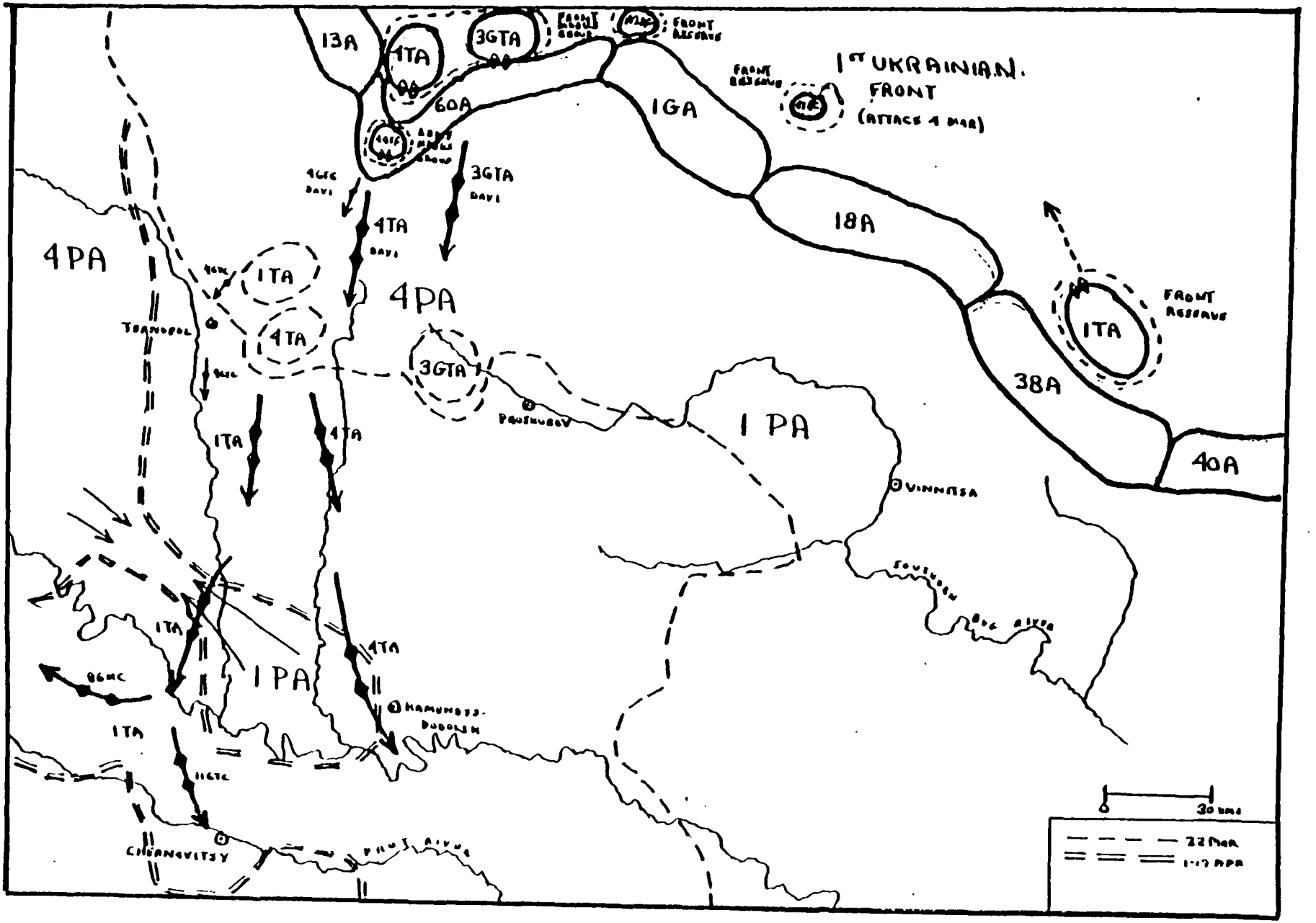
NIKOPOL - KRIVOI-ROG OPERATION 30 JAN - 29 FEB 1944



Map 42

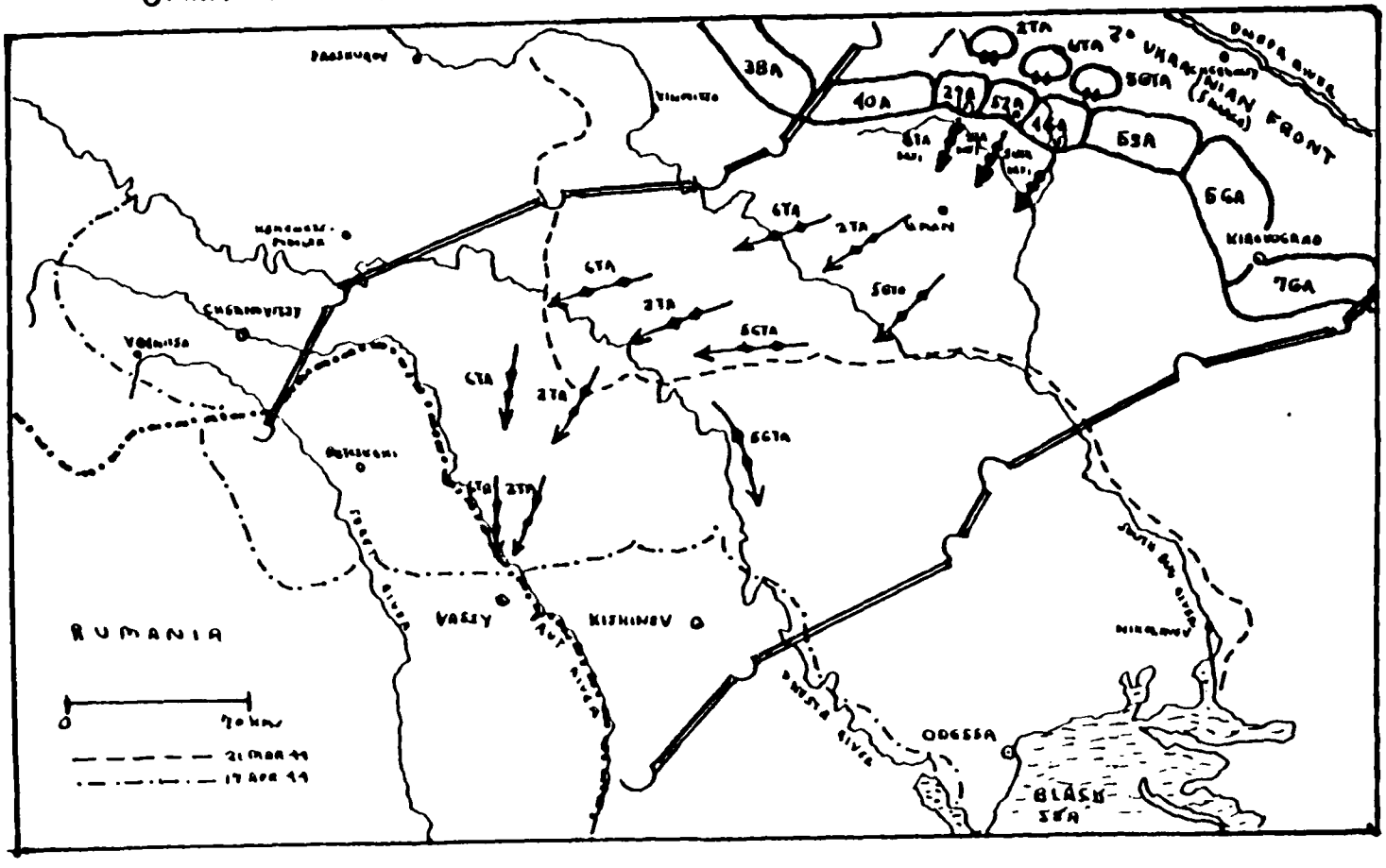
SOVIET OPERATIONAL FORMATION

PROSKUROV - CHERNOVITSY OPERATION 4 MAR - 17 APR 1944



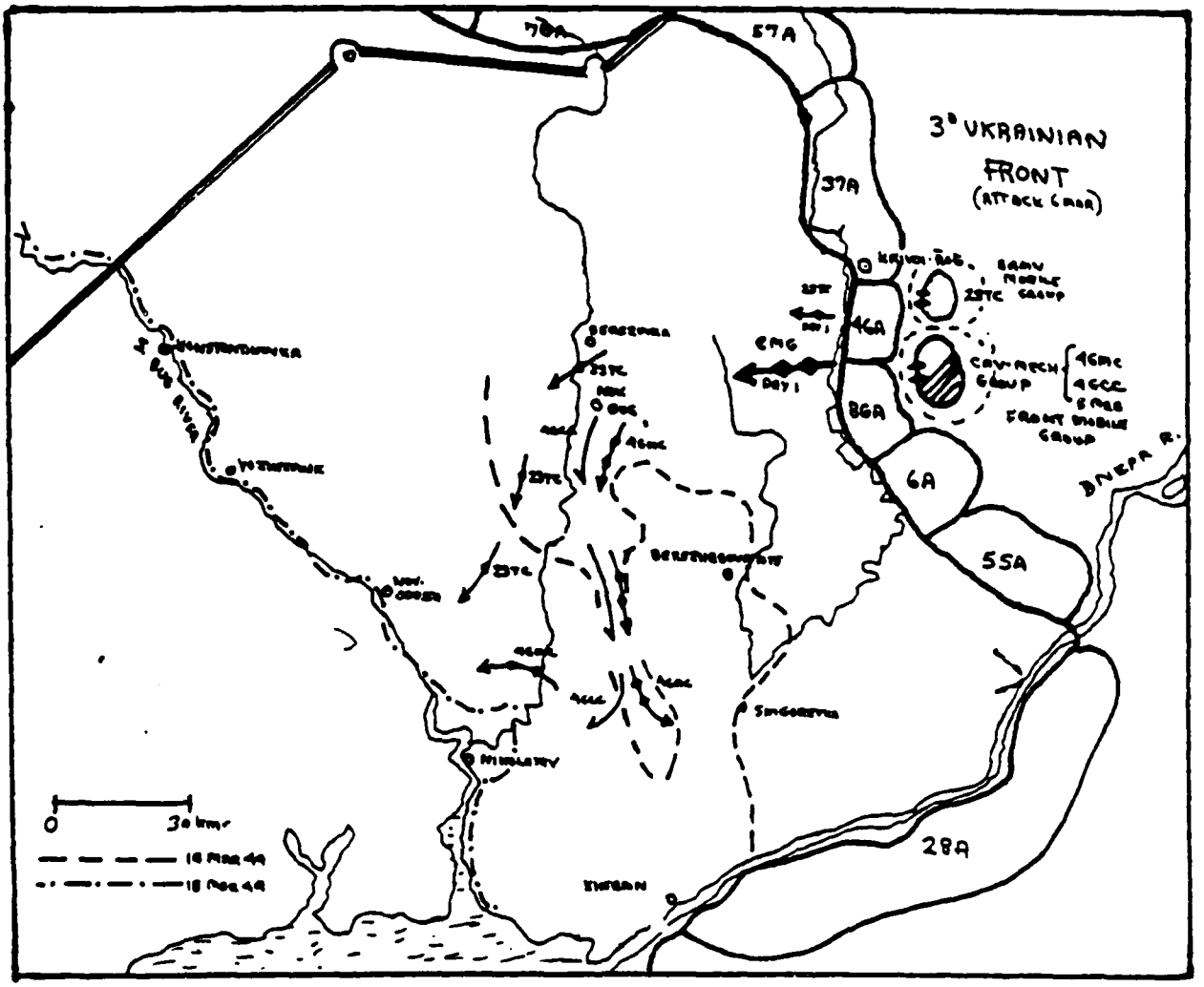
MAP 13 SOVIET OPERATIONAL FORMATION

UMAN - BOTOSHANI OPERATION 5 MAR - 17 APR 1944



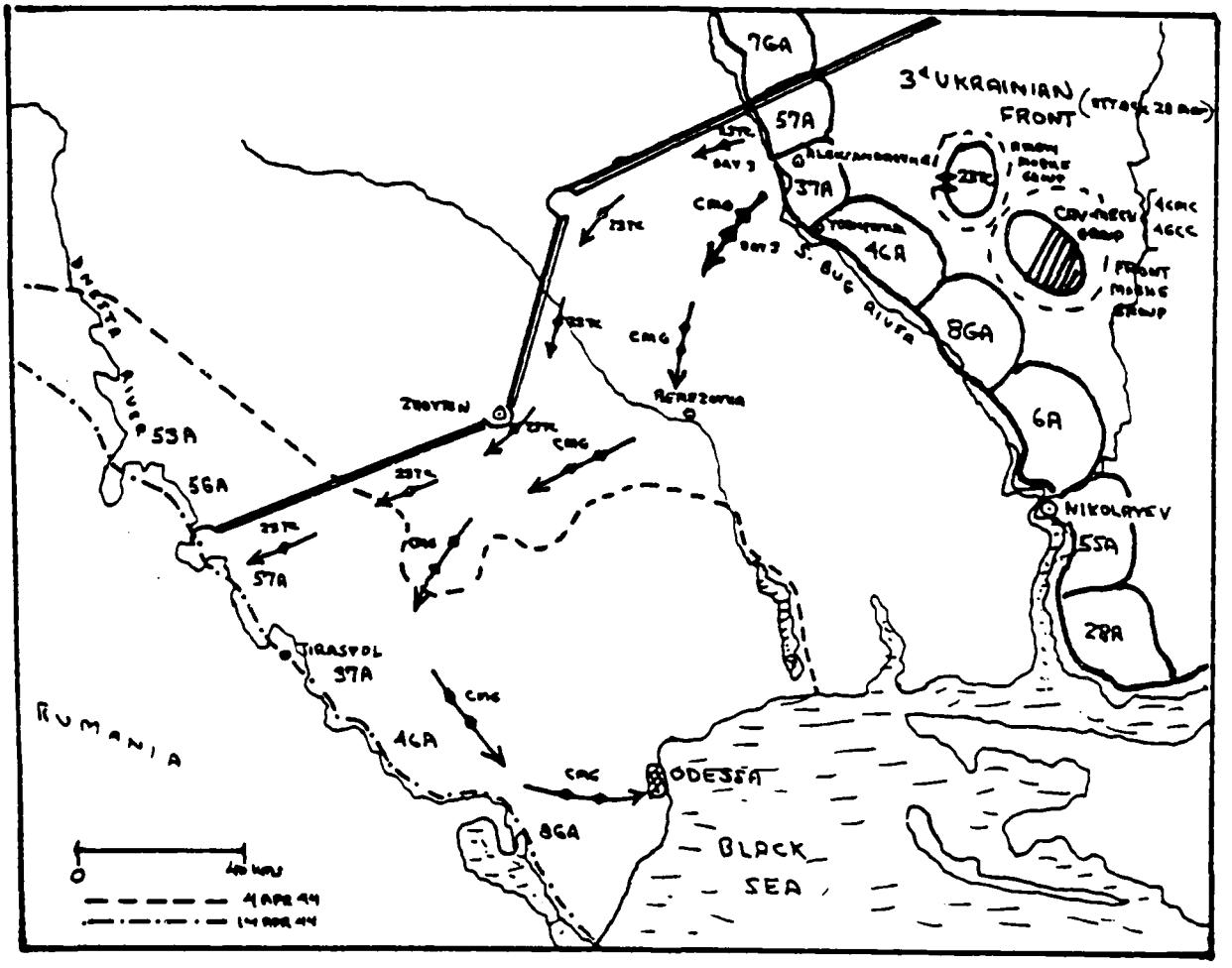
SOVIET OPERATIONAL FORMATION

BEREZHEGOVATO - SNIGIREVKA OPERATION 6-18 MAR 1944



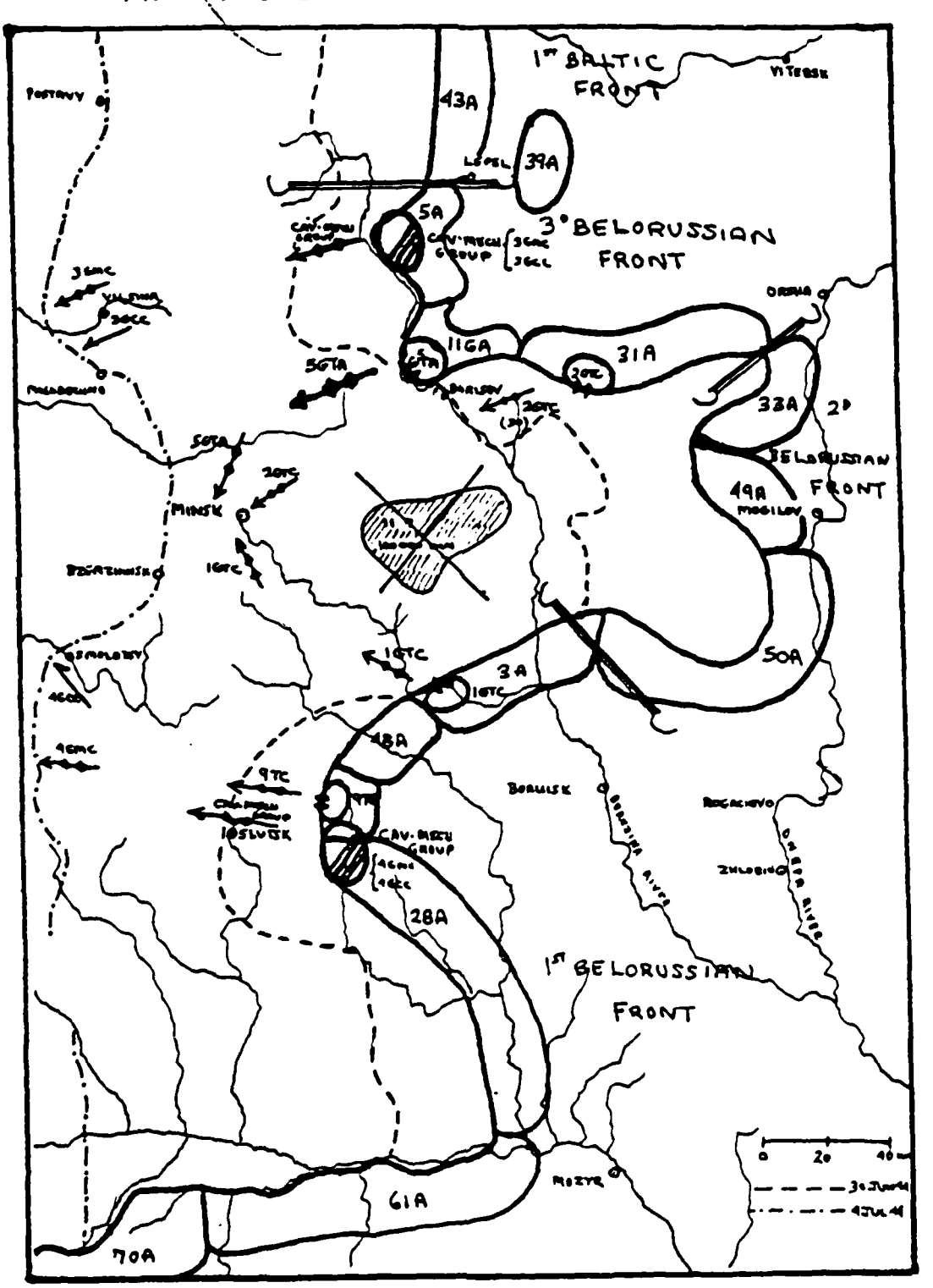
SOVIET OPERATIONAL FORMATION

ODESSA OPERATION 26 MAR - 14 APR 1944



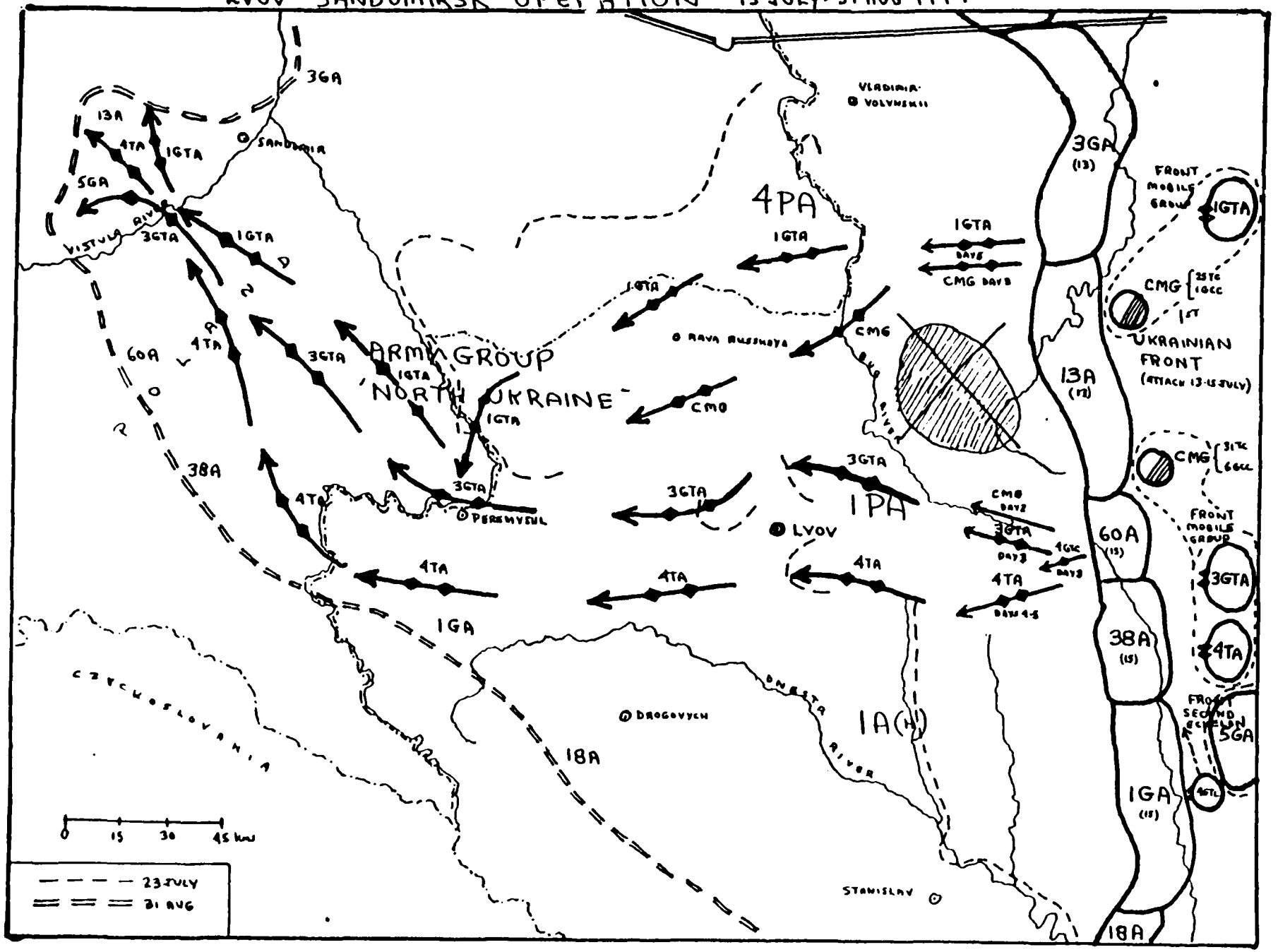
Map 40 SOVIET OPERATIONAL FORMATION

MINSK OPERATION 29 JUN - 4 JUL 1944



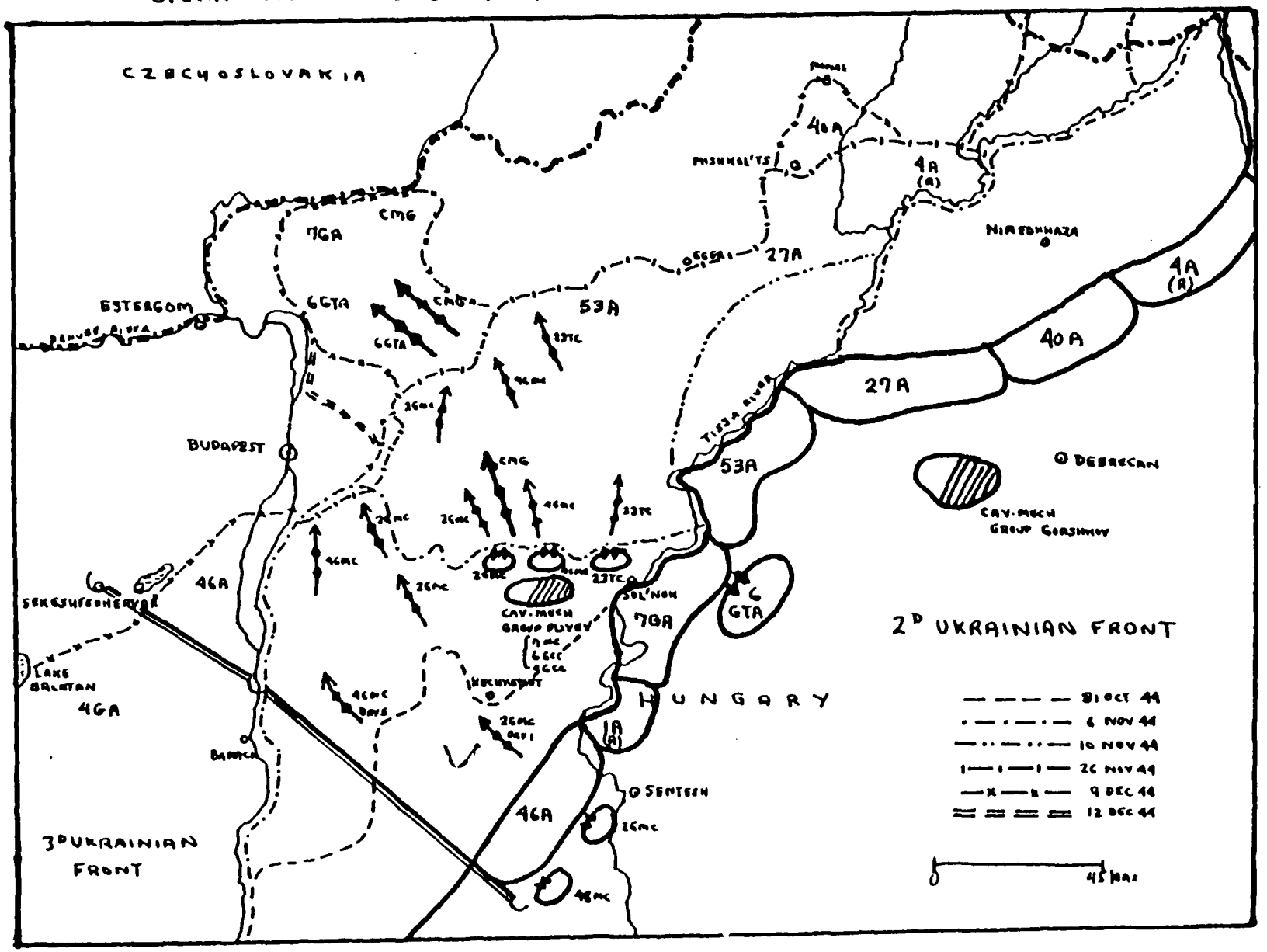
SOVIET OPERATIONAL FORMATION

LVOV - SANDOMIRSK OPERATION 13 JULY - 31 AUG 1944



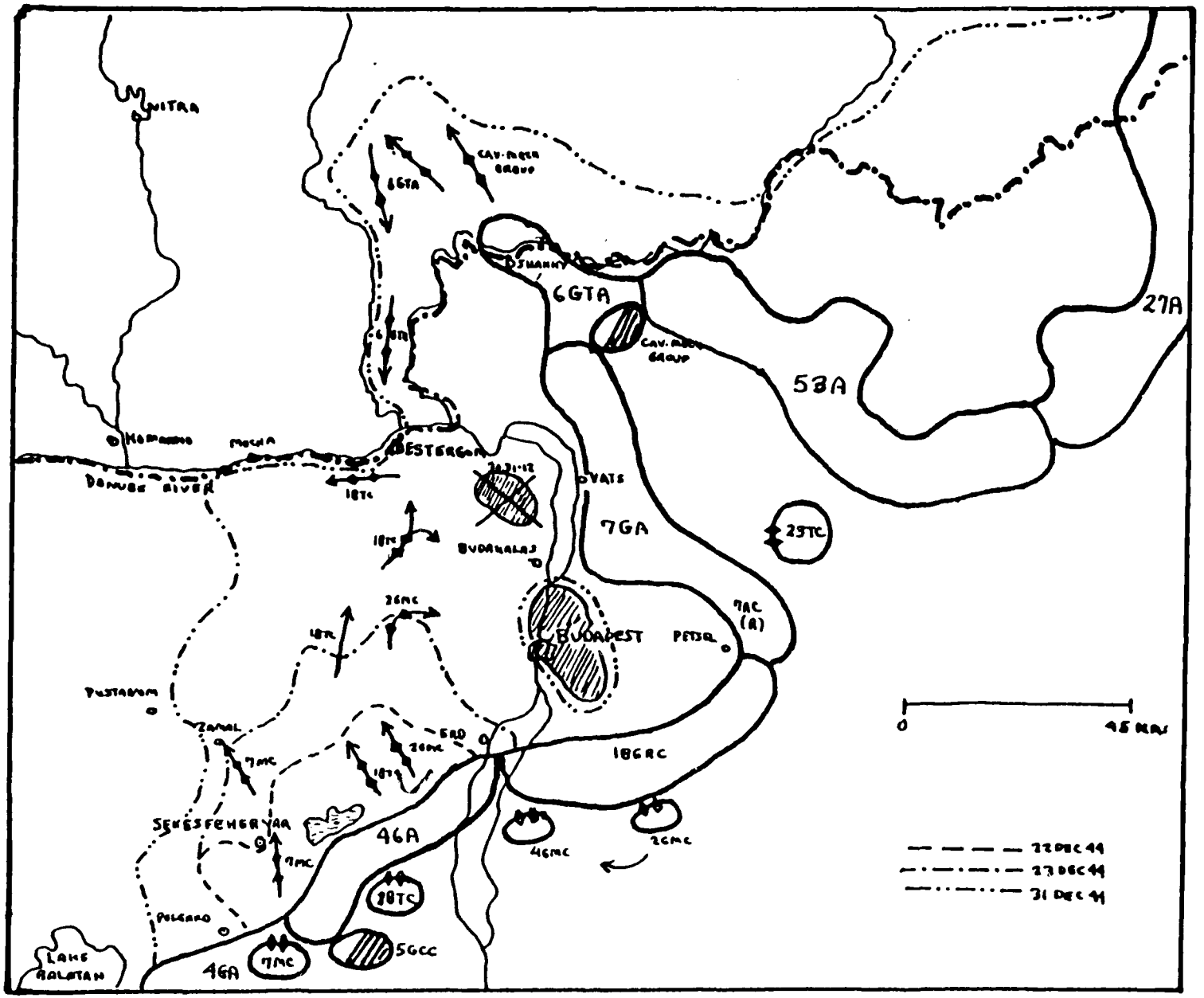
SOVIET OPERATIONAL FORMATION

OPERATIONS TO BUDAPEST 29 OCT. 12 DEC 1944



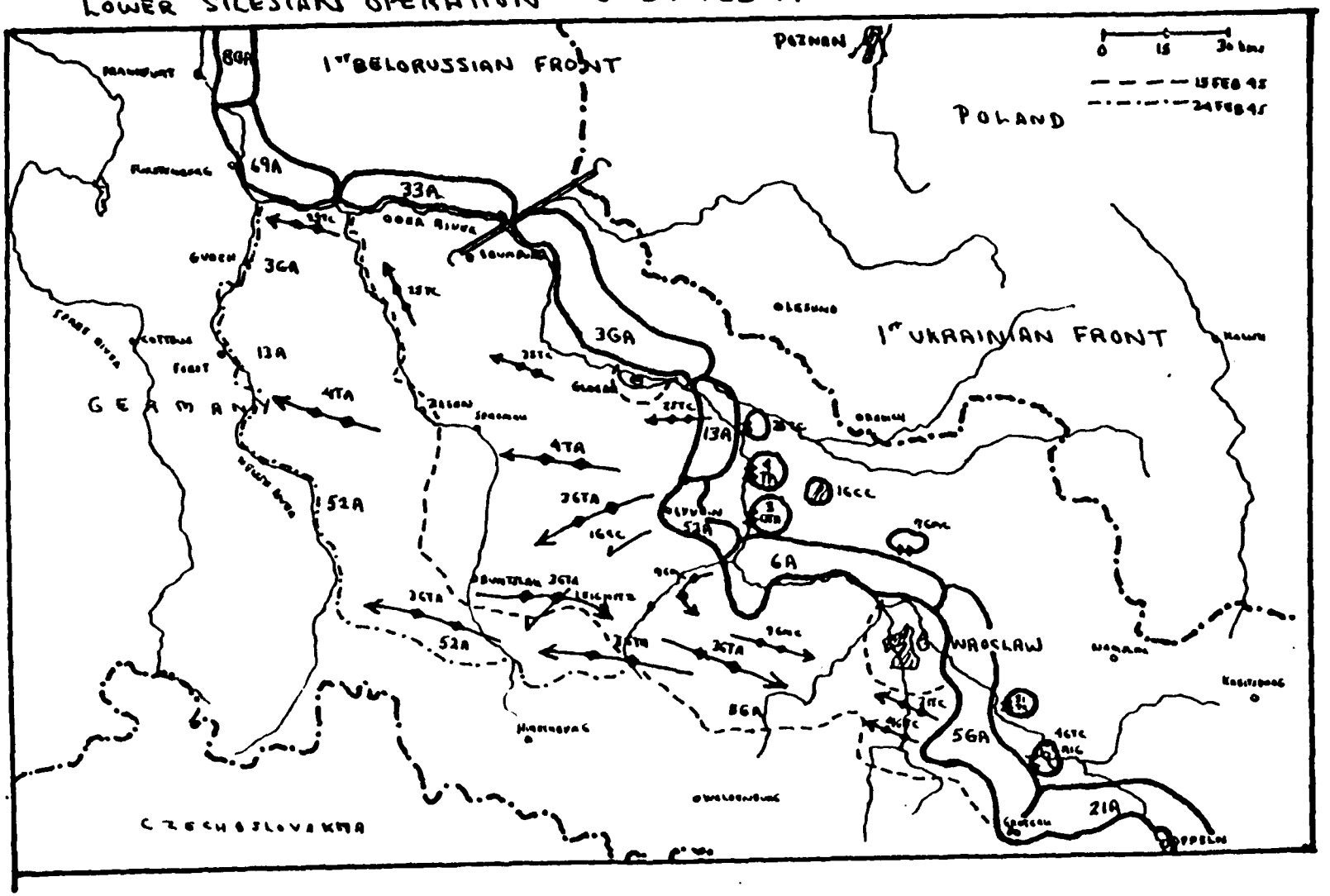
SOVIET OPERATIONAL FORMATION

BUDAPEST OPERATION 20·31 DEC 1944



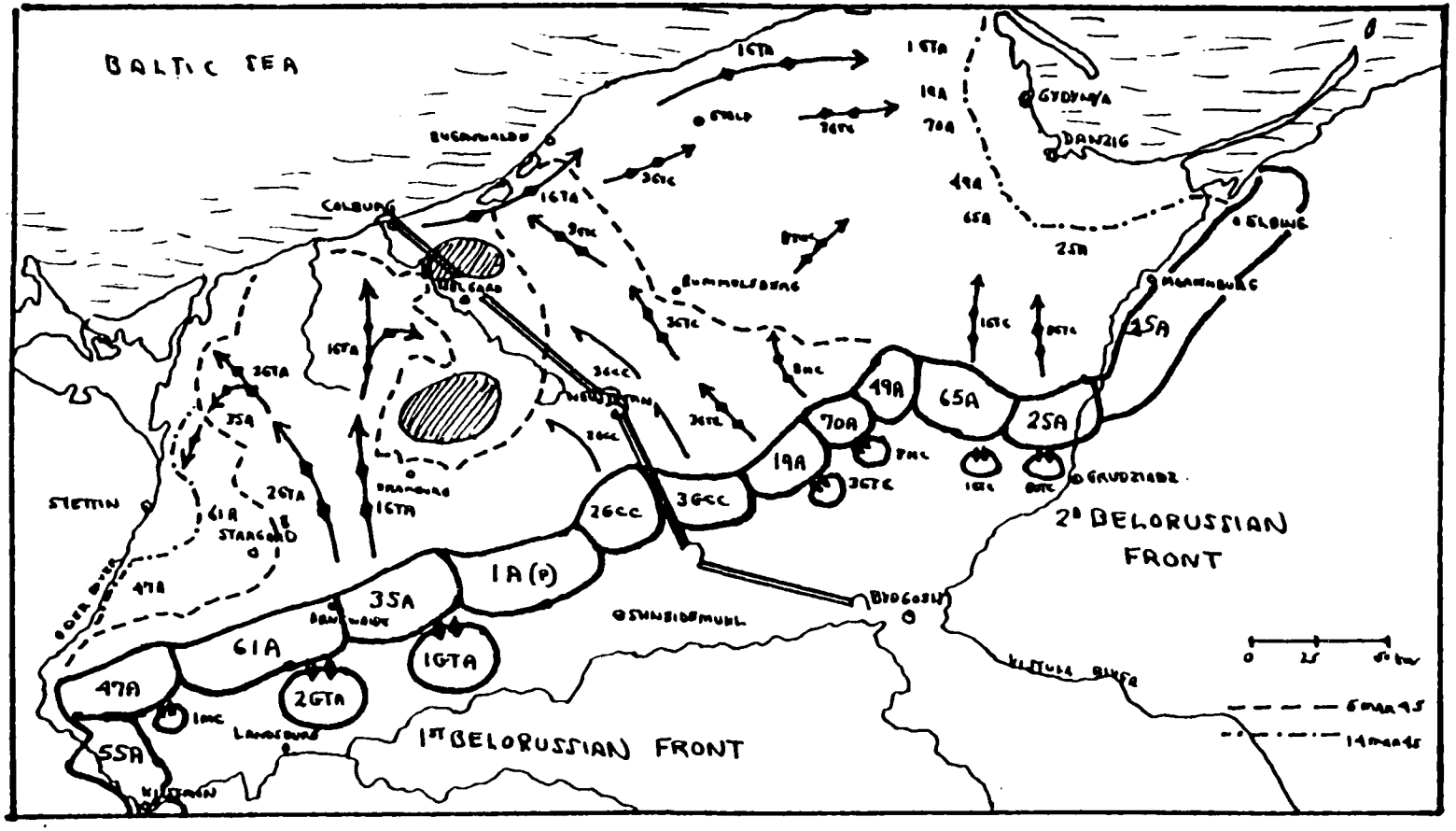
M.1. SOVIET OPERATIONAL FORMATION

LOWER SILESIAN OPERATION 8-24 FEB 1945



SOVIET OPERATIONAL FORMATION

EAST POMERANIAN OPERATION 10 FEB - 4 APR 1945



general, by 1944 evidenced considerable maneuver and demonstrated Soviet mastery of the problem of coordinating the use of all types of combat arms. Rapid regrouping and shifting of forces, and quick and effective cross attachment of units promoted more flexibility in Soviet operations and permitted successful conduct of successive army operations with little or no pause. All of these measures increased the tempo of the advance to 20-30 kilometers per day for rifle forces and 50-60 kilometers per day for tank forces and permitted advances by fronts and armies to depths of 400-500 kilometers and 150-180 kilometers, respectively. The duration of these operations averaged 15-20 days per front and 5-15 days for armies.

Tank and mechanized forces imparted much of the long range offensive punch to the Red Army reaching their heyday in 1944-45. Used as the mobile group of a front, tank armies on a few occasions operated in first echelon but more often in second echelon. Their commitment to action created tank densities of 30-100 per kilometer of front on main attack directions. By the end of the war separate tank corps operated to a depth of 180 kilometers and tank armies to a depth of 400 kilometers or more. Separate tank corps or mechanized corps acting as army mobile groups would complete the penetration of the tactical defense zone to a depth of 25-40 kilometers after which tank armies as the front's mobile group would develop success to the entire depth of the front offensive operation. By 1944-45, a weakening of German operational reserves permitted Soviet tank armies to repulse counterattacks more easily than in the second period of war and thus gave the tank armies greater operational freedom. Tank armies conducted pursuit operations rapidly in corps column (pre-combat)* formation led by strong forward detachments deployed to preempt any enemy counteraction. Tank army night operations were particularly effective. Separate tank or mechanized corps covered the flanks of advancing tank armies while

*precombat formation is a march formation from which units can deploy rapidly and fight against an opponent attacking from any quarter.

armies while forward detachments of advancing rifle forces (reinforced tank brigades or truck mounted rifle battalions with tanks) tied-in rifle forces with pursuing tank forces. The Soviets achieved efficient command and control of armored forces operating in extended formation deep in the enemy rear area by using operational groups (forward command points), first echelon staffs (command points), and second echelon command and control (rear command points). To achieve continuous command and control during deep offensives, operational groups and first echelon staffs displaced one another in turn.[27]

Aviation support of offensives became more sophisticated. Larger, echeloned, aircraft attack groups provided continuous close air and interdiction support, concentrating their fire on the most important objectives. Fighters and assault aircraft provided immediate troop support throughout the enemy tactical defense while bombers and assault aircraft supported forces operating in the operational depths or blocked enemy withdrawal and forward movement of reserves or supplies. However, throughout the war air support in the deep operational realm was spotty because of limited airfields, short aircraft combat radiuses, and limited fuel and ammunition (a result of German scorched earth policies).

Defensive operations decreased in scope and number during the third period of war. Fronts and armies went on the defense at the end of major offensive operations to resupply and regroup, to repel enemy counterattacks, or to fortify a region just secured. Defenses continued to strengthen (see tables 76-77). Fronts defended in sectors of from 250-350 kilometers and armies in sectors of from 30-70 kilometers. Operational densities reached 1 rifle division per 7-8 kilometers of frontage and 24-36 guns/mortars and 7 tanks/self-propelled guns per 1 kilometer.[28] Fronts defended in two echelons with a combined arms or tank army in second echelon and several tank, rifle, and antitank formations in reserve, while armies deployed in one or two echelons. Engineers prepared defenses to depths of 40-50 and 150-180 kilometers, respectively, for armies and

Table 76.

FRONT OPERATIONAL FORMATION - DEFENSE

1945

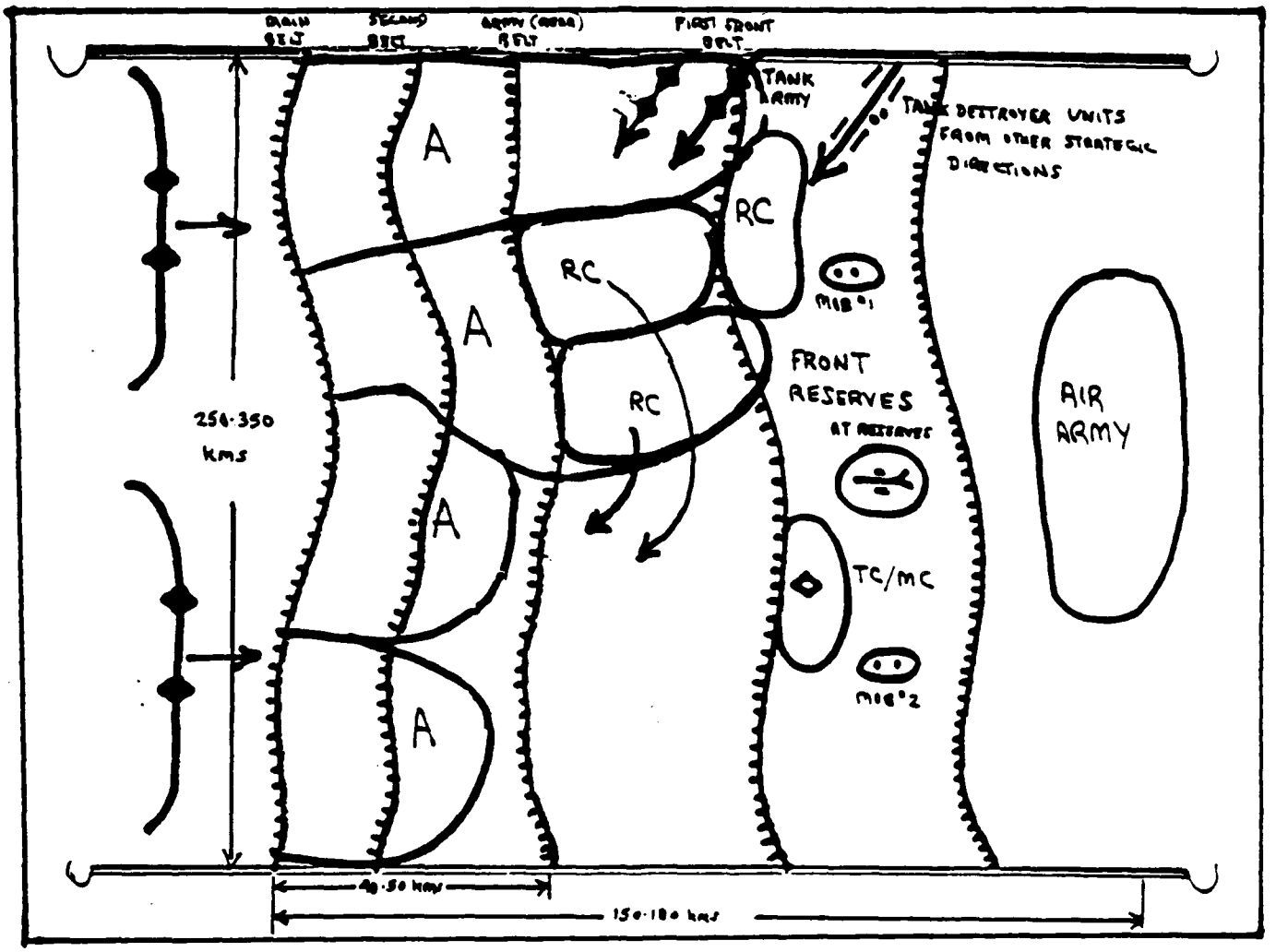
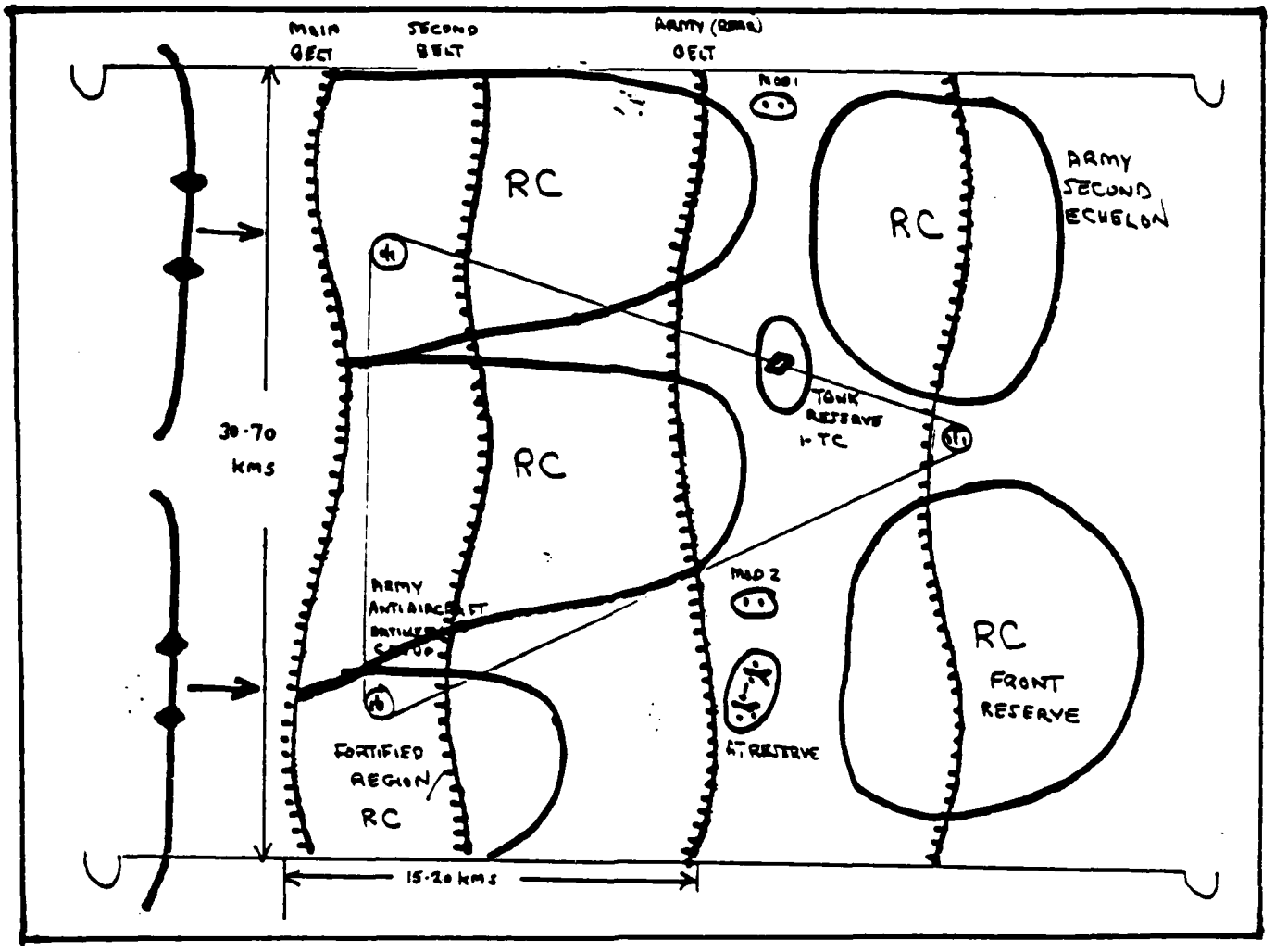


Table 77.

ARMY OPERATIONAL FORMATION - DEFENSE

1945



fronts, thus permitting creation of three army defensive belts and one to three additional defensive belts for fronts (Balatan 1945). Antitank, tank, artillery, and aviation support for defensive operations improved as well. Second echelon tank or combined arms armies launched front counterattacks during defensive operations.

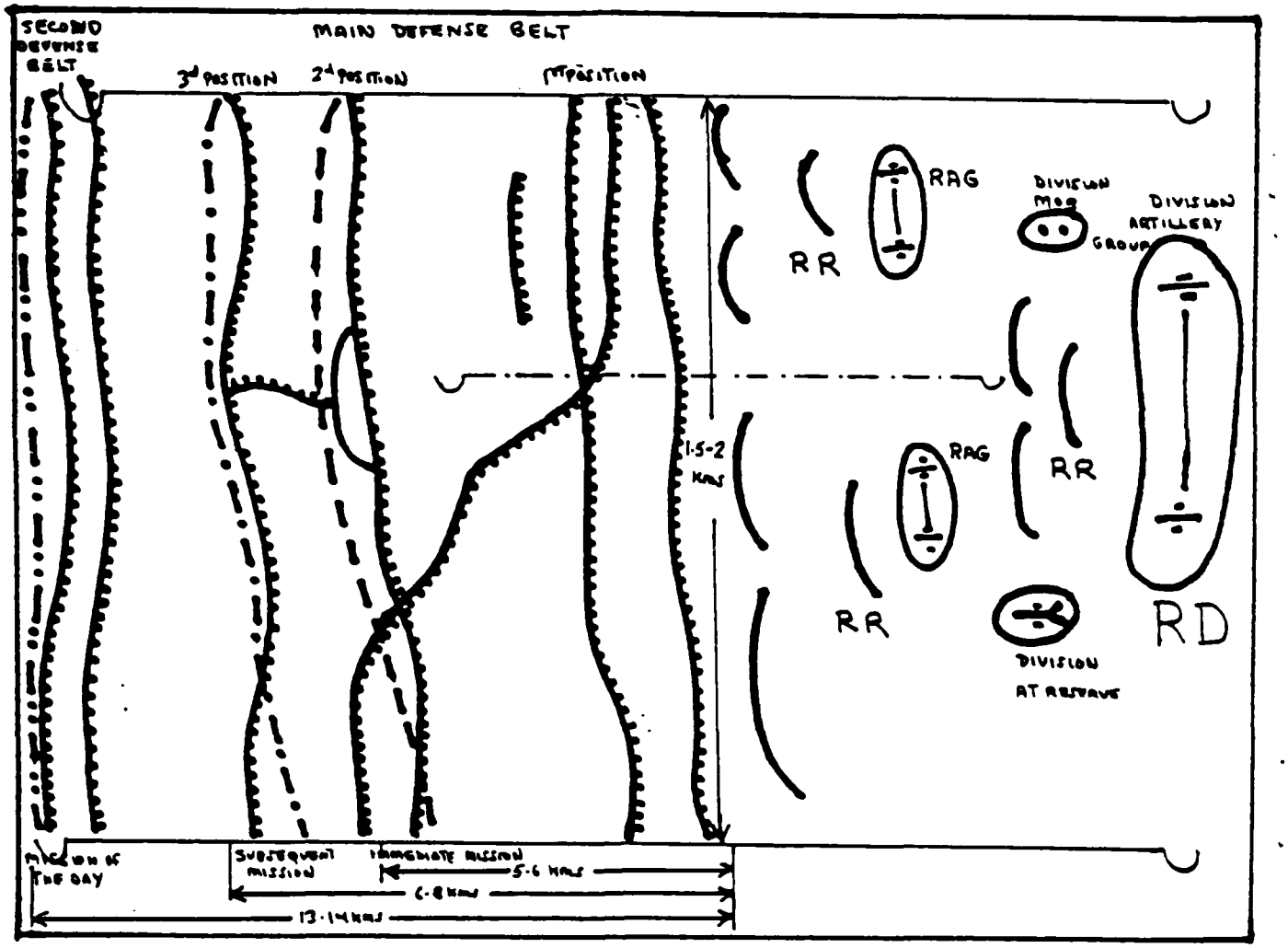
Tactical techniques evolved in consonance with improving operational art. Offensive combat by reinforced rifle division and rifle corps was fundamental to the achievement of success in tactical battle. Although the personnel strength of rifle corps and divisions was low by 1944 and 1945 (often reaching 3000-4000 men), the combat capabilities of these formations increased. Tactical formations relied on firepower and maneuver to achieve success rather than scarce manpower. By the summer of 1944, the rifle division and rifle corps had the mission of penetrating the entire tactical depth of the enemy defense (15-25 kilometers)(see table 78). Since the offensive sectors of corps and divisions shrunk to 4-6 kilometers and 1.5-2 kilometers, respectively, tactical densities rose to 6-8 battalions, 200-250 guns/mortars and 20-30 tanks/self-propelled guns per 1 kilometer of frontage, thus producing a superiority over the enemy of 5-7x1 in manpower, 7-9x1 in artillery and 3-4x1 in tanks.[29] The corps' and divisions' combat formation increased in depth, and regiments, divisions and corps could deploy in one, two or even three echelons depending on existing conditions. By 1944 stronger regimental, division, and corps artillery groups evolved as did stronger combined arms, tank, and antitank reserves, and mobile obstacle detachments. This increased the flexibility, sustainability and speed of division and corps operations.

Coordination of tactical units, a major problem from 1941-43, remained a problem in 1944, in particular, because a major part of the artillery and armor was immediately subordinate to the division commander, thus hindering timely fire support. Organization of regimental artillery groups and better radio

Table 78

RIFLE DIVISION COMBAT FORMATION · OFFENSE

1945



communications helped solve part of the problem. By 1945 subordination of tank units down to battalion level produced more effective armor support.

Techniques for conducting tactical offensive battle improved, thus permitting units to achieve their assigned missions (not always done before). After a strong but often varied artillery preparation, infantry units launched attacks from prepared jumping-off positions supported by tanks, aviation, and artillery. Infantry usually secured the enemy first defensive position after one-two hours of combat. Because of likely enemy counterattacks, the rifle regiments second echelon assaulted the enemy second defensive position and the division's second echelon attacked the third enemy position. Earlier commitment of second echelons (or even mobile groups) often resulted in an even more rapid advance although the mobile groups sometimes became attrited while completing the penetration. Tanks, antitank reserves, and mobile obstacle detachments accompanied attacking units to help repulse enemy counterattacks. After penetration of the first defensive belt (on the first day), the second defensive belt was overcome (usually on the second and third day of attack). In some instances, the use of special attack techniques permitted Soviet forces to overcome the entire tactical defense zone on the first day of operations (Belorussia, Yassy-Kishenev, Vistula-Oder). Among these techniques was the use of reconnaissance battalions to secure first positions and the early commitment of mobile groups (before commitment of division or corps second echelons) (Vistula-Oder). In these instances, army mobile groups overcame the second belt on the second or third day of the attack.

After successful penetration of enemy defenses, rifle units began the pursuit, moving in march order led by strong forward detachments advancing up to 25 kilometers ahead of the main force. Day and night pursuit achieved offensive tempos of 10-15 kilometers per day in 1944 and 25-30 kilometers per day in 1945. Insufficient motor transport remained the chief obstacle to rapid pursuit by rifle forces. During the pursuit, rivers were crossed from the march on a

wide front (3-12 kilometers per division, 6-25 kilometers per corps). Such crossings usually occurred at night.[30]

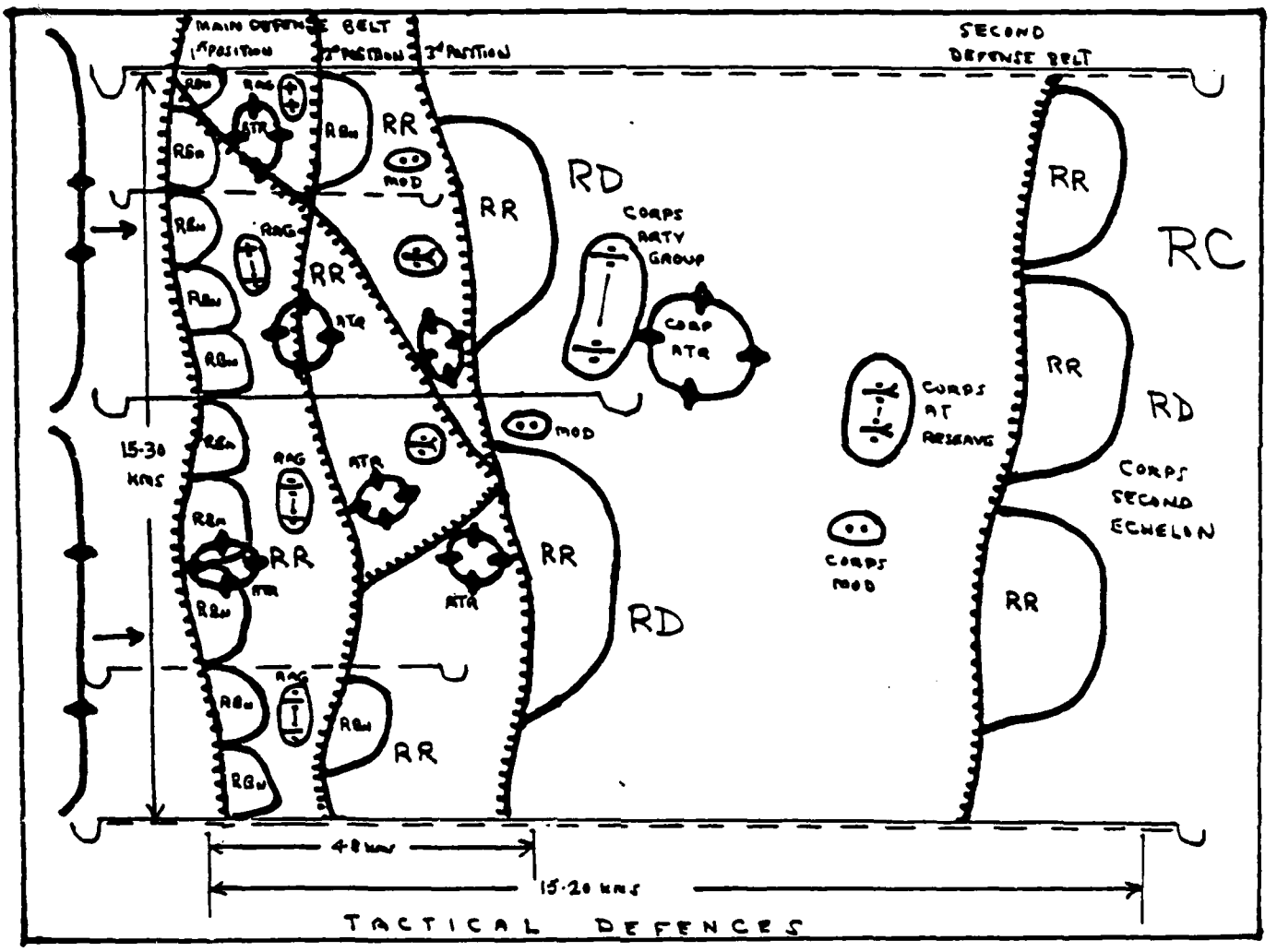
Combat support of rifle divisions and regiments improved in 1944-45. Artillery units resorted to single and double barrages and provided direct fire artillery to smash enemy strong points and provide direct support to advancing infantry. Density of direct fire weapons increased to 20-30 guns per kilometer of front. Infantry support tank units, centralized under division command through 1944, were finally decentralized in 1945. Tank and self-propelled artillery regiments and brigades were attached in company and battalion strength to first echelon rifle battalions in order to provide closer support. Separate tank regiments and brigades, under centralized command attacked enemy positions at high speed and from the march to benefit from the element of surprise. Air support became more effective when assault aviation units began assigning liaison officers with radios to rifle corps and rifle division command posts to coordinate air support. Prearranged signals were used increasingly to mark the location of advancing units.

Defensive tactics, though receiving less emphasis, improved on techniques developed in 1943. Defensive sectors decreased with rifle corps defending sectors of 15-30 kilometers width and rifle divisions sectors at 6-14 kilometers in width (see table 79). Tactical depths increased to 15-20 kilometers with all tactical units and formations deployed in two echelons. Rifle division first echelon regiments occupied the first and second defensive positions, and the second echelon regiment the third defensive position. Two rifle divisions and all reinforcements from the rifle corps defended the main defensive belt. The rifle corps second echelon division occupied the second defensive belt and prepared to conduct counterattacks. Supporting artillery groups, antitank reserves, and mobile obstacle detachments raised tactical densities to 0.6-1.5 rifle battalions, 18-30 guns/mortars, 11-14 antitank guns and 2-4 tanks/self-propelled guns per 1 kilometer of front.[31]

Table 79.

RIFLE CORPS/DIVISION COMBAT FORMATION - DEFENSE

1945



During the third period of war, logistical support of Soviet forces measurably improved. To overcome logistical problems, hitherto the most serious impediment to offensive operations in light of German scorched earth policies, the Soviets created many new logistical units and a command and control structure for their use. The Soviets paid special attention to resupply of fuel and ammunition and the maintenance and repair of equipment in critical tank and mechanized formations. Although production problems were overcome, transportation of supplies, down to operational and tactical units, persisted as a problem to wars end, in particular in liberated regions.

The third period of the Great Patriotic War is, for the Soviets, one of the most important periods of their military development. In addition to achieving victory, the Soviets successfully prepared and conducted the widest range of operations, in particular offensive operations. Their force structure and regulations for its use were more sophisticated than they had ever been, and their command cadre as experienced. The intensity and scope of conflict exceeded that of any previous conventional war. Their operational and tactical techniques were well refined. For all of these reasons the Soviets have considered, and still consider, study of that period to be beneficial if not essential. That study has gone on for almost forty years, but has markedly intensified since the late 1960s. Review of that historical analysis often is indicative of contemporary Soviet concerns. At the highest level, the Soviets have focused in immense detail on the nature of the initial period of war (June 1941, August 1945) - specifically on the issue of how one wins quickly or avoids rapid defeat. The nature of strategic operations has attracted considerable attention most notably through analysis of the Belorussian, Yassy-Kishinev, Vistula-Oder and Manchurian operations, though others as well. At the operational level, the Soviets have exhaustively studied the problem of preempting or overcoming defenses and developing operational success through use of mobile groups at army

and front level. Tactically (and operationally) they have analyzed the time-phased commitment of forces to battle and the use of maneuver to preempt or overcome tactical defenses, placing particular emphasis on the use of forward detachments and tailored assault units to disrupt the coherence of defenses and initiate pursuit operations. Consequently, a significant number of contemporary Soviet offensive techniques are direct products of that investigation tempered by contemporary practice and experimentation. The third period of war for westerners has been an "unknown war." Few Germans wrote about it, preferring to dwell on the more productive years of 1941-43. The Guderian's, Manstein's and Mellenthin's, from whose works we have derived our image of Russians, were gone by 1944 and their successors, the Heinricis, Model's and Schorners wrote no memoirs (or have had none translated into English). Hence we remain ignorant of that stage of the war and ignorant of the tremendous repository of military knowledge and inspiration the Soviets tap from it.

NOTES

1. Strokov, 323-324.

2. 50 Let, 269-271.

3. For this process, see Directive of the General Staff Concerning the Study and Application of War Experience, 9 November 1942, No. 1005216, Inclosure: Instructions Concerning the Study and Application of War Experience in Front and Army Staffs, translated by US Army General Staff, G-2.

4. Strokov, 389; Bagramyan, 185-186.

5. N.A. Sbytov, "Stavka verkhovnogo glavnokomandovaniya" (The Stavka of the High Command) S.V.E. 1979, 7:511-512.

6. Strokov, 389-391; Bagramyan, 187-189.

7. A. Radzievsky, "Proryv oborony v pervom periode voiny" (Penetration of a Defense in the First Period of War) VIZh, March 1972, 17-18.

8. Strokov, 391; Bagramyan, 189-190. More detail found in S. Lototsky, "Iz opyta vedeniya armeiskikh nastupatel'nykh operatsii v gody Velikoi Otechestvennoi voiny" (From the Experience of Conducting Army Offensive Operations in the Years of the Great Patriotic War) VIZh, December 1965, 3-14.

9. "Prikaz NKO No. 325 ot 16 Oktyabrya 1942 g" (Order of the Peoples Commissariet of Defense No. 325 of 16 October 1942) VIZh, October 1974, 68-73.

10. Bagramyan, 192-193; Strokov, 391-392.

11. "Prikaz NKO No. 306 ot 8 Oktyabrya 1942 g" (The Order of the Peoples Commissariet of Defense No. 306 of 8 October 1942) VIZh, September 1974, 62-66.

12. Bagramyan, 193-194; Lototsky, 4-8.

13. 50 Let, 333-337; A. Radzievsky, Tankovyi udar (Tank Blow) Moskva: Voenizdat, 1977.

14. Strokov, 425-426.

15. Bagramyan, 243; Lototsky.

16. G.A. Kavraisky, "Artilleriiskoe nastuplenie" (The Artillery Offensive) S.V.E. 1976, 1:270-271; K. Kazokov, "Sovershenstvovanie artilleriskogo nastuplenie" (Perfection of the Artillery Offensive) VIZh, October 1970, 33-39.

17. Bagramyan, 245-246.

18. Ibid.

19. Matsulenko, "Pazvitie taktiki..."; Strokov, 427.

20. Strokov, 429.

21. Polevoi ustav krasnoi armii 1944 (PU-44) (Field Regulation of the Red Army 1944) Moskva: Voenizdat, 1944, translated by the Office of the Assistant Chief of Staff G-2, GSUSA.

22. I.V. Maryganov, Peredovoi Kharakter sovetskoi voennoi nauki (The Advanced Nature of Soviet Military Science) Moskva: Voenizdat, 1953.

23. Bagramyan, 407-409; N.D. Saltykov, "Operatsiya gruppa frontov" (The Operation of a Group of Fronts) S.V.E. 1978, 6:68.

24. Bagramyan, 417; Strokov, 568.

25. Bagramyan, 418; Lototsky, 7-8.

26. Bagramyan, 420-422; Matsulenko, "Razvitie operativnogo...," 48-50. For a good discussion of forward detachments, see I. Vorob'ev "Forward Detachments in Offensive Operations and Battles," Voennaya Mysl' April 1965, translated in FDD 957, 6 april 1966. For details on the use of forward detachments in Manchuria, see D. Glantz, August Storm: Soviet Operational and Tactical Combat in Manchuria, August 1945, Leavenworth Paper No. 8, Ft. Leavenworth, Ks. Combat Studies Institute, 1983.

27. Bagramyan, 426-428; A. Radzievsky, Tankovyi udar; Losik. Among the many articles focusing on distinct aspects of tank operations are: P. Kurochkin, "Operations of Tank Armies in the Operational Depth," Voennaya Mysl', November 1965, 97-166, translated by FDD; A. Maryshev, "Deistviya tankovykh voisk pri proryv oborony protivnika" (Operations of Tank Forces in Penetrating an Enemy Defense) VIZh, June 1982; N. Kobrin, "Iz opyta vydvizheniya tankovykh armii iz raionov sosredotocheniya dlya vvoda v srazhenie" (From the Experience of the Movement of Tank Armies From Assembly Areas for Introduction into Battle) VIZh, September 1976; A. Radzievsky, "Vvod tankovykh armii v proryv" (Introduction of a Tank Army into a Penetration) VIZh, February 1976; I. Garkusha, "Osobennosti boevykh deistvii bronetankovykh i mekhanizirovovannykh voisk" (The Peculiarities of Combat Operations of Armored and Mechanized Forces) VIZh, September 1975; I. Taran, V. Kolesnik, Organizatsiya svyazi v bronetankovykh i mechanizirovannykh voiskakh desitvuyushchikh na pazobshchennykh napraveniyakh" (The Organization of Communications of Armored and Mechanized Forces Operating on Separate Directions) VIZh, May 1982; A. Tsynkalov, "Iz opyta povysheniya zhivuchesti tankov v nastupatel'nykh operatsyakh" (From the Experience of Increasing the Survivability of Tanks in Offensive Operations) VIZh, March 1983.

28. Bagramyan, 435.

29. Strokov, 573-575; A.I. Radzievsky, Proryv (Penetration) Moskva: Voenizdat, 1979.

30. Bagramyan, 450-451; N. Kireev, N. Dobenko "Iz opyta boevogo primeneniya peredovykh otryadov tankovykh (mekhanizipovannykh) korpusov" (From the Experience of the Combat Use of Forward Detachments of Tank (Mechanized Corps) VIZh, September 1982, 20-27; N. Kireev, "Presledovanie protivnika soedineniyami i ob'edineniyami brontetankovykh i mekhanizirovannykh voisk" (Pursuit of the Enemy by Formations and Large Units of Armored and Mechanized Forces) VIZh, June 1977, 82-90.

31. Ibid, 454-455; Strokov, 581-585.