A SURVEY OF 'QUICK WINS' IN MODERN WAR

HISTORICAL EVALUATION AND RESEARCH ORGANIZATION

PREPARED FOR

OFFICE OF THE SECRETARY OF DEFENSE

OCTOBER 1975

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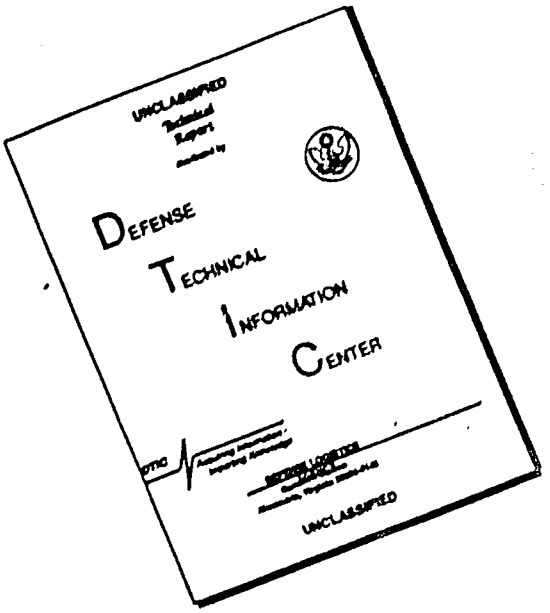

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A Report Prepared for
Director of Net Assessment
Office of the Secretary of Defense
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Under Contract No. MDA903-75-C-0236

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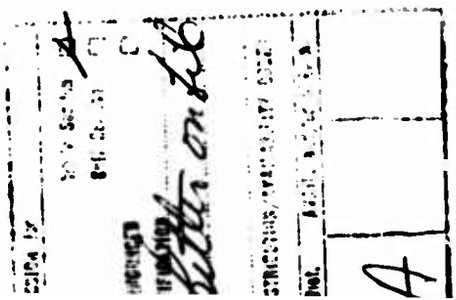
CONTENTS



A SURVEY OF "QUICK WINS" IN MODERN WAR

INTRODUCTION

It may be safely assumed that offensive operations are always launched with the hope of achieving a victory in as short a time as possible. It would be hard to find an instance in history when the attacker deliberately sought a protracted campaign, whether he measured length in modern terms of days or weeks or whether he measured in months oryears, like the Mongols sweeping west into Europe. What factors, then, result in quick success to some, and cause others to stop short of success, or end in a stalemate, with neither side making appreciable advances?

In an attempt to identify the factors which seem to have contributed to, or militated against, rapid and decisive victory, the Historical Evaluation and Research Organization (HERO) has studied seven examples of "quick wins" in modern war, three examples of "almost quick wins" and three examples that ended in stalemate. The categories were defined as follows:

A "Quick Win" is a war or campaign brought to a decisively successful conclusion in a short period of time (measured generally in days or weeks, rather than in months or years) without any significant interruption of the victor's momentum in the attainment of geographic and other objectives which determine the outcome.

An "Almost Quick Win" is an operation or campaign which would apparently have been a "Quick Win" had not the momentum of the initially successful side been significantly interrupted before a decisive outcome was achieved, with the result that the conclusion of the war or campaign is substantially protracted, sometimes becoming a stalemate.

A "Stalemate" is an inconclusive combat situation, extending over a period of several months (usually through two or more seasons), in which--regardless of the extent of combat activity -- neither side is able to gain a significant or decisive combat success.

The examples studied are:

Quick Wins

British Megiddo Campaign in Palestine and Syria, 1918
German invasion of the Low Countries and France, 1940
Japanese invasion of Malaya, 1941-1942

Soviet invasion of Manchuria, 1945
Third Arab-Israeli War, 1967
Sinai Front
Jordanian Front
Syrian Front

Almost Quick Wins

German invasion of Russia (Operation Barbarossa), 1941
Allied breakout from Normandy (Operation Cobra), 1944
North Korean invasion of South Korea, 1950

Stalemates

Sinai Desert Front, 1915-1917
Winter and Gustav Lines, Italy, 1943 1944
Korea, 1951-1953

The first step in the study of all of these operations has been preparation of a narrative describing briefly the characteristics of the opposing forces, including force strengths, organization and deployment, the circumstances of place, time, etc., in which the operation took place, and the development of the operation. These narratives are included in Annex A. Sources used in preparing these narratives and analyzing the operations are listed in the bibliography, Annex B. Only secondary sources were used because time did not permit consulting primary documents. Consequently statistical data is incomplete and may, in some instances, be questionable.

The narratives were summarized briefly for Part I of the report, and the factors that seem to have contributed most to the outcome identified. They were then analyzed in matrix format to identify the factors of characteristics or circumstance in which the attacker or the defender had an advantage. The matrix and commentary on results of this analysis are in Part II. In Part III the operations are compared in terms of effective force ratios, suggesting quantitative values for many of the factors discussed in Parts I and II. Part IV lists some conclusions regarding factors of significance in Quick Wins.

I. THE CAMPAIGNS

QUICK WINS

The British Megiddo Campaign, 1918

Within a period of only two weeks, from 19 September to 1 October 1918, the British Egyptian Expeditionary Force under General Sir Edmund Allenby succeeded in driving the Turkish defenders of Palestine from a roughly east-west line at the latitude of Jerusalem into the region north and northeast beyond Damascus. Of the approximately 100,000 Turks in Palestine at the outset of the campaign, only 17,000 escaped from the debacle, to withdraw northward from Damascus.

As planned and perfectly executed, one infantry corps broke through the line of the Turkish Eighth Army near the coast and enveloped its right flank, while a second infantry corps turned the left flank of the Turkish Seventh Army in the Jordan Valley. The British cavalry swept northward through the gap in the west, and, speeding up the coast, cut through the mountain passes to the rear of the Eighth and Seventh Armies. While the main British force thus encircled the bulk of the Turkish forces in Palestine, allowing only a small remnant to flee northward to Damascus, a smaller British force crossed the Jordan River and, aided by Arab irregulars operating against the Turks' line of communications, eliminated a major part of the Turkish Fourth Army in the hills of Moab. Survivors of this army too retreated to Damascus. Rapid pursuit by the British cavalry resulted in the capture of Damascus on 1 October.

The British campaign, marked by thorough preparation, combined arms coordination, and rapid cavalry advance, did not alone drive Turkey from the war, as had been hoped. However, it did accomplish its primary objective of destroying the Turkish armies in Palestine and thus severely weakening Turkey's ability to continue its participation in the world-wide conflict.

The most significant factors in the achievement of this Quick Win are undoubtedly (1) its thorough planning and preparation, based on good use of intelligence data, (2) the attainment of surprise, both in the initial attack and in the long race by the cavalry up the coastal plain and through the mountain passes, (3) the British preponderance of force, and (4) the skillful execution of the plan.

The best of plans, both in drafting and in execution, are dependent for success upon good leadership, and there is no doubt at all that at all levels in the British EEF leadership was outstanding, from General Allenby to his platoon commanders. A substantial proportion of the officers were combat-seasoned career men. The enlisted men also were well-trained, and many had had experience in combat either in Palestine or on the Western Front. Command was unified, and the various operations were well coordinated, with infantry, cavalry, and air units working in mutual support to carry out the plan design.

The Turkish forces were led by a German officer, General Otto Liman von Sanders, in overall command. Many of the officers were German-trained, but the Turkish forces were under strength and neither adequately trained nor fully equipped. And the unified command broke down when the British cut the Turks' communications lines.

British force strength predominated, particularly in cavalry, where the ratio of British to Turk was 4 to 1. In infantry it was 1.78 to 1, and in artillery 1.35 to 1, with a higher proportion of heavy artillery on the British side. Both sides had good weapons, with no significant difference in quality except for the British advantage in more and better aircraft, as well as better doctrine for their employment. The British excelled too in mobility, with better use of roads and railroads, more trucks, and highly effective light patrol cars, as well as outstanding cavalry units and an effective camel corps.

In supplying their forces, the British had the advantage not only of a better, although hardly adequate, internal system of roads and railroads but also of complete naval control of the eastern Mediterranean. This permitted them to supply their troops by sea as well as overland, a crucial factor as the army advanced northward and outdistanced the forward rail supply bases. In this short campaign, however, it was the stockpiling of supplies rather than resupply that was crucial, and this the British had done effectively. Supply was a minor problem for the Turks in the campaign, since they were outmaneuvered and forced to retreat so swiftly that there was a minimum of time and opportunity to deliver supplies to them.

German Invasion of the Low Countries and France, 1940

After the defeat of Poland in October 1939, more than six months elapsed before the Germans attacked the Western Allies, France and Britain. The original German plan, a modification of the 1914 Schlieffen Plan for sweeping envelopment, was changed to provide for a decisive penetration of the French armies through the Ardennes Forest, with an invasion of Holland and Belgium as a secondary effort, and a diversionary feint toward the Maginot Line. The Allies, anticipating the main invasion effort through the Low Countries, like that of World War I, had massed their forces to resist it, and prepared minimum security for the Ardennes area, where the rough terrain and limited road nets seemed to provide adequate protection.

German Army Group B marched into Belgium and the Netherlands in the night of 9/10 May and, as expected, attracted French and British forces to assist the Belgian and Dutch defenders. At the same time Army Group A's armored spearheads crossed into Luxembourg and southern Belgium and advanced through the Ardennes, meeting little opposition until they reached the Meuse River on 12 May. Overcoming stubborn French defense in some areas the German panzers crossed the river in several places, established a bridgehead, and raced ahead, pushing a wide gap through the French defense. On 20 May they took Abbeville, and German tanks reached the Channel coast. French and British attempts to counterattack failed to halt the German advance. But on 24 May Hitler himself ordered the panzers to halt for two days. Meanwhile, the slower moving Army Group B had continued west across Belgium, and Holland was completely occupied by May 15. The Allies north of the Army Group A penetration were pushed into a diminishing pocket around Dunkirk. On 26 May the British were authorized to withdraw from the continent, even as the Belgian Army, under heavy attack from Army Group B, crumbled. In the next eight days 338,226 men--British, French, and Belgian--were evacuated. The remainder of the Allied forces surrendered, as German infantry moved up to complete the sweep of northern France.

The German High Command correctly assessed Allied thinking and planning and prepared a well-designed and coordinated plan of operation. With it they achieved tactical surprise with the timing and speed of the attack, and strategic surprise by launching their main attack through the Ardennes area. With outstanding leaders they exploited their opportunities and capitalized on the mobility of their armored forces.

In total forces available the Allies exceeded the Germans on the ground by about 20% (3,000,000 -2,500,000) in manpower, 3,345 to 2,574 in tanks, 12,000 to 9,700 in artillery pieces. But the Germans had their forces massed for the attack, and although their tanks were inferior to the Allies' best, they concentrated their armor for the main effort, rather than dispersing it with the infantry as was the Allied doctrine. In the air the Germans had 3,500 aircraft to the Allied 1,700, and the Germans used them well in support of the ground attack.

The Germans made the maximum possible use of terrain. In the Netherlands and Belgium it is fairly flat, and well adapted to maneuver, and the Germans took advantage of it. The natural and man-made obstacles were well known, and overcoming them was part of the German plan. The difficult terrain of the Ardennes was turned to the advantage of the Germans, and contributed to surprise, since the Allies assumed its natural difficulties would prevent an attack and were in themselves sufficient protection to necessitate only small security forces.

Other factors contributed to the quick German victory: lack of a strong and competent unified command among the Allies; superior German communications equipment that resulted in better control of their forces; German combat experience as a result of the campaign in Poland; and the better supply system that managed to keep the German armor and trucks moving. Perhaps it can best be summarized as superior readiness. In all respects the Germans were ready for the attack they made; the Allies were not ready to defend against that attack.

Japanese Invasion of Malaya, 1941-1942

The Japanese attacked the British on the Malay Peninsula by amphibious assault and overland attack from Thailand on 8 December 1941. In ten weeks they pushed their way south to conquer the entire peninsula and the island of Singapore. Although outnumbered nearly two to one, the Japanese troops had the advantage of overwhelmingly superior air support and careful preparation. They methodically broke through static British defense positions. Seldom pausing to regroup, resupply, or consolidate their gains, and spearheaded by tanks--the British had none--the Japanese surged south on bicycles, captured or abandoned vehicles, and on foot, forcing most of the British to withdraw to the island by the end of January. At that point the Japanese regrouped and brought up ammunition and supplies. On 7 February they started the final offensive, crossing the Strait of Johore to Singapore Island. A week later Singapore's garrison surrendered, bringing to an end a campaign whose swiftness amazed the western world.

The careful Japanese planning for this operation, based on very competent use of intelligence data, contrasts sharply with the British pre-war

planning, which concentrated not only on defense of the naval base at Singapore but on defense of the base and the island against attack from the sea, paying much less attention to defense of the Malay Peninsula, since few had thought it possible that an attack on Singapore would be made by the long and indirect route down the peninsula.

The British commander, Lieutenant General Arthur Percival, had recognized the danger of overland and amphibious invasion from the north, and endeavored to deploy his inadequately-trained forces to oppose the threat. However, his resources were not adequate to cope with the air supported power of the highly trained Japanese, many of whom had had combat experience, although not jungle fighting, in China. British reinforcements arriving during the campaign increased the numbers of the defenders, but were even less prepared for tropical combat than the original garrison.

Japanese morale was high, for the surprise attack on Pearl Harbor was quickly followed by successes in the Philippines, Indonesia, and elsewhere in Southeast Asia, and their rapid advance after the initial landings on 8 December were accompanied by the sinking of the only two large British naval vessels in the area. British discipline could not overcome these negative influences on British morale.

The British initially had about 80,000 men in all, against some 50,000 Japanese, and these figures were increased during the campaign to about 130,000 versus 60,000. In artillery too they had a slight advantage. But they had no tanks and few antitank guns, while the Japanese had about 200 medium and light tanks. And their 160 obsolete aircraft were soon driven from the air by the 450 Japanese planes. Japanese air superiority was a decisive factor in the campaign. In fact, paradoxically, it was overwhelming preponderance of force, created by aircraft and tanks, which was the major factor in the victory of the outnumbered Japanese. Japanese naval vessels controlled the sea, permitting their army not only to make the initial landings almost unopposed but to move troops down the coast by sea as the campaign progressed.

Support and movement on both sides were restricted by the limited system of roads and railroads through the jungles, but the Japanese seem to have had less of a problem than the British, since they were less dependent upon motorized transport. However, their bold gamble in advancing rapidly without waiting to build up a stockpile of supplies created grave, and potentially disastrous problems. The British on the other hand, had ample stores of ammunition and other supplies and their efficient logistical system provided effective support to the combat areas.

The analysis in this paper is revisionist, since it does not support the traditional assessment of British ineptitude in utilizing superior force against a small, bold, but resourceful enemy. The Japanese were indeed bold and resourceful, which overwhelmed a reasonably competent defense by troops who performed effectively, despite lack of training and acclimatization for jungle combat.

Soviet Invasion of Manchuria, August 1945

Although the Soviet invasion of Manchuria was terminated as part of the general Japanese surrender at the end of World War II, the operation is in fact, both in planning and in execution, an excellent example of a Quick Win. The Soviet objective was to prevent the withdrawal of Japanese forces and destroy them or force them to surrender in Manchuria, Korea, and southern Sakhalin, and to establish the Soviet presence in those areas. To achieve it, the Soviets concentrated three strong army groups along the borders of Manchuria and Korea and launched converging attacks from three directions, the strongest from the west across the formidable Greater Khingan Mountains, where the Japanese least expected an attack in force.

Led by a rapidly moving tank army, the Soviet forces from Mongolia crossed the mountains and descended upon the Japanese, surprising them in both the timing and the location of the attack. They pushed aside opposition as they advanced swiftly to try to cut off the main Japanese force from retreat to the Korean Peninsula. The other attacks, meanwhile, overcame substantial Japanese defense forces and fixed fortifications, to advance from the north and northeast. When the surrender became effective in Manchuria, the Soviet attack had already proceeded at such a rate and to such an extent that independent surrender of the defending Kwantung Army and a Quick Win for the Soviets would probably have been inevitable.

The Soviet plan was well conceived. Like the German attack through the Ardennes in 1940, it focussed the main effort in an area where attack seemed unlikely to occur, making an advantage of terrain that was not ideal for tank maneuver, and where the defense was not adequate. Thus the attack, initiated almost simultaneously with the declaration of war, achieved surprise in its timing on all fronts, in the areas of attack, and particularly in the use of tanks in force in the attack across the mountains.

The Soviets had a preponderance of men (1.5 to 1),* tanks (4.6 to 1), artillery (4 to 1), and aircraft (2 to 1), and complete naval superiority in the Sea of Japan and on the Amur and Sungari Rivers. Their equipment was superior--most of

*Estimates of comparative numerical strengths vary.

the tanks were new--and the combined operations of tanks, artillery, and infantry, and support by air and naval forces, were well coordinated. Wherever terrain permitted, tanks, cavalry, and motorized infantry were used to outflank, bypass, or encircle the Japanese.

The Soviet troops were well-trained, and led by efficient officers, most of whom had had combat experience in comparable terrain. Morale was high in this only Soviet engagement in World War II with the Japanese, whose armies elsewhere were shattered. Japanese troops had been assigned to Manchuria primarily for defensive purposes and did not have a great offensive capacity. Many of the officers had had combat experience, but most of the enlisted men were either very young or very old, and the uneven status of their training reduced their effectiveness in combat. Nevertheless they fought well. With adequate supplies stockpiled, they did not suffer the logistical problems of the Soviets, whose rapidly advancing forces, in spite of very careful preparation, outran their supply units, necessitating a pause to bring up fuel for the tanks and even food.

Third Arab-Israeli War, 1967

In June 1967, less than a month after Egypt demanded the withdrawal of United Nations security forces from the Sinai Peninsula, the Gaza Strip, and Sharm el Sheikh, and soon after the UN compliance with this demand, war broke out between Israel and its Arab neighbors. It was in effect three separate wars--Israel-Egypt, Israel-Jordan, and Israel-Syria. And it resulted in three Quick Wins for Israel. It is analyzed as three wars in Parts II and III.

The Israelis planned on making a surprise attack and achieving a quick victory on the Egyptian front, while holding against Jordan and Syria unless one or both should attack first. On 5 June 1967 Israeli aircraft attacked air bases in all three nations, destroying most of the Arabs' aircraft. In the Sinai and the Gaza Strip Israeli ground forces rapidly overran Egyptian positions and advanced westward to the Suez Canal, the Egyptian collapse hastened by a breakdown in top leadership. In four days, the Israelis destroyed a large proportion of the Egyptian Army, captured the coastal towns of Gaza, Khan Yunis, and El Arish, cleared the Gaza Strip, pushed west through the desert, capturing the three Sinai passes, and occupied the east bank of the Suez Canal and all of the peninsula. Much of the Egyptian Army was never engaged, having been ordered to withdraw before the frontier battles were decided.

Meanwhile, later in the day on 5 June hostilities started on the Jordanian front. Despite strong Jordanian resistance, the Israelis, in several converging attacks, pushed swiftly through Jordanian territory west of the Jordan River. In three days of combat they reached the west bank of the Jordan, forcing the Jordanian defenders to retreat across the river. Air superiority was a major factor in the Israeli victory.

On the Syrian border there were no significant combat actions until 9 June. On that day Israeli forces attacked and pierced the strongly fortified Syrian position on the Golan Heights. The next day they consolidated this success, occupying Kuneitra and the entire Golan Plateau.

The Israeli war plan was well designed to take advantage of the maneuverability of armored and motorized forces, control of the air, the benefits of a surprise attack on the Egyptian front, information about Arab deployments and strengths gleaned from intelligence sources, and their estimates of the quality of their opponents' troops. In its execution and flexible tactics, the plan was highly successful.

The Israelis were outnumbered by the Egyptians about 1.6 to 1, but--by shifting forces between fronts--were able to outnumber the Syrians 1.2 to 1 and the Jordanians 1.5 to 1. The Egyptians also had more tanks, artillery pieces, SAM missiles, antiaircraft, and aircraft, but the Israelis overcame the disadvantage in aircraft by destroying most of the Egyptian Air Force in the first hours of the war, and substantial parts of the other Arab forces later in the day. And what they lacked in numbers of tanks compared with all three opponents was more than compensated for by their skillful use of armored forces in their rapid attacks on the eastern defenses of Egypt, and against the Syrians and Jordanians as well.

Arab weaknesses also contributed significantly to the Israelis' Quick Win. The Egyptians had a fatal weakness in leadership at the top, whose significance was increased by the dramatic surprise attack. Without competent direction from the Army High Command, leadership at lower levels crumbled, resulting in confusion, and mass desertions. Syrian leadership was perhaps even worse, at all levels, as demonstrated by the almost incredible failure of the Syrians to make a better defense of the Golan escarpment.

German Invasion of Russia (Operation "Barbarossa"), 1941

When the Germans attacked the Soviet Union on 22 June 1941, they were counting on a short war. Logistically they were not prepared for a conventional war of more than five or six months. They concentrated huge amounts of infantry, armor, artillery, and aircraft on the main lines of advance, toward Moscow in the center (the main effort), toward Kiev in the south, and toward Leningrad in the north. The objective was to destroy the Red Army in the border zone west of the Dvina and Dnieper Rivers and then, facing only scattered resistance, to advance eastward to the Volga River and northward toward Archangel on the White Sea.

After initial success, during which the German Army inflicted great losses on the Soviet forces, the German offensive bogged down. As winter approached, it became obvious that there was to be no short war, that blitzkrieg had failed. The Germans were halted along the entire front, and the Soviets turned to a counteroffensive. The hoped-for Quick Win had become an Almost Quick Win.

The German operational planning was good, and for the first weeks it appeared that they were headed for a Quick Win. In spite of the great numbers of men and weapons and huge stockpiles of supplies that had to be assembled in preparation for the attack the attackers achieved both strategic and tactical surprise. Stalin, having concluded that a German attack was unlikely, for political reasons had decided not to mobilize the Red Army in June 1941 and not to deploy his first defense echelon at the border. Moreover, Soviet planners expected the major effort would be made in the Ukraine rather than in the center, toward Moscow. So the German tanks and highly mobile infantry were able to roll over the border defenses and to maneuver to surround and destroy large Soviet units in all of their areas of attack.

At the beginning of the operation the Germans were well organized, well led, well trained, and highly disciplined, better than the Soviet in practically all respects, and particularly in their senior officers, since many of the best Soviet officers had been purged in 1937-38. The Germans had a 1.05 to 1 advantage in manpower over the Soviets in the forward area as a whole and concentrated their forces to achieve much greater advantages at the main attack points. They planned to overcome the fact that the Soviets had 2,100,000 men who could be brought up from other areas by overwhelming the defenders in the initial attack and bringing the operation to a rapid conclusion before reinforcements could be effective. The Soviets had more mortars, cannon, tanks, and aircraft, but, except for the T-34 tanks, which were the best around, in quality the German weapons were better. Moreover, the Soviet Air Force was almost totally destroyed in the first day of operations.

The weather was good, the summer days were long enough to give more time for operations, natural obstacles were readily overcome, and the German forces advanced rapidly. They successfully, and quickly, executed the first phases of a complex triple operation, but they were stopped short of achieving their objective.

A major reason for the German failure to achieve a Quick Win may be traced back to Hitler himself. In the first place, he caused a delay of over a month in the launching of the offensive by diverting forces to stabilize the situation in Yugoslavia and Greece. Then, when the possibility arose to encircle the main force of the Soviet Southwest Army Group in the Ukraine, Hitler, despite strong OKW resistance to the idea, diverted Guderian's panzer group from Army Group Center to join in the attack. As a result, Army Group Center's attack on Moscow was delayed until the initial German advantage of good weather and long summer days was turned into an advantage for the Soviets in autumn rains and winter snow. And the Soviets gained time to prepare a counterattack.

The Germans also failed to assess correctly the manpower and mobilization potential of the Red Army and the economic strength of the Soviet Union. Nor did they adequately consider the vastness of the territory available to the Soviet Army for withdrawal and reconstitution. Planning as they did for a quick victory they did not provide logistical support for a winter campaign in Russia. With fewer roads and rail lines as they advanced farther from their original bases their logistics system and their replacement system were inadequate to maintain the momentum of the original attack against stiffening Soviet resistance.

Allied Breakout from Normandy (Operation "Cobra"), 1944

After landing on the French coast in early June 1944, the Allied armies encountered difficulties as they tried to advance across the hedgerows of Normandy, and fell far behind their projected invasion schedule. To overcome this situation, the Allies planned a two-phased operation, with British and Commonwealth forces on the left attacking to attract German armor and reserves, while US forces on the right took advantage of the weaker German forces in front of them to break out of the

bridgehead. The US attack, code-named "Cobra" opened with a heavy air attack, following which a strong infantry attack opened a breach in the German line. The US Third Army divisions flowed south out of Normandy, turned west toward Brest, and swung deep south and then east. While US First Army units, converging to meet British forces pushing down from the north, almost closed an enormous circle to envelop two German armies. Third Army tank divisions led a rapid dash eastward across France, which halted just short of the German West Wall when the extended supply lines could no longer deliver sufficient fuel to the armored and motorized forces.

The success of Cobra in breaking through the German defenses resulted from careful planning and preparation and, most importantly, the preponderance of force to execute it. It was the weight of the attack, rather than its location or its timing, which achieved a measure of surprise for the attackers. In men, tanks, aircraft, and artillery, the Allied resources greatly outnumbered the German. This advantage was increased after 2,500 planes dropped 4,000 tons of bombs on an area seven miles long and two miles wide in front of the Allied lines, destroying or stunning the German defenders so that they were unable to withstand the powerful US forces that advanced against them. The highly mobile US forces then were able to exploit their breakthrough and race to the east, and the shattered Germans were unable to establish an effective defense line to stop them.

The troops on both sides, as well as their officers, were well trained and well prepared. However, the shock of the initial carpet-bombing air attack and the rapidity of the followup on the ground, disrupted the German defenders and adversely affected their morale at the same time it increased the morale and esprit de corps of the surging US units.

The initial Allied success was also influenced by the fact that the prewar bombing of bridges and railroad targets in northern France had greatly reduced the ability of the Germans to transfer their troops and to bring up reinforcements and supplies.

It seemed for a time that nothing could stop the Allied advance, as the Germans were unable to form a cohesive defense and offered resistance only in limited areas. But the possible Quick Win was averted through no action by the Germans, but by a basic logistical problem which the Allies could not overcome. Allied logistical planning had not anticipated the speed or distance of advance, and, lacking an adequate port for landing supplies, and trucks and railroad cars to move them forward, the Allies could not deliver consumables (particularly fuel) in adequate amounts to the front lines. This circumstance was further complicated by the conscious decision of the Allied high command to advance on a broad front rather than concentrating on one area of it.

North Korean Invasion of South Korea, 1950

On 25 June 1950 seven North Korean divisions and a tank brigade crossed the border into South Korea, or the Republic of Korea (ROK), surprising the defenders, and the western world, both tactically and strategically. During the first three days of the carefully prepared offensive the invaders destroyed a large part of the South Korean Army and advanced 15-20 kilometers per day. Thereafter their progress slowed, until it was finally halted in early August in the southeastern corner of the peninsula, along the so-called Pusan Perimeter.

The invasion was planned, directed and supported by the Soviet Union, which correctly evaluated the weakness of the ROK Army and anticipated a swift operation to conquer and occupy the entire peninsula. However, the Soviets did not correctly evaluate the prompt reaction of the United States and the United Nations. It was the physical intervention of US forces that changed the prospective Quick Win to an Almost Wuick Win.

In addition to the surprise of the attack the North Korean Peoples Army (NKPA) had the initial advantage of long and careful preparation for the offensive, with the Soviet Union supplying incentive, equipment, and training. They had an advantage of 1.4 to 1 in manpower on the front line on the day of the attack, with 90,000 to 65,000, and a total strength advantage of 150,000 to 107,000. But by the time they reached the Pusan Perimeter 70,000 North Koreans were facing 92,000 UN troops, a figure that became 142,000 by late August. The North Koreans had new weapons, while those of the ROK were mostly left over from World War II. They started with 150 Soviet-made T-34 tanks to none for the ROK, with over 3,000 guns and mortars, opposing about 1,000, and with 110 combat airplanes against no ROK aircraft.

A considerable percentage of the NKPA troops were combat-hardened veterans of the CPLA or of partisan groups that had fought the Japanese, and many officers had served in the Soviet Army or the CPLA. Their professional competence was above average, and their leadership good. Soviet methods of indoctrination had given them a deep motivation for combat. Discipline was strict, and morale was high. In the ROK Army, on the other hand, discipline was less strict, morale and motivation were low, and esprit de corps non-existent. The appearance of US troops was a great surprise to the North Koreans, but otherwise in the beginning their effective contribution was minimal, because they were introduced into combat piecemeal.

The ROK Army was not even able to make effective defensive use of the mountainous terrain in which the fighting started. They had, in short, only one advantage, and that one was decisive in the outcome. There can be no doubt that had the United States not intervened by sending air, ground, and naval support to the South Koreans and by gaining support of the United Nations for an attempt to halt the NKPA aggression, the Soviet-backed invasion would have achieved a Quick Win, probably even quicker than the Soviets had envisaged.

STALEMATES

Sinai Desert Front, 1915-1917

After the failure of the Turkish effort to seize the Suez Canal from the British in 1915, the evacuation of Gallipoli released British troops. The British then strengthened the Egyptian garrison, and assigned General Sir Archibald Murray to command it. The following year an offensive was launched, first to seize El Arish, at the northeastern edge of the Sinai Desert. The advance moved slowly, overcoming Turkish harassing attacks, and engineers built a railroad and a pipeline for water as the troops proceeded. The Turks made an unsuccessful attempt to halt the British with an attack in force at Romani in August, but it ended in disaster for the Turks.

In December the British took El Arish, and prepared to attack the major Turkish positions at Gaza and Beersheba, the gates to Palestine. After capturing three outposts, reorganizing, and stockpiling supplies, Murray launched an attack on Gaza on 26 March 1917. Because of a breakdown in communications, the local commander, General Sir Charles Dobell, was unaware that his troops were meeting with success on both sides of the city, and he ordered a withdrawal. The next day a Turkish counterattack ended the British attempt. A second attempt to take Gaza, with a frontal attack on 17 April, was driven off with heavy casualties.

The stalemate continued until fall. In June General Sir Edmund Allenby relieved General Murray. Reorganizing and strengthening his forces, Allenby also changed the strategy and attacked Beersheba first, on 31 October 1917. Having taken that city the British units headed northwestward and captured Gaza on 7 November.

The development of the March attack on Gaza into a Stalemate rather than a Quick Win must be attributed primarily to inadequate preparation, faulty communications, and unimaginative leadership. While the British did not have a large preponderance of forces or weapons in March, they did have more men (20,000 to 16,000, or 1.3 to 1), and horses, more and better artillery, and some naval support. In some respects, including training, officer calibre, morale, and staff planning, they undoubtedly had an advantage. In terrain and weather, neither side had an advantage. The Turks had some advantage in their road and rail systems, but since the British had ample time to stockpile the supplies needed for the attack, and the operations lasted a very short time, they had no logistics problems.

Gaza was the obvious target for the attack in March, and the British could hardly hope to surprise the Turks by attacking it. Even so, the Turk defenses were not strong, and the British might well have succeeded in taking the city if Dobell had been aware that both elements of his attacking force were making progress and had not called off the attack. During the next month, while Murray was receiving some reinforcements the Turks were also, and they were strengthening the defenses around Gaza and toward the southeast. Thus Murray's April frontal attack, against a more difficult target than the attack had struck in March, was doomed to failure.

By October not only did the British have a much stronger force for the attack (95,000 to 35,000 troops), but the new commander had a more imaginative plan, which aimed at the weakest part of the Turks' defense line, surprised them, and broke the stalemate.

Winter and Gustav Lines, Italy, 1943-1944

After the exhausted Allied forces pushed across the Volturno River in October 1943, on their drive toward Rome, they found themselves facing the formidable German defense zones known as the Winter and the Gustav Lines.

The US Fifth Army started the assault on the Winter Line on 20 November 1943. After almost two months of fierce fighting, US troops broke through determined German resistance and approached the main German defenses of the Gustav Line. There the stalemate, which was characterized by repeated

assaults by Allied troops and stubborn resistance by the Germans, lasted until early May, when the Allies launched the successful offensive that carried them to Rome.

The reason the attacks on these two related German defense lines became a stalemate rather than a Quick Win is simply that the Allies did not have enough strength to overcome a carefully planned and coordinated defense system that took advantage of the rugged terrain of Italy and was manned by an adequate defense force. There was no way a surprise attack could disrupt or dislodge the defenders, and no way to envelop or encircle the whole defense line. It had to be attacked frontally, and until there was a major preponderance of force the Allies could only chip away at the defenses and move ahead bit by bit.

The Allies did have a manpower advantage, and substantially more artillery and air support. But they were at a distinct disadvantage in the mountainous terrain and the miserable winter weather, which lowered morale and limited the possibility of maneuver. The short winter days restricted the ground operations as well as providing few hours for aircraft to fly in support. These physical factors also made it difficult to bring up supplies. The Germans, on the other hand, had stockpiled vital supplies close enough to the front to limit the immediate effects of interdiction efforts on their supply lines.

Korea, 1951-1953

During the first year of the Korean War, each side was at one time almost on the threshold of victory. First in the summer of 1950, the North Koreans occupied almost the entire Korean Peninsula, but failed to achieve a Quick Win because of US intervention. Then the UN forces counterattacked and drove almost to the Manchurian border. The entry of the Chinese Peoples Liberation Army (CPLA) in November 1951 temporarily changed the balance of power and drove the UN forces back below the 38th Parallel.

Thereafter both sides made several attempts to gain the upper hand, but neither made significant progress. With the battlefield centered generally along the 38th Parallel, diplomatic maneuvering was initiated to bring the conflict to an end. A military stalemate developed which lasted for two years. When the war ended on 27 July 1953, neither side had gained any substantial territory.

With two opportunities for victory lost, and the opposing forces facing each other at approximately the starting line, a stalemate was almost inevitable unless one or the other could concentrate a really preponderant force for a major offensive. Actually the limitations within which both sides either was forced to, or chose to, operate insured that neither side could win.

Although the Chinese and North Koreans had more guns and mortars, the UN weapons, fire control techniques and ammunition supply were better. In ships and air support too the UN command had substantial advantages. Along the demarcation line CPLA and NKPA deployed strength averaged about 300,000 men, opposing about 250,000 of the UN command. And the total available strength of the CPLA and NKPA was about 900,000 against some 700,000 UN troops. The quality of the forces, both officers and men, was good on both sides, and a large proportion had combat experience, but the long months of stalemate had a more adverse effect on the UN troops than on the highly indoctrination troops of the NKPA and the CPLA, because the UN troops found it harder on morale, and units were relieved frequently by less experienced units for rest and recreation.

Basically, however, the stalemate in Korea was political rather than military. As long as armistice negotiations were continuing in Panmunjom neither side was willing to risk launching a major offensive.

II. EVALUATION OF FORCES

From the evidence of the record as described in the narratives in Annex A, the forces participating in these operations have been evaluated in comparative terms under three major rubrics: force characteristics, circumstances, and command characteristics. Factors for evaluation are those suggested at the start of the study, modified to include others which appeared significant as the various operations were studied. Although there is a great deal of overlap among these factors, each is sufficiently individual to be considered separately.

The evaluation, which is shown in Figure 1, has been made in terms of which side, if either, had an important advantage in each factor. Such advantage is indicated with an x. When neither side had a significant advantage, when there was no information available relative to a factor, or when a factor is not relevant, no x is shown. In those cases in which a factor is considered a major, or decisive, cause of the achievement or loss of a Quick Win, the x is underlined. In the case of the Almost Quick Wins underlining indicates the factor that caused the failure. Where a factor was a distinct disadvantage to a side an O is used. The total number of advantages in each category is shown in Figure 2.

For this analysis the 1967 War is considered three operations, because the three fronts were geographically separated, with different opponents, and totally uncoordinated with each other. The Stalemate in Korea poses insuperable obstacles to comparative analysis with the other Stalemates, since neither side logically fits an attacker or a defender role. Consequently the advantages have been ascribed, but the results have not been included in the statistical analysis.

The evaluation assesses advantages in variables of different types and importance as they pertain to operations that have in common little more than the speed with which victory was or was not achieved. The campaigns vary widely in such major characteristics as locations, types and sizes of forces, duration, strategy, and tactics. It is, moreover, a small sample. Nevertheless, as the following discussion of the assessments displayed in Figures 1 and 2 shows, there are some interesting consistencies, sufficient to permit some conclusions.

General

In the seven Quick Wins the advantages most often found are:

Seven Times

- Mobility means*
- Planning*
- Objective
- Offensive
- Maneuver

Six Times

- Aircraft* preponderance
- Armor* preponderance
- Training/experience
- Leadership*
- Coordination/control
- Surprise*

Five Times

- Morale
- Intelligence*
- Simplicity
- Unity of command

The factors marked with an * are those in which a clear advantage was found to be decisive in from two operations (Intelligence) to seven (Mobility means). Most of the factors most commonly an advantage in the Quick Wins were also an advantage in at least two of the three Almost Quick Wins.

Force Characteristics

Resources

It is not surprising that in numbers of men, aircraft, and armor or cavalry in most of the operations the attacker had a preponderance, or that in ground operations few had a preponderance of ships. It is perhaps surprising that in only two of the Quick Wins, Megiddo and Manchuria, does the record show that the attacker had significantly more guns, and in only four of the seven

Figure 1. EVALUATION OF FORCES

Operation	Megiddo 1918		Flanders 1940		Malaya 1941		Manchuria 1945		1967 War		1967 War		1967 War		Barbarossa 1941		Cobra 1944		Korea 1950		Sinai 1915-1917		Italy 1943-1944		Korea 1951-53	
Opponents	Brit	Turk	Ger	Allies	Jap	Brit	Sov	Jap	Is	Eg	Is	Jor	Is	Syr	Ger	Sov	Allies	Ger	NK	SK	Brit	Turk	Allies	Ger	UN	NK/C
Posture	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D		
Force Characteristics																										
Resources																										
Mobilized Manpower	x	.	.	x	.	x	x	.	.	x	.	.	.	.	.	.	x	.	x	.	.	x	.	.	.	x
Aircraft	.	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	x	.	.	x	.	x	.
Armor/Cavalry	x	.	.	x	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.
Artillery	x	.	.	x	.	x	x	.	.	x	.	.	.	x	.	.	x	.	x	.	.	.	x	.	x	.
Ships	x	.	.	.	x	.	x	.	.	.	.	.	.	.	.	.	.	.	x	.	x	.	x	.	x	.
Technology																										
Weapons Quality	.	.	x	.	.	.	x	.	.	.	.	.	.	.	x	.	.	.	x	.	.	.	.	.	x	.
Mobility Means	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.	.	.	.	.	x	.
Command/Control System	x	.	x	.	.	.	x	.	.	.	.	.	.	.	x	.	.	.	x	.	.	.	.	.	x	.
Force Quality																										
Discipline	.	.	.	.	.	.	.	.	x	.	.	.	x	.	.	.	.	.	x	.	.	.	.	.	.	x
Elan	.	.	x	.	x	.	x	.	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.
Morale	x	.	.	.	x	.	x	.	x	.	.	.	x	.	x	.	.	.	x	.	.	.	.	.	.	x
Training/Experience	x	.	x	.	x	.	x	.	x	.	.	.	x	.	x	.	.	.	x	.	.	.	.	x	.	x
Circumstances																										
Situational Factors																										
Season	.	.	x	.	.	.	x	.	.	.	.	.	.	.	x	x	x	.	.	.	.	.	.	x	.	.
Weather	.	.	.	.	.	.	.	x	.	.	.	.	.	.	x	x	x	.	.	.	.	.	.	x	.	.
Terrain	.	.	.	x	.	x	.	x	.	x	.	x	.	x	.	.	x	.	.	x	.	.	.	x	.	.
Road/Rail Net	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	x	x	.	.	.	.	.	.	.	.	.
Fortifications	.	x	x	.	.	.	.	x	.	x	.	.	.	x	.	0	.	.	.	.	.	x	.	x	.	.
Size of Theater	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	x	.	.	.	.	.	.	.	.
External Influences																										
Major Reinforcements	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	x	.	x	.	.	.	.
Political Involvement	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	.	0	.	x	.	.	.	.	0	x
Command Characteristics																										
Leadership	x	.	x	.	.	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.	0	.	.	.	.	.
Staff Quality																										
Planning	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	0	.	.	.	.	.
Coordination/Control	x	.	x	.	.	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.	.	.	.	.	.	.
Logistics	x	.	x	.	0	x	.	.	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	x	.
Intelligence	x	.	x	.	x	.	x	.	x	.	.	.	.	.	x	.	.	.	x	.	.	.	.	.	.	.
Use of Situational Factors																										
Weather	.	.	.	.	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Terrain	x	.	x	.	x	.	x	.	.	.	.	.	.	.	.	.	.	.	x	.	.	.	.	x	.	.
Principles of War																										
Objective	x	.	x	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.	x	.	.	.	.	.	.	.
Simplicity	x	.	x	.	x	.	.	.	.	.	x	.	x	.	.	.	x	.	x	.	.	.	.	.	.	.
Unity of Command	x	.	x	0	.	.	.	.	x	.	x	.	x	.	.	.	x	.	.	.	0	.	.	.	.	.
Offensive	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	.	.	.	.	.	.
Maneuver	x	.	x	.	x	.	x	.	x	.	x	.	x	.	x	.	.	.	.	.	0	.	.	.	.	.
Mass	.	.	x	.	.	.	x	.	x	.	.	.	.	.	x	.	x	.	.	.	.	.	.	.	.	.
Economy of Forces	.	.	x	.	.	.	x	.	x	.	.	.	.	.	x	.	.	x	.	.	.	.	.	.	.	.
Surprise	x	.	x	.	x	.	x	.	x	.	x	.	.	.	x	.	.	.	x	.	.	.	.	.	.	.
Security	.	.	x	0	.	.	x	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

x = Significant advantage
x = Decisive advantage
0 = Significant disadvantage
0 = Decisive disadvantage

Figure 2. SUMMATION OF ADVANTAGES

	Quick Win		Almost Quick Win		Stalemate	
	A	D	A	D	A	D
Force Characteristics						
Resources (numbers)						
Mobilized Manpower	2	3	2	·	·	1
Aircraft	6	·	3	1	1	·
Armor/Cavalry	6	1	3	·	1	·
Artillery	2	4	2	·	1	·
Ships	3	·	1	·	2	·
Technology						
Weapons Quality	2	·	2	·	·	·
Mobility Means	7	·	2	·	·	·
Command/Control System	3	·	2	·	·	·
Force Quality						
Discipline	2	·	1	·	·	·
Elan	3	·	1	·	·	·
Morale	5	·	2	·	·	·
Training/Experience	6	·	2	·	·	1
Circumstances						
Situational Factors						
Season	2	·	2	·	·	1
Weather	·	1	2	1	·	1
Terrain	·	6	1	1	·	1
Road/Rail Net	·	1	1	1	·	·
Fortifications	1	4	·	-1	·	2
Size of Theater	·	·	·	2	·	·
External Influences						
Major Reinforcements	·	·	·	2	·	1
Political Involvement	·	·	-2	+2/-2	·	·
Command Characteristics						
Leadership	6	·	2	·	-1	·
Staff Quality						
Planning	7	·	3	·	-1	·
Coordination/Control	6	·	2	·	·	·
Logistics	+2/-1	1	-1	·	·	·
Intelligence	5	·	2	·	·	·
Use of Situational Factors						
Weather	1	·	·	·	·	·
Terrain	4	·	1	·	·	1
Principals of War						
Objective	7	·	2	·	·	·
Simplicity	5	·	2	·	·	·
Unity of Command	5	-1	1	·	-1	·
Offensive	7	·	3	·	·	·
Maneuver	7	·	1	·	-1	·
Mass	4	·	2	·	·	·
Economy of Forces	3	·	1	1	·	·
Surprise	6	·	2	·	·	·
Security	2	-1	·	·	·	·

Quick Wins did he have more men. However, it should be remembered that the preponderance shown is based on total numbers of men and weapons, and not on the advantageous use made of them. One significant, and generally employed, way to overcome a disadvantage in numbers was massing forces in one or more areas. In Flanders, for example, where the Germans were at a disadvantage in numbers of men and of tanks, they massed their guns and tanks to support the main effort, and a substantial secondary effort, thus in effect giving them a preponderance in those sectors, although they were outnumbered in the battle area as a whole. And the Germans attacking the Soviet Union in 1941 similarly massed their forces in three main areas, thereby achieving local, but not theater-wide, preponderance. Two other ways were used by the Israelis to offset overall Arab superiorities in the Six-Day War of 1967: they overcame their disadvantage in artillery with air support, and the extreme mobility of their forces enabled them to achieve numerical preponderance not only at the critical point in the Sinai, but also on the separate Jordanian and Syrian fronts. And in Malaya the Japanese actually had preponderant artillery strength at the front because much of the British artillery was deployed to defend the naval base and so was not effective in resisting the attack down the peninsula.

In all the Quick Wins except Megiddo, which took place when air operations were in their infancy, the attacker had a significant preponderance of air strength. In five of them--all except Manchuria--this preponderance was a decisive factor in the achievement of a Quick Win. It was decisive also in permitting the Allies in Cobra in 1944 almost to achieve a Quick Win, for the carpet bombing opened the way for the rapid advance of US forces across northern France, and even more significantly hampered German defensive efforts by massive air interdiction.

The matrix shows air preponderance on both sides in the Korean offensive of 1950, because although the North Koreans started with preponderant strength, the advantage shifted very quickly after the US decision to support the Republic of Korea.

Only in Flanders did the defender have the numerical advantage in armor or cavalry, and, as has been mentioned, the attacker there massed his tanks and had a preponderance where he made the main effort. In three of the other six operations--Megiddo, Manchuria, and the Sinai Front in 1967--the availability of more armor (or cavalry) has been judged a decisive advantage to the attacker.

Technology

The preponderance of armor or cavalry shown under Resources is closely related to the means of mobility shown under Technology, but the latter includes means of moving men and weapons as well as the tanks or horses attached to the force. In all of the Quick Wins the attacker had an advantage in means of mobility, and in all cases it was a decisive factor, since he had to move his forces to attack, push back, envelop, or encircle his enemy in order to achieve a victory. The possession of better means of mobility did not prove decisive in either Barbarossa or Korea of the Almost Quick Wins, but the loss of mobility resulting from the bogging down of German vehicles in snow and mud and the lack of spare parts to keep them in repair even under good weather conditions certainly contributed to the end of the possibility of a Quick Win.

Weapons quality refers to the quality of all weapons, and an advantage in one type cannot be assessed as an overall advantage. Only in Flanders and Manchuria of the Quick Wins, and Barbarossa and Korea of the Almost Quick Wins, was the advantage significant enough to note. Similarly, command and control systems in the majority of the operations were comparable on both sides.

Force Quality

The quality of a force has been described by four factors: discipline, élan, morale, and training/experience. In all cases where there was an advantage it was the attacker who had it. In only two of the Quick Wins and one of the Almost Quick Wins did he have an advantage in discipline, which was generally comparable on both sides. Elan, which is hard to assess, was judged an advantage to the attacker in three Quick Wins and one Almost Quick Win.

The attackers in all but one of the Quick Wins and in two of the Almost Quick Wins had an advantage in training and experience. Only one of these attackers, the Germans in Flanders in 1940, was not also judged to have an advantage in morale. The relation of these two factors is not surprising, since the trained and experienced soldier is generally less likely to be seriously affected by the rigors of warfare.

The poor state of training and experience of the South Korean forces in 1950 warrants mention, since this deficiency contributed significantly to the rapid advance of the North Koreans and their approach toward a Quick Win.

Circumstances

Situational Factors

These are the conditions external to the fighting forces that relate to the place and time in which the battle took place, and which they could

not change significantly once the fighting began. Most of them, where they gave an advantage worth noting, gave it to the defender. Terrain is the most important of these, and six of the defenders in the Quick Wins fought in terrain which was either a distinct advantage for defense or a distinct disadvantage for attack.

The fortifications constructed by the defender enhanced the advantage afforded by the terrain in three of the Quick Wins, and in Italy in 1943-1944, where the fortifications were judged to be decisive in the conversion of the attack to a Stalemate. In one case, Barbarossa, the absence of fortifications was a serious detriment to the defending Soviet forces, particularly in the center and the north. And in Flanders in 1940 the Germans used their fortified Siegfried Line to guard their left flank and prevent an attack from the facing Maginot Line while they launched their offensive.

The size of the theater was of decisive importance in Barbarossa. The original German objective of destroying the Soviet Army east of the Urals did not adequately recognize the vastness of the Soviet Union. Although the German forces advanced rapidly at the start of their offensive, and for several weeks had a good chance of achieving a Quick Win, the Soviets were able to call on the resources of the enormous expanses beyond the field of battle and prepare an effective counterattack. In Cobra also the size of the theater was a decisive advantage to the Germans. Because of the great distance from his bases the attackers could not adequately supply his forces with consumables, and the Quick Win could not be achieved when he was halted by a lack of fuel.

Because of the duration of Barbarossa, season and weather, which initially favored the attacker, shifted in favor of the defender when the advantage to the attacker of summer weather passed into the disadvantage to him of autumn and winter.

External Influences

Major Reinforcements. None of the attackers who achieved Quick Wins received major reinforcements during the operation. However, in two of the Almost Quick Wins--Barbarossa and Korea--major reinforcements reached the defender. And in both cases they were decisive advantages that turned the Quick Win into an Almost Quick Win. In the Sinai Stalemate in 1915-1917 reinforcements helped the Turks to maintain their defense. It was not until the attackers there, and in Italy in 1943-1944, received major reinforcements themselves that they were able to break the Stalemates.

Political Involvement. Only in the almost Quick Wins was there significant political involvement during the course of the operation. In Barbarossa both the German and the Soviet forces suffered from political influence, the Soviets in inadequate preparations for defense, the Germans in the delays caused by Hitler before and during the offensive, which resulted in loss of the advantage of season and weather. Political involvement was also a disadvantage, although not a decisive one, to the Germans in Cobra, who were ordered to fight when it had become impossible. In Korea in 1950 political involvement was a clear advantage to the South Koreans, who secured support from the United States Government and the United Nations.

Command Characteristics

Leadership

In assessing leadership, consideration has been given not only to the top commanders but to those in leader positions at all levels. It must be considered significant that in six of the Quick Wins the leaders on the attacker side from top to bottom were better than those on the defender. In five of the operations--Meggido, Flanders, and the three fronts in the 1967 War--leadership was a decisive factor in the accomplishment of the Quick Win. In the seventh operation--Malaya--on balance the leadership seems to have been comparable on both sides. This was also true of Cobra among the Almost Quick Wins. But in both Barbarossa and Korea in 1950 the attackers had an advantage in leadership. Leadership of the British forces was a negative factor in the Sinai Stalemate and was one of its causes.

Staff Quality

The assessment of the quality of a staff must necessarily consider not only its functions as a planning body but its functions as an organization controlling the operations as well. In a sense the four factors by which the staff quality had been assessed--planning, coordination/control, logistics, and intelligence--are all part of planning. But the proof of their quality must be in the execution of the plan.

In all of the Quick Wins the planning of the attacker was at the very least good, and because it worked, if for no other reason, it has to be considered better than that of the defender. In five of the cases--Megiddo, Flanders, Malaya, Manchuria, and the Sinai Front in 1967--planning was a decisive factor in the outcome. Intelligence upon which the planning was based was a decisive factor in Malaya and the Sinai. In both cases the attacker had made good use of his information about the defender's strength and deployment as well as the physical features of the battlefield in developing his operational plans. In Malaya, however, the Japanese logistics system

was so poor as to be a detriment. And in Cobra the disadvantage of the inadequate logistics system of the attacker was a decisive one.

Use of Situational Factors

This category shows those factors, natural or artificial, of which one side made particularly effective use. In two cases--Flanders and Manchuria--the attacker turned a disadvantage to an advantage as part of his deception plan and as an aid to the achieving of surprise. In both, the main attack was made through terrain--and in Manchuria in weather too--that was considered so difficult for tanks to traverse that the attacker succeeded in surprising his enemy, a very important advantage in achieving a Quick Win, as is noted below.

In Megiddo in 1918 the British planned their attack so as to send cavalry racing up the coastal plain and through the passes in the mountains and cut off the retreating Turks. In Malaya the Japanese and in Korea the North Koreans adapted their tactics to a terrain where the defender should have had the advantage but which he was unable to utilize.

Principles of War

The principles of war represent a crystallization of military thought on the military fundamentals which have been the characteristics or hallmarks of successful combat. They are useful analytical tools for assessment of military performance, and are also tools available to commanders and staffs as guides to planning. In this study they are used as a yardstick to measure performance.

As in the case of the other factors in this analysis, only when the attacker's or defender's performance showed a better application of a Principle is an advantage indicated. Absence of an advantage does not necessarily mean absence of observance of a Principle. As is readily apparent, in only one case, Economy of Force in the Almost Quick Win at Cobra, is an advantage given to a defender. In Flanders the defender's failure to observe Unity of Command and Security are both assessed as serious disadvantages to him as well as advantages to the attacker. And in the Sinai Stalemate the British attacker was judged seriously delinquent in observance of Unity of Command and Maneuver.

It is noteworthy that three of the Principles --Objective, Offensive, and Maneuver--are assessed as the attacker's advantage in all of the Quick Wins. In all except the Golan Heights offensive in the 1967 War, Surprise also was an advantage, and in four cases--Megiddo, Flanders, Manchuria, and the Sinai in 1967-- it was a decisive advantage. Simplicity and Unity of Command were advantages in five of the Quick Wins. The others appear - advantages in two or three cases.

The Almost Quick Wins are unanimous only in having an advantage in the Offensive, but Objective, Simplicity, and Surprise are all recorded twice for the attackers.

Only the Flanders operation is recorded with an advantage in all nine of the Principles of War. Of the Quick Wins, Manchuria and the Sinai Front have seven, Megiddo and the Jordanian Front have six, and Malaya and the Syrian Front have five. Barbarossa of the Almost Quick Wins has five and the other two operations four apiece.

III. QUANTITATIVE ANALYSIS

Introduction

The purpose of making quantitative analyses in this section of the study was to ascertain if, on the basis of the general, highly aggregated (and in some cases questionable) data found in the secondary sources, it was possible to ascertain any simple statistical patterns for Quick Wins, Almost Quick Wins, and Stalemates in terms of numerical force comparisons, effective force ratios, operational days, operational distances, and advance rates.

Although HERO's Quantified Judgment Method of Analysis of Historical Combat Data (QJMA) is designed for use in analyzing short engagements with detailed combat data from primary sources, since time did not permit research for such data, the QJMA was used in this analysis to try to identify general patterns rather than accurate comparisons. The data actually used is a combination of hard data and estimates based on knowledge of force structures and other relevant factors. While not precise, the results are considered within 20% of accuracy and should be so interpreted.

Analysis

The results of the QJMA analyses* of these operations are shown in Figure 3. On the basis of total forces available for employment at the outset of the campaign, effective combat power ratios (CPRs) were determined for the attacker in respect to the defender (P_a/P_d). It should be noted that P_a/P_d ratios will often differ greatly from numerical force ratios. This is due to the application to P_a and P_d of various environmental and operational variables that influence the effectiveness of weapons and of forces in combat.

Outcome values were calculated on the basis of assessment of mission accomplishment, casualty rates, and rates of advance during the campaign. A hypothetical P_a/P_d ratio was determined with respect to the "Normal Battle Line" found to represent the mean relationship of power ratios to outcomes in QJMA analyses of World War II engagements.* (See the plot in Figure 4.) A factor which would modify the actual power ratio to obtain the hypothetical ratio was then calculated. This factor is presumed to represent approximately the relative combat effectiveness value (CEV) of the opposing forces.

However, since the attackers frequently had the advantage of surprise, the relative combat effectiveness thus calculated, while representing what happened in this campaign, is considered to be a distortion of the actual relative combat effectiveness of the forces under standard conditions, where surprise was not a factor.

In HERO's QJMA analyses of World War II engagements, tentative factors were derived for the effects of surprise on the relative mobility and vulnerability of opposing forces. These factors quite satisfactorily explain outcomes of combat that are otherwise inexplicable, in the light of the relative unmodified power ratios of the opposing forces. This same technique had recently been applied by HERO to 1973 October War engagements in which surprise affected the outcomes.** The factors are considered reliable enough for utilization in the general analyses of this study.

The results of this application of QJMA surprise factors are shown in lines 8 through 11 of Figure 3. Using the revised mobility and vulnerability factors, a modified ratio was calculated (line 8) to show the effects of surprise. The actual multiplying effect of surprise in this campaign (line 9) was then calculated by dividing this ratio by the original P_a/P_d ratio. The new ratio (line 8) was then compared with the hypothetical ratio (line 4, repeated on line 10) to derive a new factor to represent the amount that the surprise ratio needs to be corrected, thus giving new CEVs (line 11) representing the relative combat effectiveness of the opposing forces under normal circumstances (without surprise).

Another quantitative approach to analysis of Quick Wins is to assess the time it took to reach a decision in the campaign, or to ascertain clearly that a Quick Win had indeed been achieved (or that a potential Quick Win had in fact degenerated to an Almost Quick Win). For this analysis a general survey was made of 30 Quick Wins or Almost

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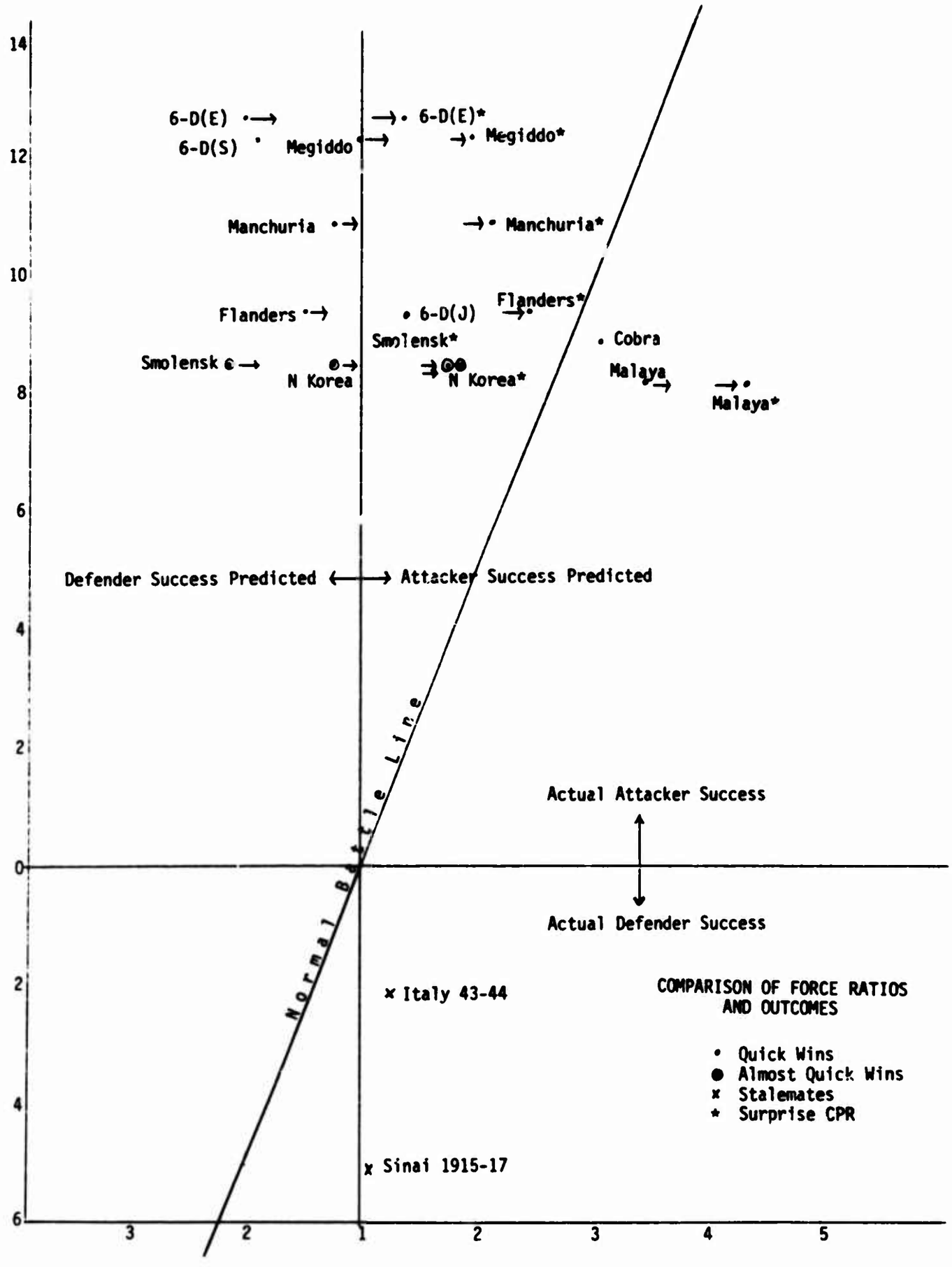
*The method is described in HERO Monograph, *The Quantified Judgment Method of Analysis of Historical Combat Data*, May 1974.

*This relationship can be read off the graph or calculated by the formula $P/P = \frac{R-R}{5} + 1$.

**"Preliminary QJMA Analyses of October War Data," HERO, 1975.

Figure 3. QUANTITATIVE ANALYSIS

	Megiddo 1918		Flanders 1940		Malaya 1941		Manchuria 1945		1967 War (6-Day)		1967 War (6-Day)		1967 War (6-Day)		Barbarossa 1941		Cobra 1944		Korea 1950		Sinai 1915-1917		Italy 1943-1944		Korea 1951-1953	
	Brit	Turk	Ger	Allies	Japan	Brit	Sov	Jap	Isr	Eg	Isr	Jor	Isr	Syr	Ger	Sov	Allies	Ger	NK	SK	Brit	Turk	Allies	Ger	UN	NK/C
Numerical Force Ratio	1.88		0.83		0.75		1.50		0.63		1.31		1.23		0.73		2.68		1.38		1.29		1.02		0.54	
Actual CPR (P_a/P_d)	0.97		0.66		2.93		0.82		0.50		1.23		0.54		0.47		3.05		0.79		1.08		1.27		0.66	
Outcome ($R_a - R_d$)	12.38		9.39		6.20		10.92		12.68		9.44		12.34		9.28		8.86		8.47		. .	5.07	. .	2.11	. .	3.63
Hypothetical CPR	3.48		2.88		2.64		3.18		3.54		2.89		3.48		2.86		2.77		2.69		0.50	2.01	0.70	1.42	0.58	1.73
CEV	3.59		4.36		0.90		3.88		7.08		2.35		6.44		6.08		0.91		3.41		0.46	2.17	0.55	1.82	0.88	1.14
Surprise?	Yes		Yes		Yes		Yes		Yes		Yes		No		Yes		No		Yes		No		No		No	No
Nature	Complete		Complete		Minor		Complete		Compl.		Minor		--		Complete		--		Compl.							
Surprise CPR	1.95		2.44		4.34		2.14		1.36		1.40		--		1.73		--		1.82							
Value, Surprise	2.01		3.70		1.48		2.61		2.72		1.13		--		3.68		--		2.30							
Hypothetical CPR	3.48		2.88		2.64		3.18		3.54		2.89		--		2.86		--		2.69							
New CEV	1.78		1.19		0.61		1.49		2.60		2.06		--		1.65		--		1.48							
Length of Campaign (days)	14		26		55		10		4		3		2		160		32		42		N/A		N/A		N/A	
Days to QW Decision	2		12		28		6		2		2		2		24		32		42							
Distance Advanced (km)	310		545		1,000		450		220		80		35		700		880		560							
Rate of Advance (km/day)	22.1		21.0		18.1		45.0		55.0		26.7		17.5		29.1		27.5		13.3							
New Force Committed	No	No	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes						


14
12
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4
5
6-D(E)
6-D(S)
Megiddo
6-D(E)*
Megiddo*
Manchuria
Manchuria*
Flanders
6-D(J)
Flanders*
Smolensk*
Smolensk
N Korea
N Korea*
Cobra
Malaya
Malaya*
Defender Success Predicted
Attacker Success Predicted
Normal Battle Line
Actual Attacker Success
Actual Defender Success
x Italy 43-44
x Sinai 1915-17
COMPARISON OF FORCE RATIOS AND OUTCOMES
• Quick Wins
● Almost Quick Wins
x Stalemates
* Surprise CPR

Figure 4

Figure 5. MAJOR RAPID OFFENSIVES OF THE 19TH AND 20TH CENTURIES

Date	Name of Campaign	Attacker Nationality	Total Distance Considered (km)	Days In Campaign	Days To Decision	Distance /Day	Resistance On March	Terrain Difficulties	Principal Means of Movement	Quick Win Yes	Quick Win No	Attacker Defeated	Notes
1800 May 14-Jun 14	Marengo	French	350	31	--	11	Minor	Severe	Foot	x			
1805 Sep 26-Oct 17	Ulm	French	475	22	--	22	Minor	--	Foot	x			
1806 Oct 9-14	Jena	French	140	6	--	23	Minor	--	Foot	x			
1807 Jun 5-14	Friedland	French	210	9	--	23	Minor	--	Foot	x			
1809 Apr 22-May 21-Jul 6	Danube	French	405	(77)	30	14	Serious	--	Foot		x		
1812 Jun 24-Aug 19-Sep 14	Russia	French	680	(83)	57	12	Serious	--	Foot		x	x	1
1813 May 1-May 20	Lutzen-Bautzen	French	300	20	--	15	Serious	--	Foot		x	?	
1863 May 1-19	Vicksburg	U.S. (N)	190	(64)	19	10	Moderate	--	Foot		x		
1864- Dec 10 1865 Apr 13	Savannah-Raleigh	U.S. (N)	1,010	121	--	8	Sporadic	--	Foot		x		
1865 Apr 3-9	Appomattox	U.S. (N)	100	6	--	26	Minor	--	Horse	x			
1866 Jun 16-Jul 3	Sadowa	Prussia	230	18	--	13	Moderate	--	Foot	x			
1870 Aug 3-Sep 1	Metz-Sedan	Prussia	390	30	--	13	Serious	--	Foot	x			
1914 Aug 14-Sep 10	Marne	German	560	28	--	20	Moderate	--	Foot		x	x	
1917 Oct 24-Nov 12	Caparetto	German	160	20	--	8	Moderate	Severe	Foot		x		
1917 Oct 31-Dec 9	3rd Gaza	British	150	39	--	4	Moderate	Bad	Foot		x	?	
1918 Mar 21-Apr 5	Somme	German	110	16	--	7	Serious	--	Foot		x		
1918 Sep 19-Oct 2	Megiddo	British	310	14	(2)	22	Moderate	--	Horse	x			
1940 May 10-Jun 4	Flanders	German	545	26	(12)	21	Moderate	--	Motor	x			
1941 Jun 22-Jul 16	Barbarossa	German	700	(167)	24	29	Serious	--	Motor		x	x	2
1941- Dec 8-1942 Jan 8-Jun 31	Malaya	Japanese	515	(55)	28	19	Serious	Bad	Foot	x			3
1941- Dec 10-1942 Jan 26	Luzon I	Japanese	310	(108)	15	21	Moderate	Bad	Foot		x		
1942 Jul 21-Aug 23	Caucasus	German	775	34	--	23	Moderate	--	Motor		x		
1944 Aug 1-Sep 1	Cobra	U.S.	880	32	--	28	Moderate	--	Motor		x		
1945 Jan 9-Feb 4	Luzon II	U.S.	230	26	--	9	Serious	Bad	Motor		x		
1945 Aug 9-20	Manchuria	Soviet	450	10	(6)	45	Moderate	Bad	Motor	x			
1950 Jun 25-Aug 5	N.Korean Offensive	N. Korean	560	42	--	13	Moderate	Bad	Foot		x	x	
1950 Sep 15-Oct 26	UN Offensive	U.S.-UN	790	42	--	19	Minor	Bad	Motor		x	?	
1967 Jun 5-8	Sinai Campaign	Israeli	220	4	--	55	Minor	--	Motor	x			
1967 Jun 5-7	Samaria	Israeli	80	3	--	27	Moderate	--	Motor	x			
1967 Jun 9-10	Golan	Israeli	35	2	--	18	Minor	Bad	Motor	x			

Notes: 1. Total distance of campaign: 1,130 km; 13 km/day/
2. Total distance of campaign: 1,260 km; 8 km/day.
3. Total distance of campaign: 1,000 km; 18 km/day.

Quick Wins in modern war, including the 10 for which narratives have been prepared in this study (Figure 5). Distances advanced during the campaign, or during the critical period of the campaign, were then determined for selected units (or as an average of the force as a whole, whichever seemed most reasonable and was facilitated by the availability of suitable data and maps). From this data it was possible to calculate approximate advance rates in kilometers per day.

Findings

1. The Stalemates have so little in common with either the Quick Wins or the Almost Quick Wins as to warrant little further consideration in the analysis.

2. Of the Quick Wins and Almost Quick Wins studied, all had QJMA Result Values exceeding 8.00. The Normal Battle Line suggests that in order to achieve a result of 8.00 or more, an effective force ratio preponderance of 2.6 is required. (See Figure 2.)

3. Of the Quick Wins and Almost Quick Wins studied, in only two did the attacker have enough effective force preponderance at the outset to expect to win a decisive success: Malaya and the Allied breakout from Normandy in Operation Cobra. In both Malaya and Cobra incidentally, airpower was a major element in the preponderance, although far from the only one. Also in both of these the attacker had a Combat Effectiveness Value (CEV) lower than that of the defender.

4. In all save one of the Quick Win or Almost Quick Win examples in which the initial force ratio preponderance was inadequate for a Quick Win, the ratio was increased to the required level by effective achievement of surprise. (The one exception was Syria, in the 1967 War in which the success ratio resulted from substantial Israeli combat effectiveness superiority.)

5. The Almost Quick Wins would have been Quick Wins if the attacker had been able to draw the defender into decisive battle within approximately one month of the breakthrough, or had the attacking army been able to cut the lines of communication behind the defender in that time and destroy him.

6. The indication that Quick Win decisions are likely to be achieved or to become certain within a period of one month was generally confirmed by a very general survey of a total of 30 Quick Wins and Almost Quick Wins in modern warfare (including the examples in this study); the results of this survey are shown in Figure 5; thus the original definition of a Quick Win can be given greater precision.

7. The average unmodified Combat Power Ratio (CPR) for the Quick Wins was 1.17; for Almost Quick Wins 1.44; for Stalemates it was 1.18; in other words the unmodified value was meaningless for comparative analysis purposes because it did not reflect either CEV or surprise.

8. The average effective CPR for Quick Wins was 3.17; for Almost Quick Wins 2.74; for Stalemates 0.61; the statistical validity of these values, it must be remembered, is questionable in the light of the small data base.

9. The average effect of Surprise in all relevant instances was a factor of ~ 66.

10. The Average CEV for attackers in the Quick Wins and Almost Quick Wins was 2.05; omitting the two instances in which the attacker's CEV was lower than that of the defender (Malaya and Normandy Breakout), the average CEV in the other eight instances was 2.38.

11. Although outside the scope of this study, this quantitative analysis suggests some conclusions about the Japanese invasion of Malaya, and the British defense, substantially different from traditional and conventional analyses:

a. Although outnumbered in manpower committed, the Japanese had an overwhelming preponderance of effective force over the British;

b. British performance, usually attributed to poor quality of troops and leaders, was in fact the result of Japanese force superiority, and particularly air superiority; despite low morale and mediocre leadership, the British CEV was calculated to be substantially higher than that of the Japanese.

c. The relatively low Japanese CEV was consistent with the results of the analysis of the 1945 Manchurian campaign in this study, and with qualitative assessments of Japanese performance in Pre-World War II engagements with Russian forces, as well as with Japanese performance against American and British troops in the Pacific and Burma; similarly the British CEV greater than that of the Japanese was confirmed by comparisons with the German-Russian relationship.

14. Also beyond the scope of this study, the quantitative analysis indicated a remarkable consistency in assessments of CEVs, to the extent they can be considered reliable with the small data base available in this study; this subject is elaborated in Annex C.

IV. CONCLUSIONS

1. In all seven of the Quick Win operations, the attacker had a significant advantage over the defender in mobility means, planning, objective, offensive, and maneuver. In six he had a numerical preponderance of aircraft and armor or cavalry, and an advantage in training and experience, leadership, coordination and control, and surprise. In five he had an advantage in morale, intelligence, simplicity, and unity of command. Seven of these--mobility means, planning, preponderance of aircraft and armor, leadership, surprise, and intelligence--were decisive in leading to the achievement of the Quick Win.

2. Only four different factors proved to be decisive in the conversion of a potential Quick Win to an Almost Quick Win in the three examples. They are: the size of the theater in Barbarossa and Cobra, which made it impossible for the attacker to sustain the attack at an intensity sufficient to achieve a quick victory; the arrival of major reinforcements for the defender in Barbarossa and Korea in 1950; the involvement of Hitler in changing the timing and plan of operations in Barbarossa; and the inadequacy of the Allied logistics system in Cobra.

3. The most significant reasons for the continuing stalemates in the operations evaluated are very different. In the Sinai in 1915-1917 it was primarily the failure of British leadership and planning. For the Allies and Germans in Italy in 1943-1944 it was the existence and defense by the Germans of carefully constructed fortifications and extremely effective use of terrain. In Korea in 1951-1953 it was the combination of political considerations on both sides in which one side was constrained in the use of its force by political decisions, while the other coordinated political and military activity.

4. Only in Malaya and Cobra of the Quick Wins and Almost Quick Wins did the attacker have enough effective force preponderance at the outset, as calculated by the QJMA, to expect to win a decisive success. In all save one of those in which the initial force ratio preponderance was inadequate for a Quick Win, achievement of surprise increased the effective force preponderance to a level sufficient for a decisive success. (In the one exception, the level achieved was the result of Israeli combat effectiveness superiority over the Syrians.)

5. In the three operations in which major reinforcements reached the battle area, they were delivered to the defender. In one, the stalemate in the Sinai in 1915-1917, they helped the defender maintain his position. In the other two, Barbarossa in 1941 and Korea in 1950, they were decisive in changing a Quick Win into an Almost Quick Win. The conclusion to be drawn from this appears to be that the attackers in the Quick Wins had forces adequate to complete their operations in a short time. Planning on a short campaign and providing forces for it can be dangerous, however, as the Germans found in the protracted campaign that developed from Barbarossa.

6. Although the sample of operations studied is not large, the analysis and the preceding conclusions show a consistency of conditions that point to some specific conclusions about factors of particular importance in attempting to gain a quick victory:

a. Planning. It is essential that an attacker have a carefully designed plan, based on good intelligence of the defender's military potential, force strength, and deployment, the economic and political situation, and the geographical area where the battle is to be fought. The plan must be designed with a knowledge of the Principles of War and should incorporate them to as great an extent as possible. Execution of the operation must conform as closely as possible to the plan design. An advantage in planning was considered a decisive factor in five of the seven Quick Wins and was important in all seven. In Malaya and the Sinai Front in 1967, an advantage in the use of intelligence data in planning was a decisive factor. In all of the Quick Wins the attackers showed a better observance of the Principles of War, both in the plan and in its execution.

b. Surprise. The importance of achieving surprise in the launching of an attack cannot be overemphasized, for it gives the attacker an advantage that may prove decisive. At the least it greatly increases the combat effectiveness of his forces and the ratio of effective force strength over his enemy, and it is usually the principal means of assuring adequate preponderance of strength at the decisive point selected by the attacker. Surprise may be achieved by attacking where least expected, by timing, or in the nature of the attack.

Only on the Golan Heights, where fighting began four days after it started on the Sinai front, was surprise not an important factor

in the achievement of a Quick Win. At Megiddo Flanders, Manchuria, and the Sinai in 1967, surprise was a decisive factor in gaining the Quick Win. In Flanders and Manchuria surprise was achieved primarily by the launching of the main effort through an area that the defender had left inadequately defended because he considered it too difficult for tanks to cross. In Megiddo, the timing and scope and design of the plan all contributed to surprise, and in the Sinai in 1967 it was both the timing of the attack and the initial air strikes that surprised the Egyptians.

c. Leadership. The quality of leaders at all levels must be high. Competent direction from the top, both in planning and in directing and controlling operations, is essential. None of the Quick Win attackers had poor leadership, and in all but Malaya and Manchuria the superior quality of the attacking leaders was a major factor in the victory. However, the failure of the British commanders in the Sinai in 1915-1917 was an important factor in the development and continuation of a Stalemate.

d. Mobility. Mobile weapons systems and the means of mobility, which includes means of moving men as well as firepower, and the ability to maneuver on the battlefield and to achieve high rates of advance (in comparison to the enemy) are of great importance. Armor is a major means of mobility, but armor preponderance by itself is not really significant unless it is used in accordance with a doctrine maximizing its shock capability. Aircraft, in the sense that they permit the placing of firepower where it is needed in support of the ground battle, may be considered a means of mobility, although the chief significance of aircraft preponderance to the ground battle is the achievement of control of the air, in order to be better able to apply this flexible firepower.

An advantage to the attacker in means of mobility was a decisive factor in all seven of the Quick Wins. But a preponderance of armor/cavalry was decisive in only three--Megiddo, Manchuria, and the Sinai front in 1967. In Flanders, where tanks played a major role in the ground operations, the Germans did not have as many tanks as the Allies. But they compensated for the lack of numbers by better doctrine for their use and by massing them for the main attack through the Ardennes. In all but Megiddo (which preceded the era of major air contributions to ground warfare) the attacker had a significant preponderance of airpower, and except in Manchuria this air superiority was decisive in the Quick Win.

e. Logistics. It is vital to provide adequately for supplying forces in combat and anticipating unusual demands upon a logistics system. In both Malaya and Manchuria of the Quick Wins, logistics problems occurred. In Malaya the Japanese had not planned to provide sufficient food and ammunition to sustain their forces, but fortunately for them they were able to use supplies which they had captured. The tanks of the Soviet 6th Guards Army in Manchuria were forced to halt their rapid advance temporarily because of a lack of fuel. But this was not a decisive flaw comparable to the inability to deliver fuel for the mobile Allied units in the dash across France, which determined that the operation was to be an Almost Quick Win instead of a potential Quick Win.

f. Preponderance of effective force strength. A disadvantage or only slight advantage in actual numbers of men and weapons can be overcome by the way in which they are used, i.e., by concentrating them in main areas of attack (the Principles of Mass and Maneuver), by employing them aggressively and flexibly (the Principles of Offensive, Objective, and Simplicity), and, above all, by achieving surprise at the outset of the campaign.

The lack of an advantage in effective force strength in all but two of the Quick Wins was more than compensated for by the achievement of surprise and by such procedures as the massing of tanks for the main attack through the Ardennes in 1940, the employment of cavalry and a carefully designed plan at Megiddo, and the prompt achievement of air superiority on the Sinai front in 1967 by the destruction of the major part of the Egyptian Air Force.

ANNEX A

NARRATIVES

QUICK WINS

THE BATTLE OF MEGIDDO
SEPTEMBER 1918

The 1917 British campaign in Palestine had had as its objectives the frustration of a possible Turko-German expedition against Baghdad, the engagement of Turkey's last reserves of manpower, and the bolstering of British morale at a time when an apparent stalemate had settled in on the Western Front. Although all of these objectives were attained with the capture of Jerusalem in December 1917, British Prime Minister David Lloyd George was unwilling to pause and adopt a defensive posture in Palestine.

Totally opposed to a strategy of remaining on the defensive in all the theaters of war, Lloyd George was also reluctant to send additional troops to France, where, he felt, they would be chewed up in the fighting without any corresponding territorial gains being made. He therefore urged the War Cabinet to approve an advance on Damascus and Aleppo with a view toward forcing Turkey out of the war. Bulgaria, Germany's other ally, was already weakening in its determination to continue the fighting, and the Prime Minister felt that the elimination of Turkey would inevitably lead to the collapse of Bulgaria.

Lloyd George's proposal received strong opposition from General Sir William Robertson, the Commander in Chief of the Imperial General Staff, Field Marshal Sir Douglas Haig, the Commander in Chief of the British Forces in France, and others. The collapse of Russia had enabled Germany to redeploy large numbers of troops to the Western Front, and these posed a threat to the British and French forces who now found themselves outnumbered in that theater. Robertson and Haig insisted that victory in the war was dependent upon success on the Western Front and, at any rate, Aleppo was too far from Constantinople for its capture necessarily to lead to the collapse of Turkey. Furthermore, an advance on Aleppo would require the reinforcement of the Egyptian Expeditionary Force. This, in turn, would necessitate the diversion from the European theater not only of ships, which were needed to supply Britain and transport American troops to Europe, but also of men, who were desperately required on the Western Front to offset Germany's growing numerical superiority. (American troops were not expected to be available in significant numbers until late 1918.)

At the end of February, the Supreme Allied War Council accepted Lloyd George's proposal for a major advance in Palestine while maintaining a defensive posture on the Western Front. General J.C. Smuts of South Africa was dispatched to Egypt with a representative of the British army in Mesopotamia to help General Sir Edmund Allenby, the commander of the Egyptian Expeditionary Force, formulate a strategy to drive Turkey out of the war. It was decided that the forces in Mesopotamia would assume a defensive stance and that two infantry divisions would be transferred from that theater to the Egyptian Expeditionary Force in Palestine. One additional cavalry division was to be sent to Palestine from France, and a cavalry brigade was to be supplied from Mesopotamia.

Allenby intended first to extend and secure his right flank by driving the Turkish forces eastward, occupying the Jordan Valley, and then seizing Amman and cutting the Hejaz railway near that city. The main part of his army would push north along the coast to Haifa, Tyre, Sidon, and Aleppo, while secondary columns advanced inland toward Damascus. To facilitate the main advance along the coast, Allenby intended to draw as many Turkish troops as possible east of the Jordan by attacking Amman and threatening the vital junction at Deraa. There the railroad from Aleppo which supplied the Turkish armies in Palestine divided, with the main line continuing south to Amman and the Hejaz, and a branch line running into Palestine.

During the first months of 1918 exceptionally heavy rains fell throughout Palestine, greatly hampering any military operations. Nevertheless, in February the British forces were able to seize Jericho and thus secure their right flank. A raid against Amman in late March failed to result in the capture of that city. It did, however, force the Turks to redeploy some troops away from the coastal region to the east bank of the Jordan River.

On 27 March, Allenby received word of Ludendorf's offensives in France, and he was ordered to send a major part of his army to the Western Front. In April and May, two infantry divisions, nine yeomanry regiments, 24 British battalions, five and a half batteries of heavy artillery, and five machine gun companies--a total of almost

60,000 men--left Palestine. Despite this reduction in strength, Allenby continued to try to advance, and between 9 and 11 April the XXI Corps near the coast attempted to break the Turkish line north of Jaffa and Jerusalem. But the defending Turks and Germans were well-prepared and the project had to be abandoned after heavy losses were incurred.

In April the 3d and 7th Indian Divisions arrived in Egypt from Mesopotamia, and nine Indian cavalry regiments arrived from France to replace the departed yeomanry units. The 24 British battalions were gradually replaced throughout the summer by inexperienced and undertrained Indian battalions. A Palestine Brigade of the Royal Air Force, with headquarters at Ramle, was placed at Allenby's disposal. This force consisted of two wings comprising seven squadrons, and included Bristol fighters and one Handley-Page bomber. The presence of the RAF gave Allenby complete air superiority, and it greatly aided the Arabs who, under the leadership of the Emir Feisal and Captain T.E. Lawrence, had revolted against the Turks in the Hejaz and were undertaking raids against Turkish positions along the Hejaz railroad as far north as Tafileh and Maan. During the hot summer months Allenby reorganized and trained his command as the last Indian battalions arrived to replace the departed British units.

The postponement of a major British advance in Palestine as a result of the German offensives on the Western Front allowed the Turks time to consolidate and reinforce their defenses in Palestine. When German General Otto Liman von Sanders, the defender of Gallipoli, became commander of the Turkish forces in Palestine on 1 March 1918, he began to reorganize the Turkish defenses, placing emphasis on prepared defensive positions and keeping reserves to a minimum. However, instead of reinforcing the armies in Palestine, the Turkish government embarked on a series of battles designed to seize politically sensitive areas in Persia and the Caucasus. This resulted in a plunge in morale and skyrocketing numbers of desertions among the poorly-equipped, under-fed, and disease-ridden troops remaining in Palestine.

In September 1918 the Turkish force in Palestine was organized into three armies. The Seventh and Eighth lay west of the Jordan River, and the Fourth was deployed to the east. The Eighth Army, commanded by General Djevad Pasha, with headquarters at Tulkarm, held a 20-mile front from the coast to the Judean Hills. It comprised the 7th, 20th, and 46th Divisions of the XXII Corps and the 16th and 19th Divisions of the German Asia Corps. The Seventh Army continued along the same line for another 20 miles through the Judean Hills and into the Jordan Valley. Its main strength lay astride the Jerusalem-Nablus road. General Mustapha Kemal Pasha, later President of the Turkish Republic, in command of the Seventh Army, had his headquarters at Nablus. The Seventh Army comprised the 1st and 11th Divisions of the III Corps and the 26th and 53d Divisions of the XX Corps. The Fourth Army, east of the Jordan, was entrenched mainly in the hills of Moab. It consisted of the 24th Infantry and 3d Cavalry Divisions of the II Corps and the 48th and Composite Divisions of the VIII Corps. Under General Mohammed Djemal Pasha ("the Lesser"), its headquarters was in Amman. General Liman von Sanders maintained his headquarters at Nazareth. All of the Turkish units were understrength. The Seventh and Eighth Armies and the VIII Corps of the Fourth Army were equipped with an estimated 3,000 sabres, 23,000 rifles, and 340 guns. An additional 6,000 troops and 30 guns of the Fourth Army's II Corps were scattered near Maan, and 3,000 troops and 30 guns were in reserve.[1] Including non-combat troops the Turkish strength amounted to 100,000 men.[2]

The British XXI Corps, under Lieutenant General Sir Edward Bulfin, held a front of some 15 miles between the coast at Arsuf, just north of Jaffa, and Rafat. To the rear of the XXI Corps lay the Desert Mounted Corps of Lieutenant General Sir Henry Chauvel, which comprised the 4th and 5th Cavalry Divisions and the Australian Mounted Division. Thus along the coast the British had massed 35,000 infantry, 9,000 cavalry, and 384 guns, facing Turkish forces of only 8,000 infantry and 130 guns. Between Rafat and Silwad were the 10th and 53d Infantry Divisions of the British XX Corps under Lieutenant General Sir Philip Chetwode. Finally, in the Jordan Valley Allenby had placed the Anzac Mounted Division and eight infantry battalions under the command of Major General Sir Edward Chaytor. In all the Egyotian Expeditionary Force had 12,000 sabres, 57,000 rifles, and 540 guns.

In addition to their numerical superiority, the British forces also had an advantage in superior lines of communications. A double-tracked railway ran between the Suez Canal and Rafah. From that city a single-tracked railway carried supplies to Beersheba, Lydda, and Jaffa. The Turks, on the other hand, were dependent upon the railway from Aleppo, which was neither consistent in gauge nor continuous. The main Hejaz line, which continued south from Deraa, was under frequent attack by the Arabs. The Palestine branch line, which passed through Beisan, Afula, and Nablus, was the only source of supply for the Turkish Seventh and Eighth Armies. The British completely controlled sea communications. The roads throughout Palestine were little more than tracks.

By the end of August Allenby had completed a detailed plan of campaign. The five infantry divisions (3d, 7th, 54th, 60th, and 75th) of the XXI Corps, supported by the heavy artillery and the 5th Australian Light Horse Brigade, were to break through the Turkish front line along the coast. The left flank of the Corps would then

swing northeast, pivoting on its right flank, and driving the Turks through the foothills toward Jenin, Afula, and Nablus. The 5th Brigade was to attack Tulkarm and cover the left flank of the Corps during the operation. As soon as the XXI Corps had broken through the Turkish line, the Desert Mounted Corps was to ride north along the Plain of Sharon until it reached the Mefjir River. It was then to turn northeastward, cross the seven-mile wide Carmel range, and enter the Plain of Esdraelon through two passes: one in the west which ends near Nazareth, and a second one in the east which terminates at Megiddo near Afula. The cavalry was to seize Beisan, Afula, and the bridge at Mejamie, thus cutting the Turkish rail communications and lines of retreat and trapping the Seventh and Eighth Armies. This advance was to be executed as rapidly as possible, with the cavalry avoiding all unnecessary engagements with Turkish troops en route to their objectives. A cavalry detachment was to seize Liman von Sanders' headquarters at Nazareth. The XX Corps, meanwhile, was first to pivot its right flank forward so that all routes to the Damieh Bridge and the Jordan Valley would be blocked. In a second stage, it was to advance on Nablus. The force under General Chaytor in the Jordan Valley was to secure the right flank of the British operation while making the Turks believe that another attack toward Amman was intended.

Allenby's forces were supported by Feisal's Arabs, who were concentrated 50 miles east of Amman at Azrak and were within range of the vital Deraa railroad junction. Reinforced by some 2,000 camels supplied by the Egyptian Expeditionary Force, the Arabs were to cut the railway near Deraa in conjunction with Allenby's own attack west of the Jordan. Elaborate precautions had been taken to insure that the concentrations of the British forces toward the coast would be completed in secrecy.

On 16 September the Arabs struck. While the Royal Air Force bombed the Deraa junction, the Arabs moved in on the railway and cut the line between Amman and Deraa. By nightfall on 17 September they had also severed the lines connecting Deraa with Damascus and Beisan. As Allenby had hoped, the Turks responded by sending reserves from Haifa to Deraa, thereby further weakening their ability to counter Allenby's massive assault on the coast.

At 1830 on the night of 18 September the 53d Division on the right flank of the XX Corps began to advance over the Wadi Auja, its only major obstacle. The 160th Brigade of the 53d Division entered the rocky wadi on a wide sweep. Upon reaching the far side at 0300 the brigade turned to its left and attacked and took the Turkish outposts from the east. At 2230 the 159th Brigade attacked Turkish positions farther to the west of the wadi with equal success, thus sealing the southern exits to the Jordan Valley.

The right flank of the 15-mile front of the XXI Corps was held by the 54th Division and a French detachment of approximately brigade strength, which had arrived in Palestine during the summer of 1917. The French brigade was to attack a well-fortified ridge opposite Rafat and secure the pivot for the XXI Corps sweep to the northeast. The 54th Division, between Rafat and Majdal, was to advance to Kfar Kasim and then move northeast. Beyond Majdal was an area of open plain which was dominated by strong Turkish positions. These emplacements were to be bypassed initially and assaulted later from the west. Beyond this gap the 3d, 75th, and 7th Divisions were to assault a second line of Turkish defenses. They were then to advance to the line Gilgal-Et Tireh-Kalkiliyeh. Finally, the 60th Division on the coast was to advance to the mouth of the Falik River and create a break in the Turkish line through which the 5th Cavalry Division could pass. The 60th Division, with the 5th Australian Light Horse Brigade on its left, would then dash toward Tulkarm, and while the infantry took the town the cavalry would cut the Nablus road.

The Turkish defense system along the coastal plain was based on a low, sandy ridge. About 3,000 yards in depth, the system was well constructed and continuous. Two to three miles to the rear was a secondary system which ran west from Et Tireh to the Falik River on the coast. Although its right flank was protected by marshes which were passable at only a few points and through which the Falik River flows, these defenses were not continuous.

At 0430, on 19 September, after 15 minutes of heavy artillery fire, the XXI Corps began its breakthrough on the coast. The Royal Air Force had already begun to bomb the headquarters of the Turkish Seventh and Eighth Armies at Nablus and Tulkarm, and the main telephone and telegraph exchanges in Afula. This completely cut communication between the Turkish armies and between the armies and Liman von Sanders' headquarters in Nazareth. The Turkish Eighth Army along the coast was completely surprised by the scope of the British assault, and it was unable to respond either to the size or to the speed of the onslaught.

By noon the Eighth Army had collapsed, and disorganized, panicked soldiers swarmed toward Tulkarm, which had not yet been captured by the 60th Division. From there the Turkish troops pushed down the road leading to Sebustiya and Nablus. As troops and vehicles entered the defile leading to Sebustiya, the Air Force poured bombs and machine gun fire down on them with devastating results. In the early afternoon, the 5th Australian Light Horse Brigade, advancing to the north of Tulkarm, reached the Sebustiya-Jenin railway and cut the line, thus adding to the panic of the retreating Turks. The 60th Division captured Tulkarm at 1700, cutting off much of the retreating

Eighth Army. By nightfall the XXI Corps held the line Rafat-Biddya-Felamieh-Et Taiyibeh-Tulkarm. The 75th Division had assumed the role of Corps reserve, and it remained in Et Tireh.

Early in the morning the 4th and 5th Cavalry Divisions of the Desert Mounted Corps had advanced to concentration points immediately to the rear of the XXI Corps, with the 4th Cavalry Division behind the 60th Division. The Australian Mounted Division (less the 5th Brigade which had been attached to the 60th Division) advanced from Lydda to Sarona. After an interval of several hours, this force would follow in the path of the 4th Cavalry Division.

At 0630 the cavalry moved north along the coast, and by 0830 the leading 5th Cavalry Division had crossed the Falik River. The Turkish Eighth Army defenses had crumbled, and the cavalry was able to advance rapidly. Just before noon, the 5th Division reached the Mefjir River, followed soon afterward by the 4th Cavalry Division, a few miles farther inland. Both forces paused at the river for a rest until approximately 1730, when they resumed the advance. By 0230 on 20 September the 5th Division was approaching Nazareth, having passed through the Carmel range near Abu Shushe without opposition. At 0530 the 13th Brigade of the 5th Division reached Nazareth. Because of the lack of communications which resulted from the Royal Air Force bombing, this was the first time that Liman von Sanders was aware of the extent to which his forces had been devastated. Unfortunately, the 13th Brigade had difficulty in locating the Turkish headquarters. Since the northern exits from Nazareth had not been blocked, Liman von Sanders was able to escape toward Tiberias. Street fighting developed within Nazareth, and the single brigade was unable to secure the town. After a short time the headquarters was located, and many important documents were seized. The brigade then withdrew to the Plain of Esdraelon. Meanwhile, the 14th Brigade had closed in on Afula.

By 0530 on 20 September the 4th Cavalry Division had passed through the Musmus Defile, which it had almost missed during the night, and entered the Plain of Esdraelon near Megiddo. A small Turkish column was surprised and captured as it approached the northern entrance to the pass. Soon afterward, however, the division encountered a second Turkish column of six companies, supported by twelve machine guns deployed on the plain. While one squadron of the 4th Division, supported by British machine guns and armored cars, engaged the Turks facing the pass, two other squadrons charged the Turkish flanks, killing or capturing the entire force of over 500 men. The 4th Division then continued to advance, reaching Afula at the same time as the 14th Brigade of the 5th Division. After leaving the 14th Brigade to secure the town, the 4th Division advanced down the Valley of Jezreel toward Beisan, arriving there at 1800 and capturing the garrison almost without resistance.

Meanwhile, the 15th Brigade of the 5th Cavalry Division, which had been delayed in crossing the Mefjir River with the artillery on 20 September, joined the 14th Brigade in Afula. The Australian Mounted Division reached Megiddo at 1100 on 20 September. The 3d Light Horse Brigade advanced on Jenin, charged straight into the town in the afternoon with drawn swords, and quickly secured the area. It then took up defensive positions in expectation of the arrival of Turkish soldiers retreating from Nablus and Tulkarm.

On the night of 19/20 September the XX Corps began its main advance with the goals of clearing the hills up to Nablus and blocking most of the routes leading to the Jordan Valley, the only avenue of escape remaining to the Seventh and Eighth Armies. The 53d Division, on the Corps's right flank, followed a well-defined ridge between the steep hills leading to the Jordan River on the east and the Jerusalem-Nablus road on the west. The 10th Division, on the Corps's left flank, advanced along a series of parallel ridges running northeast.

Word of the success of the XXI Corps along the coast earlier in the day had convinced the Turks to withdraw from their strongest defenses at Furkhah, with the result that although the 10th Division met with stubborn resistance at first, the opposition quickly faded as the Turks began their withdrawal. By 0430 on 20 September the right flank of the 10th Division had reached Salfit, and its left was approaching Kfar Haria. However, at dawn both the 10th and the 53d Divisions were halted as the British forces struggled to overcome Turkish rearguard positions.

On the morning of 21 September the Turkish rearguards of the Seventh and Eighth Armies between the coast and the Jordan Valley began to crumble. The 10th Division reached Nablus from the south at noon, having cut the Nablus-Afula road earlier in the day. At the same time, the 5th Light Horse Brigade entered the city from the west. The forces that remained of the Seventh and Eighth Armies had departed Nablus during the night of 20/21 September, heading down the Wadi Fara toward Beisan and the Jordan River. Soon after dawn, British aircraft located the long column of Turkish artillery, transport, and troops in the wadi. For four hours the planes of the Royal Air Force poured bombs and machine gun fire on the shattered armies in the defile, forcing them to return toward Nablus and the waiting British forces. At the same time, the 13th Brigade of the 5th Cavalry Division returned to Nazareth and reoccupied that city.

Soon after midnight on 21/22 September, a

detachment of the 5th Cavalry Division, on the Acre road, was attacked by a Turkish battalion from Haifa. Although the Turkish force was quickly routed, the entire 5th Division began to concentrate toward Nazareth, and it soon received orders to take possession of Haifa and Acre. On 23 September the 5th Division advanced against those cities. The 13th Brigade took Acre with little difficulty, but in Haifa the remainder of the 5th Division met with some resistance. Yet, by 25 September Haifa was operating as a British supply port.

The Australian Mounted Division, to which the 5th Australian Light Horse Brigade had been returned on 22 September, remained near Afula and Jenin, collecting prisoners. Farther south, the 4th Cavalry Division collected the remnants of the Seventh Army. Early in the day the New Zealand Mounted Brigade from Chaytor's force in the Jordan Valley seized the Damieh Bridge against stiff opposition and blocked the last Turkish escape route south of Beisan. Those Turkish forces still between the Wadi Fara and Beisan were collected by the cavalry between 22 and 24 September.

In the Jordan Valley, meanwhile, the Anzac Mounted Division and independent battalions under General Chaytor had been ordered to occupy the attention of the Turkish Fourth Army and prevent any of its troops from being sent to the west bank of the Jordan. This force was to protect the right flank of the XX Corps during its advance and then finally to cross the Damieh Bridge and seize Es Salt and Amman.

Between 19 and 21 September, while the Turkish Seventh and Eighth Armies were being hard hit in the west, the Fourth Army took no action. By 22 September, however, General Djemal Pasha, the army commander, had begun to form a clear impression of the disaster across the river, and he slowly began to withdraw his VIII Corps from the area around Amman, hoping to delay a complete withdrawal until the II Corps, which was withdrawing from Maan along the Hejaz railway, arrived in Amman.

On the evening of 23 September the New Zealand Mounted Brigade advanced to Es Salt and by 1630 on 25 September Amman had fallen to Chaytor's force. The Turkish VIII Corps then beat a hasty retreat northward.

Chaytor next received orders to intercept the Turkish II Corps, which was at that time 30 miles south of Amman. On the 26th, the 1st Brigade of the Anzac Mounted Division moved northward and occupied the Wadi el Hammam, the only source of water north of Amman, just in case the II Corps was able to slip past the British troops. At the same time, the 2d Brigade moved south to engage the II Corps. The 3d Brigade of the Anzac Mounted Division remained east of Amman along with the 20th Indian Brigade. On 28 September the commander of the II Corps began surrender negotiations with the commander of the 2d Light Horse Brigade, and the following morning the 4,000 men of the Turkish II Corps marched into Amman as prisoners.

On the West Bank, Liman von Sanders attempted to defend a line from Tiberias around the shore of the Sea of Galilee, through Semakh and the Yarmuk Valley to Deraa. However, his forces were too weak to offer an effective resistance, and Semakh and Tiberias fell to the Australian Mounted Division on 25 September. Meanwhile, on the morning of 25 September General Allenby issued orders for the advance on Damascus.

The 4th Cavalry Division was to move by way of Irbid on Deraa. If it failed to intercept the VIII Corps of the Turkish Fourth Army there, it was to pursue the Turks along the railway and the Pilgrims' Road to Damascus. The Australian Division, which was in Tiberias, followed by the 5th Cavalry Division, which was near Nazareth, was to advance on Damascus through Kuneitra.

The 4th Cavalry Division departed Beisan on the morning of 26 September. The leading brigade engaged a Turkish rearguard at Irbid in the afternoon, but the main body of the Fourth Army was already beyond Er Remte. An attempt to take the Turkish defenses at Irbid failed, although the Turks there withdrew during the night of 26/27 September. The retreating German Asia Corps had been able to carry out repairs to the railroad junction at Deraa on 26 September, but on the following day the Arabs again cut the railway. On the 27th the 4th Division drove the Turkish rearguard from Er Remte. Finally, on the morning of 28 September the 4th Division reached Deraa and found it already occupied by Feisal's Arabs, the Turks having continued their retreat northward. The 4th Cavalry Division raced toward Damascus, while the Arabs harassed the right flank of the few Turkish troops remaining between Deraa and Damascus.

The Australian Mounted Division had begun its advance toward Damascus early on 27 September, reaching the Bnot Yaacov Bridge at noon. The Turks had destroyed the stone bridge over the river and had positioned a strong rearguard of German machine gunners on the east bank. Under cover of darkness, the 3d and 5th Light Horse Brigades swam the river north and south of the destroyed bridge and attacked the Germans on both of their flanks, forcing them to withdraw. By the afternoon of the 28th, bridge repairs had progressed far enough to allow the remainder of the Australian Division and the 5th Cavalry Division to cross. These forces reached Kuneitra at nightfall. During the following day the advance continued, and a fierce rearguard action in

Saassaa resulted in another Turkish withdrawal.

On the morning of 30 September the remnants of the Turkish Fourth Army were in two columns south of Damascus. One was entrenched at Kiswe, ten miles south of the city. The other was several miles farther south and was under constant attack on its right flank and rear from the Arabs. On the Kuneitra road a Turkish rearguard had established a position between Kaukab and Katana, where they intended to make a stand against the Australian Mounted Division.

Two roads, one northeast of Homs and the other northwest to Rayak and Beirut, were still available for a Turkish withdrawal from Damascus. The road to Beirut, which the railway paralleled, passed through the steep, narrow Barada gorge. During the day on 30 September both roads were jammed with columns of fleeing Turks.

The 5th Cavalry Division and one brigade of the 4th Cavalry Division easily dispersed both Turkish columns south of Damascus, and the Australian Division on the Kuneitra road overcame all resistance at Kaukab. The 5th Light Horse Brigade then quickly advanced west of Damascus toward the Beirut road. The 3d Brigade, unable to reach the Homs road from the west, since an approach from that direction necessitated a crossing of the Barada gorge, and the severity of the terrain rendered a crossing unthinkable, remained with the 5th Brigade on the cliffs overlooking the Beirut road and opened machine gun fire on the head of the retreating Turkish column.

At 0500 the 3d Brigade began to follow the gorge back to Damascus, entering the city at dawn. A short time later Feisal's Arabs and the 5th Cavalry Division also entered the city. The 3d Brigade then passed through the city and dashed down the Homs road in pursuit of the retreating remnants of the Turkish Fourth Army. Of the Turkish forces in Palestine and Syria at the outset of the Battle of Megiddo on 19 September, only 17,000 soldiers were estimated to have escaped from Damascus northward, and of these probably only 4,000 were effective fighting troops.[3]

FOOTNOTES

1. Cyril Falls, *Armageddon-1918* (Philadelphia: J.B. Lippincott Company, 1964), p. 23.

2. Archibald P. Wavell, *The Palestine Campaigns* (London: Constable and Co., Ltd., 1929), p. 195.

3. Trevor Nevitt Dupuy and Grace Person Hayes, *The Military History of World War I.* Vol. 5: *The Campaigns on the Turkish Fronts* (New York: Franklin Watts, Inc., 1967), p. 99.

After the defeat of Poland in October 1939, the German High Command favored a defensive strategy in the west. Anything more aggressive would entail greater risks than they were willing to take. Although successful, the German command did not believe that their army was ready to challenge France, and they still entertained some hope that, if left unprovoked, the western allies might decide to come to terms with them. Furthermore, any attack directly against France would involve a frontal assault of the vaunted Maginot Line. The only alternative was an attack into northern France through Belgium and possibly the Netherlands, two countries whose neutrality Hitler himself had assured.

Hitler showed somewhat less concern than did his military commanders for the possible violation of the Low Countries' neutrality, and a good deal more determination to carry the war to France. He believed the German army to be equal to a fight with the French after it had had time to replenish its losses from the Polish campaign. The determination of the Allies to continue the struggle fostered Hitler's decision to attack.

Initial plans were formed, and implementation of the operation was twice ordered and twice postponed, during the winter of 1939-40. The delays, at first for reasons of weather, later because of the German involvement in Scandinavia, allowed the formation of new divisions and replacement of equipment. They also gave the Germans time to alter their plans of campaign substantially.

The Belgian and Dutch plains are flat, although both countries, and particularly Holland, are laced with rivers and canals. Some of these canals--the most prominent being the Albert Canal --were not only constructed as means of transportation but also served as military obstacles. The majority of the river lines in Belgium run perpendicular to any German advance across Belgium to the coast. Those in the central portion of the country--the Dyle, Senne and Dender--can be bypassed to the south. Those which form the greatest military obstacles are the Sambre-Meuse-Albert Canal in eastern Belgium, and the Escaut and Lys, which converge to form the Schelde, in western Belgium.

There would be little difficulty for the Germans in continuing the turning movement through Belgium into northern France. The river lines, in fact, flow along the axis of such a movement. The first defensive position which might be effective against an army invading France from the north begins along the Somme River. From the Channel coast near Abbeville, the Somme line runs roughly eastward to the vicinity of Ham. Thence the defensive line continues eastward to the confluence of the Oise and the Aisne Rivers, then along the Aisne toward the Meuse River and Verdun. The portion of this defensive position between Sedan and Longuyen, a short distance northeast of Verdun, was considered by the French to be partially protected by the rugged terrain of Belgium's Ardennes Forest.

Although the Ardennes is not entirely forest, much of it is densely wooded; the land is characterized by steep grades and deeply cut streams, which necessitate frequent twists and turns in the few, narrow roads, and inhibit off-road movement, which is already constrained by the woods. The hills and woods could have made a formidable obstacle if defended, but passing through them was not impossible. The roads were such, however, that, while they would allow passage, their limited capacity would render it difficult either to achieve surprise or to sustain the momentum of an armored thrust because of the problems of advancing artillery and other support units as well as vital supplies of fuel and ammunition for the tanks.

Upon emerging from the Ardennes in the area near Sedan, an attacker from the east would be confronted with the problem of crossing the Meuse River, which at this point in its course flows through a narrow valley. The river itself in this region is confined between steep banks which provide an advantage to the defender trying to cover potential crossing sites.

South and east of the Ardennes, the French frontier was shielded by the Maginot Line fortifications. But in many places before the Maginot Line could even be reached, invading troops would have to cross the Saar or the Rhine River, for each covered a portion of the Franco-German border. Should the Maginot Line be breached, the French defenders could fall back upon the difficult terrain of the Vosges Mountains and attempt to stop the German invasion there.

Operational Plans

The Germans originally favored a modification of their Schlieffen Plan of 1914, with the main avenue of attack westward across the Belgian plain and then south into France. The main drawback in this was that the Allies expected it. Allied forces would probably advance into Belgium to meet the attack, and, even though the Germans might have sufficient strength to defeat them there was little likelihood that such a defeat would be decisive. Although the Franco-Belgian border was not strongly fortified, some scattered, minor fortifications had been built, and the Allies could be expected to try to make a stand along the border. Should that fail, they would fall back to the Somme.

Studies of the situation made by General Franz Halder, Chief of the German General Staff, indicated that by massing great forces in Holland and Belgium, and moving them rapidly, the Germans could expect a greater degree of success than either the British or French imagined. However, as the operation was repeatedly postponed, at Hitler's direction, it became apparent that the Allies would be prepared to move major forces to positions in Belgium and that the Belgian Army probably would also resist any German invasion.

The apparent plan for commitment of the bulk of the Allied forces in Belgium suggested to some German planners (including Generals Erich von Manstein and Heinz Guderian) the possibility of a decisive move against France through the Ardennes. This plan was enthusiastically supported by ColonelGeneral Gerd von Rundstedt, who was in command of Army Group A, which would make the main attack. Opposing it, however, were Generals Halder and Walter von Brauchitsch, Chief of the Army Command. Such an attack was played in war games in February 1940, with such optimistic results that Halder's faith in the attack across the Belgian plain was shaken, and he was convinced that an attack through the Ardennes could have decisive results. Manstein himself convinced Hitler of the value of the Ardennes offensive in mid-February, but by this time Halder had adopted the idea. Although the French had become aware of successive changes in the earlier German plans, they never discovered this basic alteration.

Three army groups would carry out the German attack. Farthest north, General Fedor von Bock's Army Group B would invade Holland and Belgium, attacking before the other groups in order to draw British and French troops into defensive positions in Belgium. Rundstedt's Army Group A, the central group of the three, would move through the Ardennes, to be in a position to make a major attack across the Meuse in the Sedan area. The time expended in getting through the Ardennes would allow the Allied armies to get well committed inside Belgium and the Netherlands. The objective of Army Group A was to thrust across the Meuse and drive toward Abbeville north of the Somme, in order to cut off Allied forces in Belgium. Thus a major portion of the Allied forces would be trapped between the two prongs of the German attack: Army Group B's attack toward Belgium through Holland and Army Group A's attack along the Somme-Aisne line.

Army Group C, the smallest of the three, commanded by General Wilhelm von Leeb, was stationed opposite the Maginot Line. Its mission was to feint toward the line and generally to create enough of a threat to tie French reserves to the area, preventing their employment in the main battle.

The Allies were fully expecting the German attack to be a repeat of 1914, and they made their preparations accordingly. When the Maginot Line was constructed in the early 1930s, the French had assumed that it would not be necessary to extend the Maginot fortifications along the Belgian border, since they believed that--if the Germans again invaded Belgium--it would be possible to stop them before they reached the French border. Although there were some minor fortified areas along the Belgian frontier, it was not expected that they would be threatened.

The initial Allied plan was for the Allied armies to take up defensive positions along the Escaut River in western Belgium. Once the Belgians indicated that they would resist the German invasion, the Allies could count both on moving their forces into Belgium unopposed, and on the incorporation of the Belgian forces into their defensive arrangements. In anticipation that the Belgian Army would indeed delay German invaders, the French and British planned to establish their main defensive position farther east, on the line of the Dyle-Meuse Rivers. This had the additional advantage of shortening both the time and distance of the Belgian withdrawal.

Because the French estimated that the Ardennes could be penetrated only by a long, slow march on a few roads, affording them ample time to react, they planned only a light screening deployment in the area. The exits from the Ardennes would be guarded, and sufficient force would be available to prevent a crossing of the Meuse River. These units would in effect form a hinge connecting the Allied left in Belgium with the right in the Maginot Line.

The main forces, in Belgium and screening the Ardennes, made up the First Army Group, under the command of French General Gaston Billotte. Upon moving into the Dyle position, the French Seventh Army (General Henri Giraud) would cover the sector from the Dutch border to Antwerp, the Belgian Army would fall back into the line between Antwerp and Louvain. The British Expeditionary Force (General John Lord Gort) would occupy the area from Louvain to Wavre. The French First Army (General Georges Blanchard) would be stationed between Wavre and the Sambre River at Namur, including the most vulnerable area, the Gembleux gap, between the Dyle and the Meuse. The area from the Sambre to Donchery, southwest of the Ardennes, would be defended by the French Ninth Army under General Andre Georges Corap. On the right flank of the First Army Group, forming, with Corap's Ninth Army, the hinge in front of the Ardennes, was the French Second Army under General Charles Huntziger.

The Second Army Group, commanded by General Andre-Gaston Pretelat, consisting of the Third (General Charles Conde), Fourth (General Edouard Requin), and Fifth (General Bourret) Armies, waited in reserve behind the Maginot Line from Montmedy to Epinal. The Maginot Line itself, running from near Longuyon to the Swiss border,

was occupied by the Third Army Group of General Antoine Besson, consisting only of the French Eighth Army (General Gorchery).

The defensive dispositions of the Allies therefore provided numerical and armored strength to the Allied left, and fortified strength to the Allied right; although a relatively weak connecting hinge was in front of the Ardennes, there was a substantial, relatively mobile reserve to the right rear.

The Belgian Army was to delay the German attack by holding positions along the Albert Canal and the Meuse River south of Maastricht. A key to this position was Fort Eben Emael, at the juncture of the canal, west of the Dutch-Belgian border near Maastricht and the Ourthe River, which crosses the open area between Maastricht and the northern edge of the Ardennes. Little trouble was expected in holding here for at least three days in order to give sufficient time for the French and British to advance to the Dyle-Meuse line. Once the Anglo-French forces were in position on the Dyle, the Belgians would fall back into the Allied line between Antwerp and Louvain, with the French Seventh Army on their left and the BEF on their right.

The Dutch were more vulnerable than the Belgians. The Netherlands could easily be cut in half by a drive from the German border to the eastern edge of the Ijsselmeer. The national heartland was in the south; so northern Holland would be protected by only one defensive line, starting east of Groningen and running southwest to the Ijsselmeer.

In the south the first defensive line was a continuation of the northern line, following the Ijssel River south from the Ijsselmeer, across the Waal River (lower Rhine) and south along the Meuse to Maastricht. From here, the troops in the south could fall back to a more compressed position, with the Ijsselmeer on their left flank, their line running south to the Meuse and Waal Rivers, which there run east to west. At this point the defensive line would follow the rivers to the sea. This position formed the "Fortress of Holland," an enclave which contained Amsterdam, Rotterdam and The Hague.

Hoping to remain neutral, the Dutch had not participated in conversations with the British and French, aimed at evolving a joint plan of defense. Being on its own, therefore, Holland hoped that its defensive plan would have the advantage of interior lines and allow the most effective use of the army's rifle strength. In fact, the plan locked the Dutch into "static positions which proved of little value, since the enemy was able to land airborne troops behind them and could use his bombers to make rapid reinforcement of the threatened sector extremely difficult."[1] Furthermore, withdrawal into the Fortress of Holland would preclude any link between the Dutch armies and the Allied forces to the south.

The total number of German troops in the attack forces was approximately 2.5 million. They were divided into three army groups and a reserve, totalling 134 divisions. Of these, ten were armored--three with Army Group B and seven with A--and five were motorized, one with B, three with A and one with the reserve.[2]

Army Group B, the northernmost German force, consisted of 28 divisions organized into two armies: the Eighteenth (General Georg von Kuechler) on the right and the Sixth (General Walther von Reichenau). This Group was located between the North Sea and Aachen.

Army Group A, to make the main effort, had 44 divisions organized into five conventional armies --the Fourth (General Guenther von Kluge), the Twelfth (General Wilhelm List), the Sixteenth (General Ernst Busch), the Ninth (Colonel General Adolf Strauss; not activated until 14 May), and the Second (General Maximilian von Weichs)--plus the Kleist Panzer Group of five armored divisions. The Army Group was deployed between Aachen and Saarburg.

Army Group C, consisting of 17 divisions, comprised Witzleben's First Army between the Moselle and the Rhine and Dollman's Seventh Army extending to the Swiss Border.

The Army Supreme Command (OKH) reserve consisted of 45 divisions deployed well behind the attacking elements.

German armored strength was 2,574 tanks, of which 1,478 were light tanks armed only with machine guns. Of the remainder, 683 were armed with 37mm guns (many low-powered World War I weapons) and 278 with a short 75mm gun. The remaining 135 were specially equipped command tanks. Each of the ten armored divisions contained 200 to 300 tanks, and the division itself was an integrated combined arms team.

Supporting these ground forces were approximately 3,500 combat aircraft in two air fleets under General Hugo Sperrle and General Albert Kesselring. These included 1,300-1,400 long range bombers, 300 to 400 dive bombers, 1,000 to 1,200 fighters, and 500 to 600 reconnaissance craft. They were backed up by over 500 transports.

The most noticeable aspect of the Germans' organization was the degree to which it meshed with their doctrine, unlike the French which never really reconciled their theoretically offensive doctrine with their heavy investment in the fortifications of the Maginot Line. The Germans had

evolved effective breakthrough tactics in 1917 and 1918 which had failed only because they had lacked the means for mobility in exploitation, logistical support, and fire support. They agreed with the writings of J.F.C. Fuller, realizing that effective employment of armored forces would go far to remedy their World War I failures. They adopted and improved upon the organizational and doctrinal ideas of Fuller and similar thinkers, combining these with the tactical concept of the combat group which had proved so successful in 1917 and 1918. Germany began organizing its tanks into armored divisions in 1935 and invaded Poland in 1939 with five armored divisions, four light armored divisions, and four motorized divisions. As a result of the Polish experience, Germany converted the four light armored divisions to armored divisions and, in preparation for the campaign in France, created a tenth. In addition, five motorized divisions were available for the rapid follow-up of the armored divisions, to mop up, consolidate gains, and protect flanks.

The essence of German doctrine was to be found in the principle of mass or concentration. Armored elements were grouped and used to pierce the enemy's weak points and drive on past them. Follow-up units would then have the job of reducing bypassed enemy strongpoints. Infantry and artillery closely supported the tanks, with the artillery often right behind the line of contact, firing over open sights. Armored ground reconnaissance and air reconnaissance were integrated and supported the whole. Engineers were available for mining and stream crossing. Antiaircraft was well forward and ready to protect river crossing sites and choke points from Allied air attack. The 88mm antiaircraft guns were frequently useful in another role; this was the only German weapon effective against heavily armored Allied tanks. These elements were combined by the Germans in a closely integrated team, which had been well trained in appropriate tactics and doctrine, received combat experience in Poland, and trained intensively again in the winter of 1939-40.

The mass of German infantry, proceeding on foot with animal transport, followed in the wake of the armored and motorized spearhead to mop up, consolidate, widen, and defend the penetration. Infantry units were unable to keep up with the anticipated 20 to 80 miles per day of the armored advance, however, and thus there would be an undefended vacuum behind the spearhead. While this worried the German command, they expected that the Allies, thrown off balance, would not be able to flow into this zone to cut off the spearhead. This in fact proved to be the case; Allied means were inadequate to find the vacuum, and their mobile counterattack units were both inadequate and improperly handled.

The Allied force in northern France consisted of approximately two million men, commanded by General A.J. Georges. Georges, in turn, was directly subordinate to the overall Allied commander, General Maurice G. Gamelin.

These two million men were organized in 103 divisions, distributed as shown on Figure 1. Three of these divisions were armored, and thirteen of the French divisions were fortress troops, incapable of operating outside their Maginot Line defenses.

The Anglo-French forces had a total of 3,609 tanks, approximately 40% more than the Germans had. Of the total, 3,035 were French, 2,300 of them armed with a 37mm gun, 410 with a 47mm gun capable of penetrating any German armor, and 325 with both a 75mm and a 47mm gun. The British had 401 tanks that were armed only with a machine gun, but only 287 of these were on the continent on 10 May. They also had 173 tanks with 2-pounder guns (40mm), capable of penetrating any German armor, but only 23 of these were available at the beginning of the campaign. All Allied tanks could be penetrated by the Germans' 88mm antiaircraft gun, but the armor of all French tanks was generally superior to that of their German counterparts.

Where the German tanks had an important advantage was in speed and range (see Figure 2). They were twice as fast as all the French tanks except the 410 Somua mediums, which could match the German road speed of 25 miles per hour. The British light and medium tanks were faster than the Germans' (35 and 30 miles per hour, respectively), but the heavy tanks were about 50% slower. In range the Germans had a 20-25% advantage over Allied tanks. This advantage was enhanced by well-planned refueling arrangements, vigorously carried out, as well as by exploitation of captured and civilian fuel stocks. French tanks were frequently immobilized for lack of fuel.

An additional hindrance to French coordination in general was the lack of radio communication between tanks, a result of French organization and doctrine. In fact, communication was a problem throughout the French command.

The three French light mechanized divisions, and tank units attached to cavalry divisions (700-800 tanks) were under cavalry command; under existing doctrine their primary duties were reconnaissance and screening rather than to be used in mass for breakthroughs and exploitation. The rest of the French tanks were under infantry command dispersed among the infantry divisions and were to be used for infantry support rather than penetration and exploitation. Neither doctrine was appropriate for the threat.

Tied as they were to the concept of fixed defense and heavy firepower supported by an infantry mass of maneuver, the French designed their tanks primarily for an infantry support role and

Figure 1. DISTRIBUTION OF ANGLO-FRENCH ALLIED DIVISIONS ON NORTHEASTERN FRONT, 10 MAY 1940*

Army Group	1st AG (Billotte)					2nd AG (Pretelat)			3rd AG (Besson)	GHQ Reserve	Total
Army	7th	BEF	1st	9th	2nd	3rd	4th	5th	8th		
Commander / Type	Giraud	Gort	Blanchard	Corap	Huntziger	Conde	Requin	Beurret	Garchery		
Infantry											
Active	3	5	3	2	2	2	2	4	1	17[a]	41
First Reserve	1	4	-	2	1	5[b]	3	3	-	3	22
Second Reserve	2	-	-	2	2	3	1	2	2	-	14
Armored	-	-	-	-	-	-	-	-	-	3	3
Lt Mechanized	1	-	2	-	-	-	-	-	-	-	3
Fortress	-	-	1	1	-	4[c]	4[c]	1	2	-	13
Lt Cavalry	-	-	-	2	2	1	-	-	-	-	5
Cavalry[d]	-	-	-	½	½	½	-	-	½	-	2
Totals	7	9	6	9½	7½	15½	10	10	5½	23[e]	103
1st AG Total			39								
2nd AG Total							35½				
3rd AG Total									5½		

*Modified from Stamps and Esposito, p. 108.

[a]One Polish Division.

[b]One British Division.

[c]This distribution between the Third and Fourth Armies is not clear.

[d]Independent cavalry brigades.

[e]Three more infantry divisions and one armored division were being formed.

Figure 2. NUMBERS AND TYPES OF TANKS

	Number of Tanks	Speed (mph)	Range Road/Cross Country
German			
Pz Kpfw I	523	25	95/70
Pz Kpfw II	955	25	130/100
Pz Kpfw III	349	24	108/60
Pz Kpfw IV	278	26	125/80
Czech 35 (t) & 38 (t)	334	15	118/70
Pz Befw I & II	135(command tanks)		
British			
Mark VI (light)	324	35	1[illegible]0/
Mark I (infantry)	77	8	80/
Mark II (infantry)	30	15	90/
A-13 (cruiser)	143	30	90/
French			
Char Leger R35, H35, H39, R40	2,300	12	86/50
Char 35S (Somua)	410	23	160/80
Char B	325	18-22	

dispersed them over their entire front rather than massing them for decisive action. Each infantry division was assigned about one company or one battalion of armor. While the Germans intended to concentrate their tank and artillery firepower on a specific point to achieve a breakthrough, the French sought merely to inhibit any hostile movement by barriers of fire. There existed no doctrine for concentrating fire effectively to prevent German mobility; poor communications further reduced efficient employment of firepower.

The British, on the other hand, stimulated by J.F.C. Fuller, had evolved their own armored doctrine during the interwar years. This involved using light tanks for reconnaissance, heavy tanks for close support of infantry, and medium tanks for mobile armored operations. The organization of these units was designed to maximize the capability of each. Unlike the French, the British recognized the desirability of using armor for breakthrough and exploitation, but financial restrictions, and conservative resistance to full acceptance of the doctrine, had prevented its complete implementation in the British army.

Supporting the Anglo-French armies were approximately 1,700 aircraft. The French air force had 1,400; the British contributed 290 from the RAF Fighter Command.

Neither the Belgian nor the Dutch armies was equal to stopping the Germans. The Belgian army, commanded by King Leopold III, consisted of 600,000 men in 22 divisions. The Dutch army, under General Henri G. Winkelman, contained 400,000 troops organized in nine divisions.

The deployed German troop strength was approximately 25% greater than the British and French forces together; including the armies of the Dutch and Belgians the Allies had substantial numerical superiority. In terms of armored materiel--the weapons that would play the decisive role--the Allies were numerically and qualitatively superior, although German tanks were superior to those of the Allies in speed and range.

The more numerous French artillery had the advantage of being able to fire half again as much weight of metal and explosives as German artillery, but German artillery was more mobile and German doctrine provided for more aggressive employment. The greater German use of radio communications allowed immediate coordination of effort over long distances in fluid situations, and their organization and planning in such matters as establishment of advanced stocks of POL was far more efficient than those of the Allies.

All of these things--communications, organization and planning, development of weapons with emphasis on mobility--point up the fundamental nature of German superiority over the French. Everything about the German effort was aimed at achieving rapid movement with decisive effect. The French had staked their military success on fixed positions and massed firepower. They were methodical in thought and staff functioning and tended to be ponderous in movement. They placed a relatively low premium on rapid movement because of their confidence that--as in World War I--behind a continuous front holding off the attacker there would be ample time to bring up additional artillery and ammunition where needed, and to move infantry reserves by normal railroad and road convoy timetables and methods.

Operations

On the night of 9/10 May 1940, the German attack against the Low Countries began, Army Group B drawing the Allied left-wing armies (their best and most mobile forces) northward as anticipated. Advance elements of Rundstedt's Army Group A crossed the German border into Luxembourg, and by evening of 10 May had crossed the Belgian and French frontiers, encountering only a few Belgian light troops and French light cavalry.

Army Group A's effort was spearheaded by two armored commands. The main drive through the Ardennes was made by the panzer group commanded by General Ewald von Kleist, consisting of General Heinz Guderian's XIX Panzer Corps with 756 tanks in three divisions and Generaloberst Hans Reinhardt's XLI Panzer Corps with 388 tanks in two divisions. North of the Forest, the XV Panzer Corps (known as Panzer Group Hoth for its commander, Generaloberst Hermann Hoth) of Kluge's Fourth Army, with 494 tanks in two divisions, struck toward Dinant.

By the evening of 12 May two divisions of Guderian's corps, the 1st and 10th Panzer Divisions, parts of the 6th and 8th Panzer Divisions of Reinhardt's corps, which had been held up temporarily by French artillery fire, and the 5th and 7th Panzer Divisions of Hoth's corps were on the bank of the Meuse River. Heavy fighting had developed around Sedan, but the city fell to the Germans on the 12th. The next morning the German armored divisions crossed, their assault supported by heavy and effective dive bomber strikes in the absence of heavy artillery. Antiaircraft guns, brought forward for the purpose, successfully defended the captured bridge sites against Allied air attacks, costing the Allies 85 bombers.

The following day, as more of the German tanks moved steadily across the river, the last of Guderian's divisions, the 2d Panzer Division, joined the forces on the far bank. Counterattacks by units of the French Second Army were successfully beaten off. Once across the river the German tanks found better roads and more open terrain,

which permitted them to fan out and push rapidly westward.

On the left, the motorized and infantry divisions of the Twelfth and Sixteenth Armies rushed to keep up and to protect the flank of the armored forces from French attack. Although the Germans worried considerably about their exposed flank no major Allied counterattacks actually developed.

The boundary between Army Groups A and B was generally the line of the Sambre and Meuse Rivers as they flow between Charleroi, Namur, and Liege. The Sixth Army of Army Group B, north of the line, made that group's main effort through the Maastricht-Liege corridor, with 23 divisions, two of them armored. Fort Eben Emael, key to the Belgian delaying action, and important bridges over the Albert Canal were captured by airborne troops in a suprising and daring assault on the first day. Rapid penetration of the Belgian positions by panzer units followed. After only one day of resistance the Belgians were forced to fall back on the Dyle position, where they were joined by the British and French on 12 May.

Farther north, German conquest of the Netherlands was complete by 15 May. The Eighteenth Army, under General Georg von Kuechler, consisting of ten divisions, one of them armored, advanced in three columns. Paratroopers landed behind the Dutch lines and captured and held important facilities at The Hague, Rotterdam, Meerdijk, and Dordrecht. By 12 May German panzer units had broker through the Dutch defenses to link up with these enclaves. The next day, most of the French Seventh Army, which had moved into Holland as far as Breda the day before, withdrew into Belgium, and subsequently moved south of the Somme River. Some units of the Seventh Army were trapped on Walcheren Island and forced to surrender on 17 May. Meanwhile, the Dutch Government had moved to England on the 13th. With Rotterdam heavily damaged in an air attack on 14 May, the Dutch commander surrendered.

The French armies that had moved into the Low Countries included the three French light mechanized divisions, and the French 1st Armored Division. In these units and the infantry divisions there were approximately 800 tanks. After the initial meeting engagements, the light tanks were used almost entirely for reconnaissance and screening; no effort was made to mass them for counterattacks. Committed piecemeal, individual tank units had some success against German tanks and infantry, but, lacking the power of coordinated numbers, they made no significant contribution to the operations. The one success was in the Gembleux-Ernage sector, where a counterattack by French tanks and infantry on 14 and 15 May hurled back elements of the XVI Panzer Corps of the Sixth Army and reestablished the Allied position.

By 16 May the German armored corps of Army Group A had pushed the French Ninth Army, which had been put under command of General Giraud on 15 May, back some 40 miles from its initial defensive position along the Meuse, and was embarked on a drive to the English Channel coast. The French Second Army had been repulsed in counterattacks at Donchery and Stonne on the 14th. General Gamelin's order committing the two divisions of the General Reserve to the Ardennes area had been ineffective, because they moved too slowly. On 15 May he had ordered three divisions of the Third Army, from behind the Maginot Line, to close the gap between the Second and Ninth Armies. He activated the Sixth Army, under General Robert-August Touchon, to command these units. His attempts to organize an operation to cut the German line of communications near Sedan were unsuccessful.

The French armies now formed an arc, from between Charleroi and Namur in the north swinging west of Hirson, and around to Rethel on the Aisne River, with the First, Ninth, and Seventh Armies, from north to south. The line was by no means solid, and the German attack was aimed at the weakened center.

The higher echelons of the German command worried about the exposed left flank of Guderian's corps, ordered a halt of the XIX Corps on 17 May. By late afternoon, however, Guderian had received permission to conduct a reconnaissance in force, and he took advantage of the order to continue the swift advance. The following day his tanks crossed the Oise, and on the 19th the 1st Panzer Division reached Peronne and put a bridgehead across the Somme. On the 18th Rommel's 7th Division, which with the 5th had come up against the strongpoints on the Franco-Belgian border, took Cambrai and secured a bridge across the Escaut Canal. A counterattack on Guderian's left near Laon by Brigadier General Charles de Gaulle's 4th Armored Division on 17-19 May achieved some success, but without support it was driven off.

On 19 May the French Ninth Army had virtually ceased to exist, and its new commander, General Giraud, was taken prisoner by the advancing Germans. General Gamelin was replaced by General Maxime Weygand.

The threat to the southern flank of the German armies was ended by 19 May when the Twelfth and Sixteenth Armies were able to provide security as far west as Montcornet. The following day Guderian's forces took Abbeville and reached the coast, severing completely the connection between the Allied armies north and south of the Somme and forcing the British to shift their logistical port from Cherbourg to Dunkirk. Reinhardt took Doullens, and both armored corps headed northwest toward Boulogne. Rommel's 7th Division on the right of Hoth's forces, which now included the two divisions of the XVI Corps, transferred from Army

Group B, had halted briefly near Cambrai until the 5th Panzer Division could move up on its right flank. Early on 20 May Rommel reached Arras and continued toward the Scarpe River northwest of the city. On his left the 8th Division of the XLI Corps was 20 kilometers southwest of Arras by midday.

In an attempt to halt the onrushing Germans, the commander of the British Expeditionary Force (now on the Escaut River line), Lord Gort, planned a counterattack south of Arras, using the British 5th and 50th Divisions. The French agreed to participate by attacking Cambrai with two divisions of the First Army, which was around Douai, but they reported they could not be ready until the 21st, and then delayed still another day.

Gort attacked on 21 May at 1400, with two tank battallions (74 tanks), supported by two infantry battalions, with part of the French 3d Mechanized Division (70 tanks) assisting on the right. The 7th Panzer Division, advancing south of Arras in an attempt to cross the Scarpe River about 12 miles northwest of the city, was suddenly struck on the right flank by a surprise attack on the line Dainville-southern edge of Arras. A fierce battle developed. Although the Allies had neither artillery nor air support, the heavy armor of their tanks proved too much for the German antitank guns. They broke through the German defense lines, overran the artillery guns, and were finally halted only after artillery and antiaircraft reinforcements came into play and German aircraft made repeated and heavy attacks on the Allied force. Having suffered heavy losses themselves, the Allied units withdrew toward Arras.

Meanwhile the 25th Panzer Regiment, on the division left, had continued almost to the Scarpe River. Rommel ordered it back to attack the Allied force on the rear and flank. In a fierce tank battle the German panzers broke through the Allied defense and destroyed seven heavy tanks and six antitank guns, and pushed on through south of Dainville.

On 22 May, and again the following day, General Weygand tried to get the Allied military commanders to agree on an operation designed to cut through behind the spearhead of the German forces, but the Belgian and British chiefs had other demands on their units. The French 25th Motorized Infantry Division counterattacked and reached the outskirts of Cambrai on the 22d but, since the attack could not be sustained, it was ordered to fall back and destroy the bridges across the Sensee River as the force withdrew, just before midnight.

Army Group B, which had been making less dramatic but steady progress to the west in Belgium, forced King Leopold on 23 May to withdraw his troops from the Escaut River line back across the Lys River, on the left of the BEF. The next day the German Sixth Army attacked across the Escaut south of Audenarde, driving a gap between the Belgians and the BEF, despite Gort's determined effort to close it. The panzers of Army Group A were swarming north of the Somme, but meeting heavy British and French opposition. They took Boulogne on 23 May and cut off Calais on the 22d, but thanks to reinforcements from England that port held out for five days. Lord Gort withdrew three divisions from around Lille and the 5th and 50th Divisions from Arras to the Upper Deule Canal on the night of 23/24 May, and ordered the destruction of the bridges across it, from Bethune to Pont a Vendin. Five panzer divisions were threatening the canal line, and the British proceeded with plans to evacuate their forces from the continent if necessary. At this point, 24 May, however, Hitler issued his controversial order halting the German armored advance for two days, so that the slower infantry could move up to the operational area. This gave Gort time to reorganize his line and begin an orderly withdrawal to Dunkirk. Late on 26 May the Royal Navy was given the order to evacuate the British troops. At almost the same time Hitler again unleashed his panzers.

Kleist's forces, eager to cut off the Allied units before they could reach the coast, now found stiffer defenses in front of them as they tried to push northeast. Much of the area was flooded, and tanks had slow going. Hoth's force, however, had better success. The French First Army, which had been on the British left from Bethune along the canal to Douai and then on the Scarpe and Escaut River lines, had refused to withdraw. Rommel's division succeeded in crossing the canal on 26 May and linking up with the Sixth Army near Lille, cutting off half of the French First Army. The remainder of the army joined the British units moving into the area around Dunkirk. The British were unable to maintain communications with the main Belgian forces, which were being pushed back toward Ostend. On 28 May the Belgians surrendered.

The German panzers were withdrawn the following day. Hitler had made the decision, at Goering's insistence, that the Luftwaffe should complete the destruction of the Allied forces. It was 5 June before the infantry units reached Dunkirk. German aircraft attempting to attack the flotilla that was evacuating the Allied troops were held off by the Royal Air Force, and by the time the German infantry could fight its way into Dunkirk, 338,226 British, French, and Belgian troops had been removed.

FOOTNOTES

1. Basil Collier, *The Second World War: A Military History* (New York, 1967), p. 116.

2. J.R.M. Butler, *Grand Strategy*, Vol. II (London, 1957), p. 177.

3. T. Dodson Stamps and Vincent J. Esposito, *A Military History of World War II*, Vol. 1 (West Point, 1953), p. 66.

THE JAPANESE INVASION OF MALAYA
1941-1942

Geography

The Malay peninsula, some 400 miles long and 60 to 200 miles wide, extends from the Kra Isthmus in southern Thailand southward to the narrow Strait of Johore and Singapore Island. Malaya is situated directly on the shortest trade route from the Far East to Europe--through the Strait of Malacca--and Singapore Island dominates the eastern entrance to the Strait, while the Island of Penang, on the west coast of Malaya, controls the western entrance.

A jungle-covered range of hills, rising from 3,000 to 7,000 feet, runs north-south down the center of the peninsula, separating the two coastal plains which extend the length of Malaya. Both coastal plains are largely covered with rain forests and are cut by numerous rivers and streams which serve to limit the movement of both mechanized and infantry forces. Visibility in the jungle is usually limited to 30 to 40 yards, and (save for occasional clearings) natural fields of fire are almost non-existent. In 1941 the western coastal plain was more developed and thickly settled than was the eastern plain, and through it, on a north-south axis, ran most of the road and rail communications. These, in turn, were bordered by many large rubber plantations and tin-mining areas, which produced approximately 38 percent of the world's rubber and 60 percent of the world's tin. While the coastline in the west is characterized by mangrove swamps and mud flats, the east coast has vast stretches of broad, sandy beaches.

Singapore Island, about 200 square miles in area, is cut by several rivers and mangrove swamps, whose abundance on the north coast inhibited a beach defense in the event of an attack from the mainland. On the north coast lay the British naval base which had been constructed between the two World Wars at great expense, for the purpose of securing British interests and sea lanes throughout the Far East. Just east of the naval base a causeway 60 yards wide extended 1,150 yards across the Strait of Johore, and was the island's sole link to the peninsula, carrying a road, railway, and water pipeline. In the center of the island, within an area bounded by the Kranji and Jurong Rivers in the west and the Seletar River and Kallang airfield to the east, lay approximately half of the island's fixed defenses, the city of Singapore with its port on the south coast at Keppel Harbour, three water storage reservoirs, the pumping station, oil, ammunition, and food storage facilities, and the island's hospitals.

The climate throughout Malaya is hot and humid, necessitating lengthy periods of acclimatization for incoming troops from temperate or desert regions. A 1938 estimate placed the population of Malaya at five and one-quarter million. Of these 600,000 resided on Singapore Island at the outset of the fighting, although the population in the city would reach one million before the final surrender.[1]

Political and Military Background

During the latter part of 1940 the Japanese, who had been undertaking military operations in China since 1931, focused their attention on Southeast Asia with the goals of expanding their influence in that resource-rich region and of

isolating China. As Japanese pressure on Southeast Asia grew, the Vichy government of France agreed to Japanese entrance into French Indochina, and on 23 September 1940 Japanese troops occupied northern Indochina and took control of the airfields there. On 27 September the government of Japan signed the Tripartite Pact with Italy and Germany. In response the United States placed controls on exports of iron and steel scrap to Japan, thereby forcing Japan to deplete its limited stockpiles of these materials. Further, on 20 June 1941, the United States placed an embargo on oil exports to Japan from the east coast, citing domestic shortages.

On 21 July the Vichy government, no longer able to withstand continuing Japanese pressure, allowed Japan to occupy all of French Indochina. As a result, on 26 July the United States and Britain froze all Japanese assets under their control and ended trade with Japan. On 28 July the Netherlands government terminated its existing trade agreements with Japan. These combined actions effectively strangled Japan's supply of strategic raw materials. Japan was forced to make a difficult choice; it could either abandon its plans for expansion or attempt to seize the British and Dutch controlled regions in Southeast Asia, with their supplies of oil, rubber, and other natural resources. The latter alternative would almost certainly mean taking on the combined might of the United States and Britain, and Japan's only hope of success would lie in the execution of rapid and devastating attacks.

By August 1941 the Japanese Army and Navy had developed a plan of action to extend Japan's area of control in Southeast Asia and guarantee its vital supply of raw materials. The plan called for simultaneous attacks on Malaya, the Philippines and Burma, the capture of Hong Kong, and the destruction of the only major military force that could interfere: the U.S. fleet in Hawaii. These offensives were to be followed by an advance through the South China Sea to capture the Netherlands East Indies.

Japanese Plans

Responsibility for the capture of Malaya was assigned to the Japanese Twenty-fifth Army under the command of General Tomoyuki Yamashita. The ground forces under his command consisted of two infantry divisions, the 5th and the 18th, eleven artillery battalions, four tank regiments, and various service units, to be landed in Malaya, plus a third infantry division, the Imperial Guards Division, which was to advance through Thailand to support the attack on Singapore.[2] These combined forces totalled some 60,000 men. The 56th Infantry Division was assigned to serve as the Army reserve, but, as a result of the rapid progress made by the Japanese forces in the opening days of battle, this division was never committed to the campaign. Japanese naval forces assigned either to participate in or to support the assault on Malaya comprised two battleships, eight heavy cruisers, four light cruisers, sixteen destroyers, six submarines, and a number of auxiliaries and transports. The 3d Air Group, consisting of 450 aircraft based in southern Indochina, was to support the initial landings and subsequent ground operations.[3]

The Japanese offensive in Malaya was planned in three phases: establishment of air supremacy; amphibious landings on the east coast of the peninsula; and the main drive down the west coast, with a secondary assault moving parallel in the east. The entire operation was to be completed in 100 days.

The 5th Infantry Division, under Lieutenant General Matsui, was to land two regiments, the 11th and 41st of the 9th Infantry Brigade, at Singora and the 42d Infantry Regiment of the 21st Infantry Brigade at Patani in southern Thailand. These forces were to advance down the Singora-Alor Star and the Patani-Kroh roads, cross the Perak River 200 miles to the south, secure the airfields in Kedah, and capture Kuala Lumpur. The 56th Regiment of the 18th Infantry Division was to land at Kota Bahru on the northeast coast of Malaya and, under the command of Lieutenant General Mataguchi, advance south to Kuantan, capturing the airfields at Kota Bahru, Gong Kedah, and Machang en route. In all some 12,000 men, 7,000 vehicles, 90 medium, and 100 light tanks were to go ashore in the initial Japanese landings.[4] The other units of the Twenty-fifth Army were to be landed at various times during the campaign.

British Plans

In December 1941 Britain had the equivalent of four infantry divisions stationed in Malaya under the command of Lieutenant General Arthur Percival, who had taken over as GOC Malaya in May 1941. These included the 9th and 11th Indian Infantry Divisions of the III Indian Corps, the 8th Australian Division, and additional miscellaneous infantry forces; total strength was some 80,000 men.* Despite these impressive numbers the defenses of Malaya and Singapore Island were very weak. The artillery was below strength, the training and arms of the troops were not suited to jungle operations (many men had been recently diverted to Malaya while on their way to the Middle East), and there were only 158 operational but obsolete aircraft in the country, despite the fact that

*The strength was increased to about 130,000 with the arrival of more units during the campaign.

the British Chiefs of Staff had calculated that 336 first-line aircraft would be required to provide even a fair degree of security. Percival's forces had no tanks, transport aircraft, special photographic reconnaissance aircraft, long-range bombers or dive-bombers, and no army support aircraft.[5] The Far East Fleet based at Singapore had only one modern battleship, HMS Prince of Wales, one elderly battle cruiser, HMS Repulse (both of these ships had arrived in Singapore on 2 December 1941), three cruisers, six destroyers, and a number of auxiliaries. The fleet was completely lacking aircraft carriers, heavy cruisers and submarines.[6]

Despite these obvious shortcomings, there was a complacent feeling among both the residents and the military hierarchy in Britain regarding the actual strength of the Singapore base. Many--who should have known, or did know better--believed the slogan of the "impregnable fortress" of Singapore. "The security of the naval base depended ultimately on the ability of the British fleet to control the sea communications to Singapore,"[7] as Percival later wrote. But England had been at war in Europe since 1939, with the fleet fully occupied in the conflict with Germany.

While it is true that the 15-inch guns on Singapore served as a deterrent to a sea-borne assault, there were absolutely no fixed defenses guarding Singapore from an invasion from the north, a fact of which Prime Minister Winston Churchill was not even aware until 16 January 1942.[8] It had long been assumed that the jungle of Malaya was impenetrable and that therefore no landward defenses were necessary. Yet Percival, in a description of a training exercise carried out in Malaya during the northeast monsoon in the winter of 1936-7, when he was there on an earlier tour, had concluded, "I think we were the first to start actual training in the jungles and plantations of Malaya and to discover that they were not quite so impassable as had been thought."[9] Despite the results of war games conducted at the Indian Army Staff College at Quetta and at the Imperial Defense College at Camberley between 1928 and 1939 simulating a successful invasion of Singapore from the mainland, no steps were taken to construct landward fortifications.[10] Even after war had begun Percival did not act. At a meeting with Brigadier Simson, Chief Engineer, Malaya, as late as 26 December 1941, Percival refused to allow him to establish defenses on the north coast of the island, or in Johore, to halt an advance beyond artillery range of the island, on the grounds that it would be bad for morale.

In August 1940 the British Chiefs of Staff, recognizing the inability of the British fleet alone to secure the safety of Singapore, decided that, until major elements of the fleet could be made available, the defense of Singapore should rest on airpower. The land forces were assigned roles in the defense of the airfields and the naval base. However, many of the airfields in western Malaya had evolved from pre-existing civilian facilities, while the location of those on the east coast had been determined with an eye toward the limited range of the aircraft that would be stationed at those fields. In neither case were they sited for their own best possible defense; often they were located on or near the coast and were therefore highly vulnerable to possible enemy landings.

With these restrictions and conditions in mind, in September 1941 Percival developed a new defense plan. In the event of a Japanese attack from the north, he would conduct delaying actions down the peninsula until such time as sufficient reinforcements arrived to permit a counteroffensive.

The III Indian Corps under Lieutenant General Sir Lewis Heath was made responsible for defending all of the peninsula north of Johore. The 11th Indian Division covered Perlis and Kedah in northwest Malaya, less one battalion at Kroh on the Patani road and one on the Island of Penang; the 9th Indian Division was situated in the east with the 8th Brigade in Kelantan and the 22d Brigade at Kuantan; the 28th Brigade was in reserve at Ipoh. The 8th Australian Division under Major General Gordon Bennett was responsible for Johore and Malacca, with the exception of elements of the Singapore antiaircraft defenses in Johore and the Pengerang defenses in southeastern Johore. Major General F. Keith Simmons, commanding two infantry brigades of the Straits Settlements Volunteer Force (less one battalion on Penang) and miscellaneous support units, was responsible for the Singapore fortress and the Pengerang defenses. Admiral Sir Tom Phillips commanded the Far East Fleet.

The Operations

The Japanese Landings and British Naval Activity

At 1130 on Saturday, 6 December 1941, British air reconnaissance sighted two Japanese convoys moving westward into the Gulf of Thailand. In the evening a third convoy was seen travelling northwestward. The course of this last convoy led Percival to conclude that all three forces were probably heading to a port on the west coast of Indochina from which they could advance to bases in Thailand.

Because of poor weather conditions, it was not until 1848 on 7 December that the convoys were seen again, by that time 70 miles from Singora on the east coast of the Kra Isthmus. At 0130 on the 8th the first Japanese troops came ashore at Singora, Patani and Kota Bahru. Although the men of the 8th Brigade, 9th Indian Infantry Division,

at Kota Bahru fought determinedly, their coastal defenses were quickly overrun by the 56th Infantry Regiment, fighting with heavy air and naval support, and within one hour the Japanese had established a firm beachhead. Difficult terrain and inadequate training in mobile operations resulted in the failure of an attempted British counterattack, and the British withdrew to the town of Kota Bahru. At 0200 on 9 December the Japanese overwhelmed the British defenders and seized the town. This action forced the British back to Machang and (in combination with Japanese air attacks) resulted in the abandonment of all the airfields in Kelantan to the Japanese on 11 December.

At 0400 on 8 December the Japanese carried out their first air bombardment of Singapore, and at dawn air attacks commenced on airfields in northern Malaya. Most of those in Kelantan, Kedah, Province Wellesley, and Penang were hit, and by 11 December British airpower in northern Malaya had been almost eliminated, while Japanese air supremacy was secured. Six airfields had been abandoned, and the only aircraft remaining in the north were ten fighters and bombers at Butterworth Airfield opposite Penang.

At 1730 on 8 December Admiral Phillips sailed out of Singapore with the Prince of Wales, the Repulse, and four destroyers with the aim of attacking the Japanese transports in the Gulf of Thailand. Immediately before sailing Phillips had been informed by Air Vice-Marshal C. Pulford that the RAF would not be able to provide fighter protection for the fleet. During the afternoon of 9 December the ships were apparently spotted by a Japanese reconnaissance plane and a submarine, and a Japanese air strike force was sent out from bases in Indochina to attack the British squadron. The air attack, however, was cancelled because of poor weather. Phillips, realizing that he had been spotted, meanwhile decided to return to base. On the night of 9-10 December, Phillips learned that Japanese ships had appeared off Kuantan, and he decided to see what he could accomplish there before returning to Singapore. At 0240 on 10 December a second Japanese submarine noted the position of the British squadron, and at 1015 Japanese reconnaissance aircraft, acting on infromation from the submarine, again spotted the British ships. One hour later 61 torpedo planes and 27 bombers attacked the two capital ships. By 1320 both ships had been sunk, and, although 2,180 crewmen were saved, Singapore had lost its only hope of controlling the sea. Admiral Phillips was among those lost.

Northwestern Malaya

Following the unopposed landing at Singora on 8 December, the 11th and 41st Regiments of the Japanese 5th Infantry Division, reinforced with artillery and led by tanks, advanced directly down the Singora-Alor Star road, entering Malaya at 1730. At approximately midnight on 8/9 December a Japanese advance detachment composed of one infantry regiment with armor support, engaged a British patrol near Ban Sadao on the Thai border. After one hour of fierce combat the British withdrew, and in the wreckage of one of their cars the Japanese found a map of the defenses at Changlun and Jitra.

At 0800 on 11 December, the Japanese advance regiment attacked the British outpost at Changlun. By midday the forces holding this post had been forced to withdraw to Asun, demolishing the Changlun bridge behind them. Despite intense British artillery fire, the Japanese were able to complete repairs to the bridge, and at 1630, in heavy rain, a column of Japanese tanks overran the Asun outposts. After hand to hand fighting the British began to withdraw to the main positions at Jitra. During the day the Alor Star airfield had been evacuated and the morale of the British soldiers began to fall. Meanwhile, a covering force on the Perlis-Jitra road demolished a bridge over which it was to have withdrawn and as a result it had to abandon all its carriers and vehicles, four mountain guns, and seven antitank guns.

The 11th Indian Division at Jitra, a preselected and partially prepared position 15 kilometers north of the Alor Star airfield, had been reinforced on 8 December by the 28th Indian Infantry Brigade, which had been in Corps reserve at Ipoh. The British forces at Jitra were deployed near the intersection of the Perlis-Jitra and the Singora-Jitra roads, which join to form the main road on the west coast, leading to southern Malaya. Artillery support consisted of the 155th Field Regiment of two batteries with eight 4.5-inch howitzers each, the 22d Mountain Regiment, less one battery, with sixteen 3.7-inch mountain guns, the 80th Antitank Regiment with thirty-six 2-pounders, the 15th Light Antiaircraft Battery with sixteen 40mm Bofors, and the 137th Field Regiment of twenty-four 25-pounders. The Japanese 9th Infantry Brigade was reinforced by a reconnaissance detachment, a company of medium tanks, two mountain artillery guns, one platoon of engineers, and various support forces.

Advancing slowly because the British had demolished all of the bridges, at 0300 on 12 December the Japanese advance guard attacked the Jitra position but was driven back under intense artillery fire. At dawn the Japanese committed the entire brigade to the battle. Because the airfield at Alor Star had already been abandoned, his lines of communication were threatened, the morale of his men was low, and he had no reserves, at 0900 the commander of the 15th Brigade, Brigadier Garrett, requested permission to withdraw to Gurun. Permission was denied by Percival, who wanted the stand to be made at Jitra. Immediately after this decision had been made, the Japanese brigade attacked once again, creating a large gap in the British line. The news of this breakthrough

did not immediately reach Japanese 5th Division headquarters, where Colonel Masanobu Tsuji, Chief of the Army Operations Staff, and in command of the operation, had been making plans for a renewed night attack to be executed by the entire 5th Division. At 2200 on 12 December General Heath ordered a withdrawal to Gurun, some 50 kilometers to the south. The Japanese, however, already prepared to attack, were in close pursuit despite heavy rainfall.

Japanese aircraft had begun to land at Alor Star airfield at noon, and during the evening they attacked the retreating British, who had suffered enormous losses in men and equipment at Jitra, including some 3,000 men captured. The British were unable to make a stand at Gurun, which was already under Japanese air and artillery attack on 13 December as troops withdrawing from Jitra began to arrive. By 1010 on 13 December the Japanese had seized the bridges over the Kedah River and had moved their army headquarters into Alor Star, where they made immediate use of abandoned British supplies of food, fuel, and ammunition. Meanwhile, the 41st Infantry Regiment pursued the British to Gurun, arriving there in the late afternoon of 14 December. The crossroads at Gurun fell without opposition at 0130 on 15 December, and by 0700 the main road to the south was open to the Japanese. In view of the rapidly deteriorating situation, Major General Murray-Lyon, commander of the 11th Indian Infantry Division, ordered a further withdrawal to the Muda River, which forms the boundary between Kedah and Province Wellesley.

As a result of this withdrawal and heavy bombings by the Japanese, General Heath decided at 1100 on 15 December to abandon Penang Island. He then ordered the withdrawal of the 11th Division to a position south of the Krian River on 17 December, where the rivers and swamps form a good natural defense.

Meanwhile, the Japanese 42d Regiment, which had landed at Patani on 8 December, was making steady progress. One battalion of the 15th Indian Brigade had been sent north immediately after the outbreak of hostilities to seize the Ledge, a defensive position about 60 kilometers inside Thailand, where the Patani-Kroh road traversed a steep ridge. However, before the unit --called the Krohcol Column--reached the area, the Japanese 42d Regiment, with tank and artillery support, had occupied it, and the arriving Krohcol force was driven back to Sungei Patani. The Japanese then advanced down the Patani-Kroh road and threatened to cut off the 11th Indian Division at Muda, contributing to Heath's decision to withdraw the division to the Krian River.

The withdrawal of the 11th Indian Division from the Muda River, however, did not eliminate the possibility of the Japanese envelopment. When the Japanese 42d Regiment reached Kroh, it began to advance south along the Kroh-Grik track toward Kuala Kangsar. This route had been considered by the British to be almost impassable, and therefore only one battalion of the 12th Indian Brigade had been assigned to its defense. In view of this threat on the Grik road, on 18 December Percival approved a withdrawal, when necessary, behind the Perak River. He further ordered Heath to construct defensive positions between Ipoh and Tanjong Malim. On 22 December the British forces withdrew eastward across the Perak River, destroying all the bridges behind them.

West Central Malaya

Between the defensive positions at Ipoh and Tanjong Malim additional British defense posts were established at Tapah, Bidor, Trolak, and Slim River, along the main road. During the night of 26/27 December the Japanese Imperial Guards and 5th Divisions crossed the Perak River in small boats, undetected by the British. The 4th Regiment of the Imperial Guards Division advanced steadily and attacked the 12th Brigade eight miles north of Ipoh. After taking heavy losses, Brigadier Paris withdrew his force to a new position five miles north of Kampar. During the afternoon of 28 December a regiment of the 5th Division passed through the 4th Imperial Guards Regiment and reengaged the 12th Brigade, forcing it back toward Kampar. At noon on 29 December the 12th Brigade, exhausted by its seemingly endless routine of combat and withdrawal, was withdrawn to Bidor.

The village of Kampar dominates the main road and railroad through the tin-mining area of the Kinta Valley in the State of Perak. Around the village the land is flat and had been cleared, creating open fields of fire extending to 1,200 meters or more for small arms and artillery. The town is situated on a hill which rises to 1,200 meters east of the main road, and provided an excellent artillery observation post. To the west and northwest, the Kampar and Patani Rivers are bordered by almost impassable swamps. Percival hoped to make a protracted stand at the town of Kampar. The recently combined 6/15th Brigade was to block the main road at Kampar while the 28th Indian Brigade blocked a bypass route to the east.

The Japanese forces involved in front of Kampar were the 5th Division and the 4th Regiment of the Imperial Guards Division. One battalion from the 11th Infantry Regiment was to advance east of the main road and the town through the Central Highlands; the 21st Infantry Regiment, with armor and artillery support, was to advance south along the main road. The 42d Infantry Regiment was to attempt to envelop the left flank of the British position by crossing the Kampar River swamps, while an assault down the Perak River west of

Kampar was to be executed by the 4th Imperial Guards. Finally, a seaborne assault from Port Weld to Utan Melintang on the west coast was to be carried out by the remainder of the 11th Infantry Regiment.

On the night of 30/31 December the Japanese 5th Division sent a patrol into the area southwest of Kampar. During the evening of 31 December the 21st, 11th and 42d Regiments of the Japanese 5th Division launched their attack. Resistance was fierce, and the Japanese repelled a British counterattack only with great difficulty. An advance against the main Kampar position by a company of medium tanks made little progress. At 0700 on 1 January Lieutenant General Matsui, commander of the 5th Division, committed the 41st Regiment to the battle and launched a renewed attack against the main British position. This resulted in heavy fighting between the British 6/15th Brigade and the Japanese 41st Regiment, as the Japanese outflanked the British defenses in the east and infiltrated between the British posts. The 42d Infantry Regiment was able to advance through the swamps west of Kampar, but only at a rate of 2,000 meters a day. It arrived just south of Kampar at dawn on 2 January, and immediately attacked the rear of the Kampar positions, completing what had developed into a successful double envelopment.

At 1930 on 1 January the Japanese 11th Infantry Regiment, which had embarked at Port Weld with landing craft and barges, executed a successful landing at Utan Melintang, forcing the British patrols there to fall back to the town of Telok Anson. The following morning the 4th Regiment of the Japanese Imperial Guards Division, which had come by boat down the Perak River, carried out a successful landing at Telok Anson, driving the British forces there south toward the Slim River. These developments on the coast threatened to cut the communications of the 11th Indian Division and forced the British to withdraw all their forces from Kampar on the night of 2/3 January to the positions previously prepared on the Slim River.

East Central Malaya

Meanwhile, the British 8th Infantry Brigade, of the 9th Indian Infantry Division, which had been forced back from Kota Bahru to Machang on 11 December after the initial landings by the Japanese 56th Infantry Regiment of the 18th Division, withdrew by rail some 150 miles to Kuala Lipis and Jerantut on the night of 11/12 December, thereby abandoning the Gong Kedah and Machang airfields. At the same time, the 56th Regiment received orders to advance down the east coastal road and capture Kuantan. Because of the numerous unbridged streams on the east coast, the density of the jungle, and the fact that a few horses were the only transportation available to the regiment, Japanese progress was very slow, and they did not reach Kuantan until 29 December. Immediately upon arrival in Kuantan the 56th Regiment became engaged with the 9th Indian Division, which was defending the town and the abandoned airfield, guarding the right flank of the 11th Indian Division. Sporadic fighting took place during the next two days until, on 31 December, the Japanese struck in force and took Kuantan. Between 31 December and 2 January the focus of the fighting shifted to the Kuantan airfield. Although the 9th Division fought fiercely, by 2 January Japanese gains in western Malaya forced Heath to order the 9th Indian Division to withdraw back to Jerantut and Kuala Lipis on 3 January and concentrate for future action on the west coast.

West Central Malaya

The successful Japanese landings at Utan Melintang on 1 January and Telok Anson on 2 January had caught the British by surprise and inadequately prepared. They reacted by strengthening their defenses along the west coast at the expense of their defenses along the main road. A Japanese landing attempt in the British rear at Kuala Selangor on 2 and 3 January was unsuccessful.

The Trolak-Slim River area, with its numerous rubber plantations, is so densely jungled as to inhibit both armor and infantry movement. The Japanese were thus forced to follow the road and rail lines, where the British had established their major defensive positions. The 12th and 28th Indian Infantry Brigades of the 11th Indian Division were assigned to the Trolak and Slim River areas respectively, taking up their positions on the night of 3/4 January immediately following the withdrawal from the Kampar area. These units were supported by the 6/15th Brigade in Tanjong Malim until 5 January, when that brigade was moved to Rawang to hold an area between that town and the Selangor River. The troops were, by this time, completely exhausted, having spent the last month in almost constant retreat with heavy losses.

The Japanese 5th Division's plan of attack called for the 42d Infantry Regiment, supported by a tank company and an engineer company, to advance down the main road from Kampar on bicycles. The 42d Regiment was to be followed by the 11th Infantry Regiment. Once the breakthrough was made, the 11th Regiment would pass through the 42d Regiment and continue the advance. The 41st Infantry Regiment was in division reserve.

At 0600 on 7 January the Japanese attacked. Fighting was very intense at first but antitank defenses were insufficient, and the Japanese advanced slowly, breaking through seven lines of British defenses over a distance of six kilometers. In the lead, a Japanese tank platoon and an

infantry platoon, both commanded by newly commissioned second lieutenants, surged ahead and traversed the entire British defensive zone, seizing the Slim River bridges before the British could destroy them. Intense British artillery fire stopped the advance of the Japanese tanks at the river, but all British efforts to retake the bridges were unsuccessful. By midnight the British Trolak-Slim River line had been smashed, all the Japanese forces had crossed the river, and were pursuing the remaining British troops along the railroad line to Tanjong Malim.

British losses had been enormous. The combined strength of the 12th and 28th Indian Brigades after the battle of Slim River was only 1,173. The Japanese took more than 2,000 prisoners in addition to large quantities of equipment. At no time, either during preparations for the stand at the Trolak-Slim River positions or during the battle, did the 9th Indian Division, positioned nearby in Jerantut and Kuala Lipis, make any effort to support the 11th Indian Division or to relieve the pressure on it.

The depleted state of the 11th Indian Division and the more open terrain immediately to the south combined to force the British to abandon their delaying tactics. They broke contact with the Japanese, withdrawing approximately 250 kilometers to the northern edge of Johore, leaving Kuala Lumpur, the capital of Malaya and a major supply base, to the Japanese on 11 January. In Johore the 8th Australian Division, less the 22d Brigade at Mersing, established a defensive line along the Muar River from Muar to Segamat. The 9th Indian Division, which had been strengthened to three brigades with the arrival in Malaya of the 45th Indian Brigade on 3 January, was to come under the command of the 8th Australian Division. The 11th Division would withdraw through this line to southern Johore, where it could reorganize.

In addition to the main road through Johore there was also a well-developed coastal road in the west running to Singapore. The British defenses along the Muar River line blocked both, and Major General Gordon Bennett intended to stage a counterattack against the Japanese flanks if and when they attempted to overrun the British positions. Although the communications for the forces under Gordon Bennett in northwest Johore had to pass through the villages of Ayer Hitam and Yong Peng, both a mere 28 kilometers from the west coast, and despite the fact that the Japanese were able to conduct amphibious operations all along the coast almost unopposed, Gordon Bennett assigned the poorly trained 45th Indian Brigade and one field battery to hold the 40 kilometer sector of the Muar River, and to guard against possible Japanese seaborne landings farther to the south. As a result of the rapid British withdrawal from central Malaya, the Japanese forces paused to reorganize and regroup. General Yamashita ordered the 5th Division to move south along the main road toward Segamat in north central Johore, while the Imperial Guards Division reorganized in Malacca on the west coast. The Guards would then advance along the coastal road, with the goal of crossing the Muar and Batu Pahat Rivers and thereby threatening the communications of the British forces on the main road.

The 4th and 5th Imperial Guards Regiments were to advance against Muar, south of Malacca on the west coast. While the 4th Regiment contained the Muar defenses, the 5th Regiment would cross the river at night and attack the town from the east. As soon as the river crossing had been completed, one battalion from the 4th Regiment would move by sea south of Batu Pahat to prevent use of the coastal road for a British withdrawal. When Muar had been secured, the 4th Regiment would move on Batu Pahat, while the 5th Regiment advanced overland on Yong Peng.

On the east coast the 55th Regiment of the 18th Division, which had landed at Kota Bahru on 28 December and had advanced down the coast in the wake of the 56th Regiment, was ordered to relieve the latter in Kuantan on 11 January and then continue southward to capture Endau. The 56th Regiment was to move westward from Kuantan to Kuala Lumpur. After capturing Endau and Mersing the 55th Regiment was also to move westward, to Kluang.

By 1100 on 15 January Japanese troops of the 5th Guards Regiment were at the Muar River facing the town of Muar. The Japanese succeeded in crossing the river on the night of 15/16 January, and at dawn they advanced on the town, overwhelming the defenders during the afternoon. This major loss on his left flank forced Gordon Bennett to commit part of his reserve to the battle in an attempt to stop the Japanese at Bakri, a few miles southeast of Muar.

Meanwhile on the main road the Japanese 5th Division, advancing on bicycles with armor support, engaged the British near Gemas on 15 January. A successful Australian ambush caused numerous Japanese casualties, and for the next three days the British repulsed all Japanese assaults. Finally, the 5th Division commander, General Matsui, diverted part of his force to outflank Gemas by advancing cross-country through Jementah, where they engaged the 22d Indian Brigade on 18 January. On 19 January the main body of the 5th Division force broke through the front line and took Gemas.

When Percival became aware of the strength of the Japanese assault against the Muar River line, he ordered an immediate withdrawal to a new line passing through Kluang, Ayer Hitam, and Yong Peng. The 53d Infantry Brigade, which had arrived in Singapore on 13 January, was ordered to hold the Bukit Pelandok defile northwest of Yong Peng. This move was completed on 21 January, except for

the 45th Indian Brigade, which had been cut off at Bakri since 19 January by the 5th Guards Regiment of the Imperial Guards Division. All attempts to rescue this force failed with heavy casualties. Of the 4,500 men in the brigade, only 900 were able to reach Yong Peng on 23 January after a gruelling cross-country trek.

On 24 January the British began to withdraw to a line stretching from Jemaluang through Kluang to Ayer Hitam and Batu Pahat. This was almost parallel to the previous Muar River line, but now there were three main roads to block: in the west, the main road and the coastal road, and in the east, the main road from Mersing to Singapore via Johore Bahru.

By 24 January the Imperial Guards Division, which held Bukit Pelandok and the Batu Pahat-Ayer Hitam road, was threatening to cut off the 6/15 Brigade at Batu Pahat. The brigade commander was therefore given permission to withdraw to Rengit on 25 January. The withdrawal began during the morning of 26 January, but during the day Japanese forces seized Rengit, and the British were forced to withdraw westward to the coast. During the nights of 28/29 January and 31 January/1 February some 2,700 men from the 6/15 Brigade were evacuated to Singapore by sea.

On the east coast, leading elements of the Japanese 55th Regiment, 18th Division, had probed outposts of the 22d Australian Brigade north of Endau on 14 January. However, serious fighting did not start in the area until 21 January, when Japanese troops attempted to cross the Mersing River. On 25 January Brigadier Taylor, commander of the Australian brigade, was ordered to withdraw to Jemaluang to conform to the changes along the rest of the line. Before leaving he organized a highly successful ambush, which inflicted heavy casualties on the Japanese on the night of 26/27 January.

Following the loss of Batu Pahat and the evacuation of the 6/15 Brigade, General Percival decided to execute a phased withdrawal of all forces to Singapore on the night of 30/31 January. During the withdrawal, the 22d Indian Brigade was cut off and captured by the Japanese.

On the morning of 31 January, the Japanese entered Johore Bahru. In their haste to withdraw, however, the British had not destroyed the supplies of food, fuel, and ammunition which had been stored in large quantities in Johore Bahru. These stockpiles fell intact into the hands of the Japanese Twenty-fifth Army, whose own logistical system had been unable to provide them with adequate supplies with which to conduct the final assault on Singapore.

The British blew a thirty yard gap in the causeway, severing all road and rail communications with the mainland and cutting Singapore Island's water supply, which had been provided through pipes on the causeway. The defenders and those living on the island could count only on water already in its reservoirs.

Percival deployed his available forces in expectation that a Japanese assault would come on the northeast coast of the island, despite the assessment of General Sir Archibald Wavell, Supreme Commander of the new ABDA (American-British-Dutch-Australian) Command, which included Singapore, that the attack would come on the northwest. Percival's dispositions used the causeway as a unit boundary between the 27th Australian Brigade on the west and the 28th Indian Brigade on the east. This meant that responsibility for defense of this potential attack route was divided between the two units. In addition to those troops which had retreated to Singapore from the Malay peninsula, Percival had at his disposal for the defense of the island the 44th Indian Brigade, which had arrived in Singapore from India on 22 January, and the 54th and 55th British Brigades which had arrived on 29 January.

The pre-war Japanese plan for the attack on Singapore had called for assaults in the northwest between the Kranji and Verih Rivers. Percival's dispositions thus only served to confirm the validity of this initial plan. Yamashita concentrated his 5th and 18th Divisions west of Johore Bahru and the Imperial Guards Division east of that city. The main assault by the 5th and 18th Divisions would be executed between 2000 and 2400 hours on 8 February. Between 1 and 8 February the Imperial Guards were to conduct diversionary movements, culminating with a landing on Pulau Ubin Island on the night of 7/8 February. Between 1 and 7 February an artillery bombardment by 168 guns would blanket the entire northern coast of Singapore Island until early on 8 February, when the fire would be concentrated on the northwest coast. Japanese aircraft were to bombard the island during the week. The initial objective of the 5th and 18th Divisions was Tengah airfield; they were to reach a north-south line through Bukit Panjang and Bukit Timah by 9 February. The Imperial Guards Division was to move from its landing point at Kranji to Mee Soon on 10 February and then southward to isolate the British from Changi.

From 1 to 8 February the British, hampered by the steady and intense Japanese air bombardment, attempted to prepare an organized defense of Singapore. The troops were busy organizing their defensive positions. New men, conscripted from the local population, were absorbed into the ranks; stores were moved to places where they were least vulnerable to air, artillery, and ground attack. The heavy guns on Singapore, as mentioned, were sited for the defense of the naval base from sea attack, and only a few could be traversed to reach any part of the mainland. The others, as well as the unneeded naval base installations, were destroyed.

During the evening of 8 February the Japanese began to concentrate their artillery fire along the northwest coast of Singapore, and just before midnight the 5th and 18th Divisions attacked in barges and landing craft across the Strait of Johore immediately west of the causeway. British artillery fire, largely suppressed by Japanese counterbattery fire, inflicted only minor damage on the Japanese landing craft, and once on the island the Japanese troops quickly advanced. By 0900 on 9 February some 4,000 Japanese troops had landed on Singapore and were advancing westward from Ama Keng toward Tengah. During the afternoon the Japanese artillery concentrated on the area between the causeway and Kranji in anticipation of the landing of the Imperial Guards Division which would take place that night.

At 2030 on 9 February the Imperial Guards Division landed and seized the town of Kranji, but were halted there by the 27th Australian Brigade. However, under pressure of intense attacks, at 2400 Brigadier Maxwell, the brigade commander, decided to withdraw to Mandai, leaving the left flank of the 11th Indian Division, east of the causeway, exposed. On Maxwell's left, the 22d Australian Brigade was ordered at about the same time to withdraw to join the 44th Indian Brigade and the 6/15 Brigade on the Jurong Line, running north-south between the Kranji River and the Jurong River in west-central Singapore. They reached the line at 0900 on 10 February, but at 1030, with Japanese pressure increasing, an order from Gordon-Bennett outlining future deployments should withdrawal become necessary was interpreted by all three brigade commanders as an order to withdraw. By sunset the Jurong Line had been completely abandoned.

The Japanese had reinforced and reorganized their forces during 10 February. After dark the 5th Division began to move eastward across the abandoned Jurong Line toward Bukit Panjang, while the 18th Division advanced on its right toward Bukit Timah, reaching the village at 2400. A British counterattack on the Japanese front the following day was repulsed.

Just before dawn on 12 February, the Imperial Guards Division, advancing from Kranji, attacked the 11th Indian Division, which had withdrawn from the north coast to positions near Nee Soon, just north of the island's reservoirs. The 5th Division, at the same time, advanced toward the race course between Bukit Timah and the southernmost of the reservoirs, and the 18th Division headed south toward the western outskirts of Singapore City and the Alexandra Hospital and Barracks.

In the face of Japanese pressure from the north and west, Percival withdrew his forces during the night of 12/13 February to a perimeter immediately surrounding the city. They attempted to defend these positions during the 13th and 14th. By nightfall on the 14th, however, the Alexandra Hospital had fallen, the Japanese 5th Division had cut off the city from all the island's reservoirs (although since they had not cut the flow to the city's pumping station, some water continued to reach the city's reservoirs), and the Imperial Guards Division had advanced to a position immediately north of Kallang airfield on the east of the city.

Constant air attacks and artillery bombardment soon destroyed so many water mains that the supply was very low. Development of an epidemic was a real threat. The civil administration of the city was in chaos. Army morale was low, and there was no possibility of launching a counterattack. Consequently General Percival surrendered to General Yamashita unconditionally at 1810 on 15 February.

FOOTNOTES

1. Kate Caffrey, *Out in the Midday Sun* (New York: Stein and Day, 1973), pp. 27-8.

2. Dodson T. Stamps and Vincent J. Esposito, eds., *A Military History of World War II*, Vol. II: *Operations in the Mediterranean and Pacific Theaters* (West Point, New York: United States Military Academy, 1953), p. 222.

3. *Ibid*, p. 223.

4. Caffrey, p. 62.

5. Lt. Gen. Arthur E. Percival, *The War in Malaya* (London: Eyre & Spottiswoode, 1949), p. 105.

6. *Ibid.*, p. 31.

7. *Ibid.*

8. Winston S. Churchill, *The Second World War*, Vol. IV: *The Hinge of Fate* (Boston: Houghton Mifflin Company, 1950), p. 48.

9. Percival, p. 20.

10. Caffrey, p. 21.

SOVIET INVASION OF MANCHURIA
AUGUST 1945

On 5 April 1945 the Soviet Government abrogated the 1941 Soviet-Japanese neutrality treaty. The Supreme Command of the Soviet Armed Forces began to move troops to the Far East and inaugurated intensive preparations to enter the war against Japan shortly after Germany was defeated. It was obvious to the Japanese that the blow would be struck against their forces in Manchuria, Korea, and Inner Mongolia, a battleground that covers some 1.5 million square kilometers of difficult territory.

Manchuria and adjacent Korea are mountainous. The Greater and Lesser Khingan Mountains, the East Manchurian, and the North Korean Mountains form major natural barriers from 200 to 400 kilometers in width, barring the routes into the Central Manchurian Plain, where the principal cities of Manchuria are situated and 70 percent of the population lives. The Amur, Ussuri, Mutankiang, Sungari, Tumen and lesser rivers flow generally parallel to the borders, forming natural lines that lend themselves readily to defense and present formidable obstacles.

Japanese Defensive Plans

Despite the critical military situation in the Pacific theater of operations, the Japanese High Command, fearful of a Soviet strike, maintained strong and well-equipped forces in Manchuria, Korea, and Inner Mongolia on the Soviet-Japanese border. The mainstay of the Japanese forces was the Kwantung Army under General Otozo Yamada. It was about 1,000,000 men strong. Of these 600,000 were Japanese, 450,000 in Manchuria, and 150,000 in Korea. The remainder of the army consisted of local troops of Manchukuo, Inner Mongolia, and the province of Suiyuan.

The Kwantung Army was deployed within a huge arc formed by the borders of the Soviet Union and the Mongolian People's Republic, over a distance of nearly 4,500 kilometers. Remote from Japan proper, the army's communications lines were extended, and contact with Japan was poor in some areas. Railroads were almost nonexistent in the northern and western areas of Manchuria, and the main railroads in the central and eastern areas were within range of Soviet aircraft. Additional problems were caused by the Chinese in the rear. The population of the Manchukuo puppet state, which Japan had created, was hostile to the occupying forces.

General Yamada had to rely for base support on Korea, where the Japanese had long been established. It was both the main source of food and an operational base in case of emergency. But Korea was a long way from the Japanese forces in Manchuria and could be cut off with relative ease by a thrust from the Soviet Maritime Provinces (Primorskiy Krae). The rear of the Kwantung Army was thus vulnerable from the south and east.

Until the outbreak of war with the Soviet Union the Kwantung Army had consisted of the 1st and 3d Army Groups, the Fourth Independent Army, and the Second Air Army. In mid-1945 it was reinforced with the recreated 17th Army Group and the Fifth Air Army. It had about 1,200 tanks, over 5,300 guns, and close to 1,800 aircraft, and was organized thus:

The 1st, or East Manchurian, Army Group, under General Kita Seiichi, consisted of the Third and Fifth Armies, with ten infantry divisions and one brigade, facing the Maritime Provinces. The main forces were concentrated in the Mutankiang area, defending the approaches to Harbin and Kirin. There were 75,000 officers and men in the Third Army, 80,000 in the Fifth, and 20,000 in reserve.

The 3d Army Group (Thirtieth and Forty-fourth Armies), commanded by General Jun Ushiroku, had some elements near the border of the Mongolian People's Republic, while its headquarters and forces (six infantry divisions, three infantry brigades, and one tank brigade) were stationed in the heart of Manchuria, in the Mukden area. The Japanese considered these formations to be from 40 to 65 percent effective. Two divisions had been ordered to Manchuria from northern China during June and July, and several battalions were still in China when the Soviets attacked. They never reached Manchuria.

The Fourth Independent Army, under General Uemura, was spread out over the vast area of northern Manchuria, in a rectangle formed by Kailar, Tsitsihar, Harbin and Sakhalian. It consisted of three infantry divisions and four brigades.

The 17th Army Group (Thirty-fourth and Fifty-ninth Armies), commanded by General Kozuki, was deployed in Korea. It had nine infantry divisions.

General Harada's Second Air Army, which was stationed in the center of Manchuria, numbered nearly 1,200 aircraft, but only some 200 of them were battleworthy. In Korea, the Fifth Air Army had about 600 planes, most of them effective.

The forces of Manchukuo, Inner Mongolia, and the province of Suiyuan amounted to eight infantry and seven cavalry divisions, and fourteen infantry and cavalry brigades. They were used mostly for local defense and garrison duty.

Unlike the Japanese troops, they were poorly trained and badly armed.

In reserve the commander of the Kwantung Army had one infantry division, one infantry brigade, and one tank brigade, and a special purpose suicide brigade for reconnaissance and antitank warfare. In addition, in the Peking area the Japanese High Command had six to eight divisions, organized in two armies, in strategic reserve which could be sent to assist the Kwantung Army.

The main forces of the Kwantung Army were thus deployed in central Manchuria, with only minimum forces (eight infantry divisions and eight infantry brigades) near the border for the defense of the frontier zone. In the many years of the Japanese occupation of Manchuria they had built fortifications along the Soviet border, which they strengthened in depth as war with the Soviets appeared more likely. Concentrating mainly on eastern Manchuria, they built a defense system in three belts. The first, just behind the border, was for screening, and despite numerous concrete, log, and earth bunkers it had a small garrison. The second belt (the main line of resistance) was organized between the Mutankiang and Muling Rivers, and followed the Tumen River in the south. Most of the infantry divisions of the Japanese 1st Army Group were transferred to this area, with one infantry regiment covering each of the main sectors of the border zone. The third belt (rear defense line) was being built (but not yet finished when the war started) in the sector extending from Lake Tsinpo Hu to Yenki and the Tumen River.

Along the borders with the Soviet Union and the Mongolian People's Republic were 17 fortified zones, covering the principal routes leading into the Manchurian interior. These zones, with defenses sited to take advantage of the rugged terrain, extended over a frontage of more than 1,000 kilometers and had about 8,000 pillboxes, underground communication passages and a system of observation and command posts with shelters. With its tiered concrete artillery and machine gun emplacements, extensive network of underground passages, shelter and storage facilities, and numerous antitank and antipersonnel mines, the clearly defined system of perimeter defenses created by the Kwantung Army was very formidable indeed. The Japanese also had resistance points in all border villages, where they made embrasures in every house and turned some of the administrative buildings and dwellings into veritable fortresses.

Behind their well-built fortifications and natural obstacles the Japanese generals felt reasonably secure, although in so vast an operational theater, Japan could not possibly field enough forces to man the whole frontier. The Japanese Command had to concentrate their defenses and manpower on what seemed to be the most likely avenues for attack. On several extensive sections of the frontier between Manchuria and the Mongolian People's Republic, where any kind of troops could operate, there were neither defense works nor covering forces. On the extreme left flank of the Kwantung Army the defense lines protecting approaches toward Tolun and Kalgan were particularly weak.

In the spring of 1945 the Japanese Command prepared a detailed plan of operations to be carried out in the event of Soviet attack. Japanese troops were to offer stubborn resistance to the Red Army in the border regions, and halt it along the line running from the Laoling Range to Pehanchen and Mehen and along the eastern spurs of the Greater Khingan Range to Kailu and Chengteh. Only if the Red Army were to increase its pressure sharply and attain great superiority were the Japanese to be allowed to withdraw, but not beyond the Changchun-Tumen and Changchun-Dairen line, thus covering the territory of Korea.

The Japanese expected that the Soviet forces would deal their main blow from Mongolia and assessed this as the most dangerous Soviet move, because it would open the road to Changchun in the heart of Manchuria. In view of this, the main forces of the Kwantung Army were deployed to cover Changchun. In the event of a Japanese withdrawal, the Fourth Independent Army was to be committed to the defenses of this sector.

Soviet Preparations for the Campaign

A glance at the map shows that Manchuria forms a large polygon jutting northward from China. If Soviet troops attempted to converge on the Kwantung Army from several directions, it might be expected to conduct stubborn delaying actions and gradually withdraw into Korea or China. Consequently the Soviet Supreme Command sought a quick decisive victory to smash the Japanese army before it could withdraw. They reinforced the three army groups they had in the Far East with experienced, hardened troops that had fought under similar conditions in Europe. Entire staffs and many units of the Karelian and 2d Ukrainian Army Groups and officers who had formerly served in the Far East were transferred there in anticipation of the attack. The Karelian Army Group staff, commanded by the experienced Marshal Kiril A. Meretskov, was put in command of the forces in the Maritime Provinces, to be designated the 1st Far Eastern Army Group. The Far Eastern Army Group, redesignated the 2d Far Eastern Army Group, which was on the right of the 1st, retained its former organization under the command of General of the Army Maxim A. Purkayev. Command of the Transbaikal Army Group, in the Transbaikal Military District, was given to Marshal Rodion Y. Malinkovsky, a gifted field

commander and serious, level-headed, military leader. To coordinate these forces a High Command of the Soviet Forces in the Far East was set up. Marshal Aleksandr M. Vasilevsky, who until then had been Chief of the General Staff, became its Commander in Chief. The great size and remoteness of the new theater of operations, and the complexity and variety of the forces and means engaged, created difficulties not encountered in the West. There neighboring army groups had as a rule advanced in parallel, in close contact with one another. In the Far East, however, because of Manchuria's unusual position, they would have to launch converging attacks from three different directions, with the assistance of the Navy, and a powerful and competent coordinated command was needed.

Early in April 1945 the Soviet General Staff received instructions from the Supreme Command of the Soviet Armed Forces to make final plans for war against Japan. In order to make the most rapid advance across the vast expanses, with their mountains, taiga, desert, broad rivers, and fortified areas, it was obvious that tank formations and cavalry were essential, and a tank army would be the most effective means of providing striking power, speed, and depth of penetration to the offensive.

The Soviets saw the best sector for use of a tank army to be in the zone of the Transbaikal Army Group, where there were fewer natural and man-made obstacles. The attack would cross over 100 miles of desert and then come up against the Greater Khingan Range. Although the mountains would be a formidable obstacle for tanks, they were not insuperable, and this unconventional use of large masses of armor, if successful, seemed to hold the key to success. The Japanese would hardly expect such a massive tank attack in this area, and intelligence reports indicated that Japanese positions in the Khingan area were sketchy and some of the strongpoints not adequately manned. The Soviets calculated that if the passes could be captured quickly, the Japanese there would not be able to muster enough forces to stop a tank army.

With the advantage of surprise, a powerful and fast-moving army would set the right rhythm for the whole operation of Soviet forces. Strategic surprise was not expected, because the Japanese must for long have been convinced of the inevitability of war with the Soviet Union. Actually, the Soviet offensive caught the Japanese unaware almost all along the line. They were intensively preparing for hostilities with the USSR, but apparently had no idea exactly when the attack would be launched. No small role in the Soviet success was played by effective deception measures. Names and ranks of senior commanders traveling to the east were disguised. Marshal Meretskov, Commander of the 1st Far Eastern Army Group, for instance, proceeded to the place of his new appointment as Colonel Maksimov. Marshal Malinovsky, Commander of the Transbaikal Army Group, was Colonel General Morozov, and Marshal Vasilevsky was Colonel General Vasilyev. The train on which Meretskov and his staff travelled was camouflaged to appear to be the regular Moscow-Far East express. Soldiers and officers were not permitted to send letters; signs, "Tickets sold out," were hung in railroad stations before the train's arrival to prevent passengers from boarding. Officers and men were not informed of their final destination.

As a further element in their attempt to achieve surprise the Soviets planned to attack in August, when it rains heavily in that area, rather than in September, when the better weather prospects might logically lead the Japanese to anticipate an attack.

From April to August 1945 the Soviets moved 39 divisions and brigades as well as other units from the western front to the new theater, and transferred an extraordinary amount of military equipment and supplies on the long, single-track Trans-Siberian Railroad at a rate they were confident the Japanese would not expect. Almost 750,000 men were transferred to prepare for the attack, and 136,000 railroad cars arrived in the Transbaikal area and the Far East.

By the end of June 1945 the Soviet High Command's strategic plan, aimed at splitting the Kwantung Army, isolating it in central and southern Manchuria, and destroying it piecemeal, was clearly defined. Three powerful attacks were to be launched simultaneously, converging on central Manchuria. The Transbaikal Army Group was to strike from the Tamtsag salient on the border of the Mongolian People's Republic. It was to play a decisive role because its thrust was aimed at such vital centers as Mukden, Changchun and Port Arthur, the seizure of which would decide the outcome of the war. The 2d Far Eastern Army Group was to play a lesser role, to pin down opposing enemy troops and deliver its main blow in the direction of Harbin. Its main forces were to be concentrated at the confluence of the Sungari and the Amur Rivers. The Amur Flotilla would sail up the Sungari, which was to become the axis of the army group attack, with assault land forces moving along both of its banks. The 1st Far Eastern Army Group's thrust was to be delivered from the Maritime Provinces toward Kirin, to meet with the attacking troops from the Transbaikal Army Group. On the army group's left flank the Twenty-fifth Army had as its prime objective the Dunnin Fortified Area. In addition it would launch a drive along the shore of the Sea of Japan, routing the Japanese 17th Army Group in Korea.

The plan of operations covered a vast area; the troops were to advance on a frontage of more than 2,700 kilometers to a depth of 500 to 800 kilometers. With two strong, converging strikes to resist, some 1,500 kilometers apart, the Kwantung Army would be placed in a difficult situation,

compelled to fight on two fronts, while the sparse transportation network restricted maneuvering of the reserves.

Soviet forces were deployed according to the ground over which they were to operate and the tasks they had to solve. The Transbaikal Army Group was composed of the Seventeenth, Thirty-ninth, Thirty-sixth and Fifty-third Armies, the Sixth Guards Tank Army, the Twelfth Air Army, and the joint Soviet-Mongolian cavalry-mechanized group. The 1st Far Eastern Army Group had the First Red Banner, Fifth, Twenty-fifth, and Thirty-fifth Armies, and Chuguyevsk Operational Group, the X Mechanized Corps, and the Ninth Air Army. The 2d Far East Army Group included the Second, Fifteenth and Sixteenth Armies, V Independent Infantry Corps, the Kamchatka Defense Force and the Tenth Air Army. The eleven field armies, one tank corps, three mechanized corps, eighty divisions (including two tank and two cavalry divisions), five rifle brigades, twenty-four independent tank and mechanized brigades, and other specialized units.* In addition, attached to the Soviet forces were four cavalry divisions, one tank brigade, one tank regiment, one artillery regiment, and an air division of the Mongolian People's Revolutionary Army (MPRA).

These forces had an aggregate strength of 1,500,000 effectives, about 26,000 guns and mortars, 5,500 tanks and self-propelled guns, and some 3,500 planes. The Pacific Fleet and the Amur Flotilla had nearly 600 warships and over 1,500 planes. The Soviet forces outnumbered the Japanese in personnel 1.2 to 1; in tanks 4.8 to 1; in artillery 4.8 to 1; in aircraft 1.9 to 1 (not counting the Soviet Naval Air Force, which took little part in the operation).

Although the Soviet forces were only slightly superior to the Japanese in manpower, they considerably surpassed the Kwantung Army in equipment and firepower, to provide the means for the swift penetration of Japanese frontier fortifications, and the subsequent rapid development of the offensive inside Manchuria.

Plans

The Transbaikal Army Group

The Transbaikal Army Group comprised nearly half of the Soviet military power in the Far East, a total of 654,000 men, 416,000 of them in combat units, and had 2,314 tanks and self-propelled guns. In addition to the tank army, there were two tank divisions, five tank brigades, one armored car brigade, one mechanized brigade, two independent tank regiments, three self-propelled artillery regiments, eight independent tank battalions, and twenty-nine independent self-propelled gun battalions.

Delivering all of these forces to the concentration areas in Mongolia was a major problem. Because of the limitations of the railway system, all motorized units moved under their own power from the area of Chita-Karymskaya to eastern Mongolia, a distance of about 1,200 kilometers. The infantry of the Seventeenth and Thirty-sixth Armies travelled on foot the final 250 to 500 kilometers, walking about 40 kilometers a day. Temperatures in the area rose as high as 112° Fahrenheit and contributed to the decision that security dictated moving during the night.

This enormous influx of men placed an impossible demand upon the water supply in the area. Extra engineer units were brought down from Siberia to assist those attached to the Transbaikal Army Group. In two months they had dug 635 new wells and built an unknown number of water stations. The troops departing on the offensive into Japanese territory carried water with them in metal canisters and even in inflatable rubber rafts.

The preparations for the joint offensive of the Transbaikal Army Group and the Mongolian People's Revolutionary Army, a swift penetration into central Manchuria in well-timed interaction with the 1st and 2d Army Groups, were completed by 25 July. The Transbaikal Army Group's immediate objective was to smash the opposing enemy troops, cross the Greater Khingan Range, and on the fifteenth day reach the Tapanshang-Lupeh-Solun line with its main forces.

The main thrust of the Transbaikal Army Group was to be made by the Seventeenth, Thirty-ninth, Fifty-third, and Sixth Guards Tank Armies from the Tamtsag salient in Mongolia. On the right flank the combined Soviet-Mongolian cavalry-mechanized group (mostly cavalry) was to strike from Tsamin Ude toward Kalgan. On the left flank the Thirty-sixth Army was to attack from Dauriya toward Hailar.

The distance from Tamtsag to the objective area --Changchun and Mukden--was about 800 kilometers, and was to be covered in swift movement, without pause or delay en route. The army group's spearhead was the Sixth Guards Tank Army, to be closely followed by the Fifty-third Army, with the Thirty-ninth on its left and the Seventeenth on its right. The tank army was to negotiate the Greater Khingan Mountain Range and proceed to the Lupeh-Lichuan line, about 450 kilometers away, in five days. Thereafter the army group would strike toward Changchun and Mukden, to reach the heart of the Japanese forces in five more days, in order to prevent them from withdrawing to southern Manchuria. Elements

*Of these 27 rifle divisions, 7 rifle and 5 tank brigades, 1 tank and 2 mechanized corps, and various other units had been transferred from the European theater.

of the Transbaikal Army Group would then advance to Dairen and Port Arthur on the Liaotung Peninsula.

To increase its combat capabilities, and enable it to operate without field army support, the Sixth Guards Tank Army (V Guards Tank Corps and IX Guards Mechanized Corps) was reinforced by the VII Mechanized Corps, 36th and 37th motorized divisions, and four independent tank battalions. There was a total of 1,019 tanks and self-propelled guns, 188 armored cars, 945 guns and mortars, 43 rocket launchers, 165 antiaircraft guns, 4,689 cars and trucks, and 948 motorcycles.

Each corps was given a reinforced motorcycle battalion with strong radio transmitters, to carry out reconnaissance 70 to 80 kilometers ahead of the corps. Beyond that air reconnaissance would cover as far as 1,000 kilometers in advance of the ground troops. Special attention was paid to reconnaissance on the flanks. In the broad areas to be covered wide gaps would be inevitable between armies, and between columns of the same army.

Time allotments were minimal. The Thirty-sixth Army, on the left flank, was to take Hailar by the tenth day of the operation, then proceed toward Chalantun. The Fifty-third was to follow close behind the Sixth Guards Tank Army, which meant that the infantry was allowed little more time than the tanks for crossing the Khingan Mountains. And the Seventeenth Army was given ten days to take Tapanshang, and actually needed only five.

The 1st Far Eastern Army Group

At the opposite end of the Soviet front, the 1st Far Eastern Army Group faced a belt of ferro-concrete emplacements, in seven fortified zones that extended the entire length of the 700-mile front. The main attack was to be made toward Mutankiang by the troops of the First Red Banner and Fifth Armies and the X Independent Mechanized Corps from the Grodekovo and Voroshilov areas. In 23 days they were to reach the line Poli-Mutankiang-Wangching; then the units were to advance toward Changchun and Mukden. In two auxiliary blows, the Thirty-fifth Army on the right was to attack from Lesozavodsk toward Mishan and the Twenty-fifth on the left from the area southwest of Vladivostok toward Anfu.

The Thirty-fifth Army was deployed in a 215-kilometer front north of Lake Khanka, along the Ussuri River and the Sungacha River, which flows out of the lake. The army's left flank was covered by the launches of the Amur River Flotilla, on the rivers and on Lake Khanka, but their operational zone was naturally limited. Beyond the Sungacha was a stretch of open, marshy country with occasional oak and maple forests densely covered with vines. It was very difficult terrain; the advancing army would have not only to assault fortified areas but to negotiate places where there was more water than land, and where the men would have to wade waist-deep for tens of kilometers at a stretch.

West of Lake Khanka the First Red Banner Army held a 135-kilometer front. With its main forces concentrated on its left, the army was to fight its way to some ancient coal mines on the far side of the Muleng River valley. Having pushed through forests and dense woodland in the Khanka lowland and the hills of Singtien, the Army would encounter an area of almost impassable taiga on the main route to the Muling-Mutankiang sector. Frontal attack was out of the question for the First Red Banner Army. So the commander planned to execute a series of close-in envelopments from depth. Therefore the combat formation was to be very deep, with an extremely powerful vanguard, consisting of small tank units, submachine gunners, and engineers. The tanks would fell the trees, the engineers would clear out the saplings and undergrowth, and the submachine gunners would drag the trees away, clearing a trail up to five meters wide. Troops moving in their wake would improve the trails, making them fit for the movement of heavy equipment.

The Fifth Army, which occupied a 65 kilometer sector on the left of the First Red Banner Army, had the extremely difficult task of breaching the Pogranichensky and Volyn Fortified Areas along the mountain ridges. To accomplish this, three very strong advance detachments were formed of mountain artillery and engineers. Their mission was first to crush Japanese defenses on the ridges and then to advance through the marshy country beyond, to try to cut off the Japanese retreat routes. The divisions making the main attack were to advance on a three-kilometer front, with as many as 200 guns and 40 tanks and self-propelled guns per kilometer.

The X Independent Mechanized Corps was assigned to the second echelon behind the Fifth Army. In view of the character of the terrain and the Japanese defenses it would be impossible to employ it efficiently at the start of the operation. So its task was to exploit the Fifth Army's breakthrough of the main fortification zone.

The prime objective of the Twenty-fifth Army was to breach the Dunnin Fortified Area. From there it was to advance along a 285-kilometer front, coordinating its action with that of the Pacific Fleet. Strong vanguard detachments were to effect a night crossing all along the front and, acting as a battering ram, clear the way for the main forces in their wake.

The 2d Far Eastern Army Group

The 2d Far Eastern Army Group, deployed along the Amur River to the right of the 1st Far Eastern

Army Group, had a supporting mission. It was to pin down opposing Japanese troops and attack toward Harbin, splitting the Kwantung Army. The Amur Flotilla would support its operations.

Timing of the Operation

By 3 August all army groups had entered their concentration areas, and as of 5 August they were ready for action. Since favorable weather had set in in the Transbaikal area, the Commander in Chief of Soviet Forces in the Far East, Marshal Vasilevsky, recommended to Moscow that D-Day be set for 9 or 10 August. By then the rains should have stopped in the Maritime Provinces as well, and in any case the roads and airfields would be operative. In addition to the fact that some signs of Japanese regrouping and reinforcing of troops had been spotted in Manchuria and Korea, the possibility of a collapse of Japan before the Soviet Union became an active participant in the war must have been disturbing to the Kremlin.

Marshal Vasilevsky's intention, as presented to GHQ, was that all three army groups start hostilities on the same day and hour to assure a greater measure of surprise. The 1st and 2d Far Eastern Army Groups, however, would start the action with their strong advance units only, in order to capture the most important Japanese frontier installations. Their main operations would not start until five to seven days after the Transbaikal Army Group launched its attack, in the hope that the Japanese, with seven fortified zones on Manchuria's eastern border, would shift their reserves to meet the attack of the Transbaikal Army Group. But GHQ was afraid that the Japanese might use the seven days instead to build additional fortifications, and by undertaking forceful combat reconnaissance operations they might force the Army Group into action before the seventh day. Moreover, retreating before the Transbaikal Army Group only, the Kwantung Army would be gathering into a compact strategic group and reducing its operational area to protect the most vital territory of southern Manchuria and Korea.

GHQ rejected the suggestion that the offensive of the main forces of the 1st Far Eastern Army Group be postponed. The final directive, issued on 7 August, ordered the Transbaikal and 1st Far Eastern Army Groups to attack in the early morning hours of 9 August 1945. The 2d Far Eastern Army Group would begin operations on Marshal Vasilevsky's directive.

Soviet Offensive

Late in the evening of 8 August 1945 the Soviet Government informed Japan that as of 9 August the Soviet Union would regard itself as in a state of war with Japan. Shortly after midnight local time Soviet forces crossed into Manchuria from three directions: from the Transbaikal area and Mongolia, from the area of Blagoveshchensk-Khabarovsk, and from the Maritime Provinces. In spite of difficulties caused by heavy rains and the absence of roads the offensive moved rapidly.

Transbaikal Army Group

The forces of the Transbaikal Army Group advanced fanwise from the area of Tamtsag-Bulag. Bypassing the fortified area of Halun-Arshan, the Sixth Guards Tank Army led the attack toward the Greater Khingan Mountains, with the Fifty-third Army following as closely as possible, but soon left far behind. The VII Mechanized Corps, on the left, headed toward Changchun; on the right the IX Mechanized Corps headed toward Mukden. Encountering no Japanese, the two corps sped across the desert in six to eight parallel columns, reaching speeds as high as 35 kilometers an hour. By noon of 10 August they had travelled about 250 kilometers and reached the Greater Khingan Mountain Range.

That night the V Guards Tank Corps led the way across the mountains. The crossing was extremely difficult and dangerous. The mountain roads ran along ledges between towering cliffs and sheer precipices and abounded in hairpin turns and steep gradients of up to 30°. In some sections swamps presented formidable barriers even for track-laying vehicles. Engineers were ready, however, and laid fascine corduroy and crushed rock roads. Where the mountain roads degenerated into narrow crumbling tracks, the roadway was blasted through rock. Tanks negotiated steep descents with the help of towlines, two joined together, with the rear one keeping the front vehicle from slipping. Command and control were difficult to maintain; radio communications faded out frequently even at moderate distances. The leading tank units of the V Guards Tank Corps pushed across the mountains in seven hours at an average speed of five to six kilometers, an almost incredible achievement. The climb of the VII Mechanized Corps lasted longer, because of its many trucks and other wheeled vehicles.

The V Guards Tank Corps proceeded beyond the mountains in the morning of 11 August, and the mechanized corps followed the next morning. The weather was unfavorable; it was raining heavily. In some places wheeled vehicles had to be towed. The crude roads across the Khingan Range became impassable; all transport which was still on the other side of the mountains was stuck there. Nevertheless there was no opposition from the Japanese, and late on 11 August the forward detachment of the V Guards Tank Corps occupied Lupeh. On the 12th they took Lichuan. By 13 August the main forces of the corps had reached the area, still having made no contact with the Japanese. The Sixth Guards Tank Army had crossed the

mountains and reached the Central Manchurian Plain threatening the strategic envelopment of the main forces of the Kwantung Army by the Transbaikal Army Group.

Supply units had been unable to keep up on the difficult mountain roads, and a serious fuel shortage had developed. The IX Guards Mechanized Corps was entirely without fuel, the V Guards Tank Corps and the VII Mechanized Corps had their fuel tanks filled to only 40-50% capacity, and it became necessary to stop for two days until supplies could be replenished. Planes of the Twelfth Air Army (Marshal Khudyakov) flew hundreds of sorties carrying POL to the army units, continuing their flights until the end of the war. (Between 9 and 22 August 887 tons of POL were delivered by air.)

The Thirty-sixth Army, on the left wing of the Transbaikal Army Group, crossed the border from Soviet territory into Manchuria near Manchouli, and immediately encountered a Japanese fortified area. Overcoming resistance there, the army advanced 40 kilometers the first day. Lead elements of the army hurried on to Hailar, while the main units went on to encounter strong Japanese resistance at Chalainoerh

The Thirty-ninth Army, deployed on the right of the Thirty-sixth Army and the left of the Sixth Guards Tank Army, had to overcome very strong Japanese fortifications. Part of the army besieged the Halun-Arshan Fortified Area, while the main body was advancing toward the mountain passes of the Greater Khingan. The Japanese, sheltered behind a system of fortifications six meters deep and extending for almost forty kilometers, resisted fiercely, holding up the advance with fire and counterattacks for three days.

The main attack of the Thirty-ninth Army was directed south of the fortified area, to cross the mountains and take Solun and Wangyehmiao. As the army pushed into the Manchurian interior, the Japanese attempted to counterattack. Around Solun and Wangyehmiao the stiffest fighting developed. The V Guards Rifle Corps advanced unhindered toward Solun. On 12 August a Japanese infantry division was discovered, withdrawing from the Halun-Arshan area. A sharp engagement ended in victory for the Soviets. The next day a cavalry force of 2,000 men also was defeated. Corps units occupied Solun on the 13th.

On the right of the V Guards Rifle Corps the CXIII Rifle Corps had slow going. The terrain was extremely rough and poorly mapped, with no roads on the approach or crossing the Greater Khingan Mountains. Progress was slow, and gas supplies ran low. But the Corps moved slowly forward toward Wangyehmiao.

On the right of the Sixth Guards Tank Army one of the two advance detachments of the Seventeenth Army, after crossing about 250-300 kilometers of difficult desert and mountainous terrain, toward the evening of 12 August captured Linhsi. A single tank company reached the area of Tapanshang. The second advance detachment hit a stretch of 60 kilometers of sandy hills which took three days to negotiate, and it fell well behind the other.

On the right flank of the Transbaikal Army Group, the Soviet-Mongolian mixed cavalry and mechanized forces, under the command of General I.A. Pliyev, had first to cross the Gobi Desert. In two columns they moved swiftly, encountering no Japanese. After covering more than 350 kilometers of extremely difficult desert, on 14 August the motorized infantry captured the town of Tolun. The other column advanced toward Changpei.

The 1st Far Eastern Army Group

From the Maritime Provinces, the assault group of the 1st Far Eastern Army Group, consisting of the First Red Banner and the Fifth Armies, was to assault the Japanese after a powerful artillery barrage. But a sudden tropical rainstorm at zero hour (0001 9 August) disrupted the Soviet plan. As torrents of water lashed the troops waiting for the signal to attack, it was decided to move out without artillery preparation. Some 30 advance battalions crossed the border and attacked the Japanese positions, gaining control of road centers and breaking into fortified villages. The Japanese, taken by surprise, were unable to offer effective resistance. Taking advantage of the downpour and the pitch-dark night, the Soviet advance battalions, with frontier guards as guides, reached their appointed objectives and demolished the Japanese fortifications.

Advance units of the infantry divisions of the forward echelon poured into the gaps created by these demolitions, and, knocking the Japanese out of the main mountain passes, road junctions, and defiles, ensured the unhindered advance of the main forces. The Japanese began to withdraw, but Soviet advance troops drove wedges between their units, breaking up their actions, disrupting communications, and disorganizing their defense. The first day the Soviet forces advanced 20 kilometers.

The main effort of the 1st Far Eastern Army Group was delivered in the general direction of Mutankiang. The First Red Banner Army advanced across the forested Pogranichny Range, hacking its way through virgin forest. An advance detachment of the XXVI Infantry Corps, after pushing ahead through about 40 kilometers of taiga, captured Muleng (Pamiantung) on 10 August. As a result the Soviets were able to thrust swiftly at Jutankiang from the northeast. At the same time, on the army's right flank, troops were storming strongpoints of the Mishang fortified zone. Protracted fighting developed along the approaches to Mutankiang. The area was defended by the Japanese

Fifth Army, which had prepared several rings of strong fortifications. First, there was a stretch of open country five kilometers wide, specially prepared with minefields, barbed wire, artillery strongpoints, and booby traps to hold up Soviet advance units. A short distance beyond stretched the main line of defense, four kilometers deep, with permanent concrete fire emplacements. Fifteen kilometers behind it was a defensive belt three kilometers deep. Another fifteen kilometers back there was another defensive area, four kilometers in depth, with formidable resistance points. Most of these points had about 17 permanent artillery emplacements, 5 combined artillery and machine gun emplacements, over 50 machine gun emplacements, and a large number of diverse field entrenchments and weapons emplacements.

Bitter fighting for Mutankiang lasted several days, during which Soviet troops had to repel many Japanese armor and infantry counterattacks. On 11 August, because of the stubborn Japanese resistance around Mutankiang, the 1st Far Eastern Army Group Commander, Marshal Meretskov, decided to send his main forces south of the Mutankiang fortified area toward Kirin. This would enable his main forces to advance speedily toward Changchun and link up with the striking force of the Transbaikal Army Group. For this purpose he reinforced the Twenty-fifth Army with two rifle corps and the X Mechanized Corps. Advance units struck in the direction of Wanching and Kirin on 12 August.

On the right flank of the army group, shortly after midnight on 9 August the Thirty-fifth Army moved into action after a short artillery preparation which had softened up Japanese resistance points. The army crossed the Ussuri and the Sungari Rivers and negotiated a large stretch of marshy country. They penetrated the Japanese defense area, and by nightfall had reached the rear of the strongly fortified position at Hutou, about 12 kilometers from the border. During the next five days, all the fortified frontier areas were breached. The army advanced 120-150 kilometers over difficult hilly terrain and taiga.

On the left flank of the army group, the Twenty-fifth Army advanced about 12 kilometers during the first day. In subsequent days the Japanese defenses in front of the army were pierced, and it continued the advance toward its assigned objectives.

After crushing the Japanese resistance at Mutankiang, the 1st Far Eastern Army Group overran numerous fortified zones, and approached the Harbin-Changchun line. The First Red Banner Army struck at Harbin, and the Fifth Army at Kirin. The Thirty-fifth Army occupied the town of Poli, ensuring protection for the striking force from the north. The main forces of the Twenty-fifth Army advanced swiftly in the direction of Wanching-Tunhua-Kirin, while its left flank was advancing in North Korea.

The 2d Far Eastern Army Group

The 2d Far Eastern Army Group started operations on the night of 8/9 August. Its troops, supported by ships of the Amur Flotilla, successfully forced the Amur and Ussuri Rivers, and drove toward Harbin, supplementing the thrusts of the Transbaikal and 1st Far Eastern Army Groups from the northwest.

In the center of the army group to the north of Tungchiang, the Fifteenth Army (General S.K. Mamonov) crossed the Amur during the first two days of combat. The Japanese put up a strongly organized resistance based on well-prepared fortifications. The crossing was extremely difficult. Following heavy rains, the Amur River had flooded the lowlands and marshes along its banks, to a width of 10-15 kilometers in some sectors. Nevertheless, the army was able to capture a bridgehead on the right bank of the river, and by 14 August occupy Fuchin, a Japanese stronghold.

To the south-east on the left flank of the army group in the Tungchen area the V Rifle Corps on 11 August crossed the Ussuri River (which was about five kilometers wide due to torrential rains) and continued to advance toward Paoching.

On the right flank of the army group, the Second Army crossed the Amur during the night of 9/10 August, and by the end of 11 August had captured Japanese defense centers on the right bank of the Amur south of Blagoveshchensk-Konstantinovka -Poyarkovo, and continued to push toward Tsitsihar.

* * *

On 14 August, when the Japanese Government announced its acceptance of the Allied demand for unconditional surrender, the situation on the Soviet-Japanese front in Manchuria was as follows:

The Transbaikal Army Group, after breaking Japanese resistance wherever encountered, had advanced from 250 to 400 kilometers into the Manchurian heartland and reached the line Chitai-Tolun-Tapansnang-Taoan.

The 1st Far Eastern Army Group had advanced from 120 to 150 kilometers and reached the line Linkou-east of Mutankiang-Najin (Korea).

The 2d Far Eastern Army Group had advanced from 150 to 200 kilometers and reached the line Aihun (Sakhalian)-Sunwu-Kaokang-Paoching.

Thus, in six days, Soviet forces in Manchuria had advanced 50 to 400 kilometers on the several fronts and captured sixteen fortified zones.

The Soviets claimed that in spite of the Japanese Government's decision to surrender, the Kwantung Army continued to offer fierce resistance to the advancing Soviet forces in an effort to win time and strengthen its position.

Consequently, Stalin, the Supreme Commander of the Soviet Armed Forces, ordered the troops to continue active operations until Japanese unconditional surrender should take effect.

By this time heavy rains were causing Soviet armies fresh difficulties. Roads became impassable, rivers overflowed their banks, and there was a serious shortage of fuel. Nevertheless all three Soviet army groups continued their drive into Manchuria and Korea.

The Transbaikal Army Group had received enough fuel so that the commander of the Sixth Guards Tank Army ordered advance detachments of each corps to proceed toward the corps objectives, using the full corps supply. When more was delivered the rest of the army was to follow. The strength of these units is unknown, but the system worked well. Covering 100-150 kilometers in two days, the forces of the V Guards Tank Corps took Tunqliao and those of the VII Mechanized Corps took Kaitung on 16 August and cut the Taonan-Mukden railroad line.

The Thirty-sixth Army, on the left of the Transbaikal Army Group, had met especially stubborn resistance at Hailar, where the Japanese strove to prevent the army's troops from crossing the Greater Khingan Range and pushing on to Tsitsihar. Although Hailar was surrounded, its defenders, more than 6,000 officers and men, continued to hold out.

The CXIII Rifle Corps of the Thirty-ninth Army crossed the Khingan Range by 16 August, and despite repeated Japanese counterattacks advanced toward Wangyehmiao. The Soviet-Mongolian forces in the south continued their advance, one column proceeding from Tolun toward Chengteh, the other taking Changpei against opposition. The other elements of the Transbaikal Army Group also moved ahead, meeting stubborn resistance in most areas, despite the surrender of the Japanese Government.

The First Red Banner Army of the 1st Far Eastern Army Group was in the midst of a bitter fight for Mutankiang on 14 August. Two days later Soviet forces finally broke through the Japanese defenses, crossed the Mutankiang River, and captured the city. The Soviets estimated Japanese losses during the battle for Mutankiang as high as 40,000 men. Soviet casualties are unknown.

On 17 August the Commander in Chief of the Kwantung Army offered to terminate hostilities, ordered an immediate ceasefire. He surrendered the next day. However it was several more days before all units were alerted and fighting stopped, and the Soviets took advantage of the delay to improve their strategic position. With part of the Kwantung Army still withdrawing in front of the Transbaikal Army Group, Marshal Malinovsky, following instructions from GHQ, ordered the Sixth Guards Tank Army to continue the advance to Changchun and Mukden. Having taken those cities, it was to complete the original plan and proceed rapidly to Port Arthur, to reach it by 25 August, the day on which the surrender was to be effective. To simplify their task and to gain control of strategic spots, about 200 men were dropped by air on 18 and 19 August at Changchun, Mukden, Harbin, and Kirin.

Fuel supplies for the Sixth Guards Tank Army had improved somewhat, and on 18 and 19 August the main forces reached the area the advanced units had occupied on the 16th. They were already on their way to the next objective. Heavy rains had made the roads between Tunqliao and Mukden impassable. Thus for about 120 kilometers the tanks and vehicles of the V Guards Tank Corps and the IX Mechanized Corps followed the railroad tracks. Moving at the rate of 4 to 6 kilometers per hour, they averaged 45-50 kilometers per day. The main forces followed from one concentration area to the next, as rapidly as the fuel supply permitted. Mukden was occupied by the advance elements of the V Guards Tank Corps on 20 August, and Changchun by those of the VII Mechanized Corps the following day. About 200 men were dropped by air at Port Arthur and Dairen on 22 August, and two days later some ground elements reached both cities.

The Thirty-sixth Army, which had been trying to take Chalainoerh for five days, finally received its surrender on 18 August, shortly after the garrison at Hailar capitulated. The next day Tsitsihar was taken without opposition.

The CXIII Rifle Corps of the Thirty-ninth Army finally took Wangyehmiao on 21 August. The Japanese had lost 900 men killed and 1,100 taken prisoner in the fighting for the city. The Soviets were surprised, however, when some elements of the Japanese 107th Infantry Division suddenly attacked Soviet troops about 70 miles north of the city. Counterattacking, the Soviets surrounded the division, killing about 1,000 Japanese soldiers. Nearly 8,000 men escaped into the hills, where most of them surrendered on 24 August. The last of the fighting there did not end until 30 August.

On the Transbaikal Army Group's right wing the cavalry and mechanized forces also were still fighting after 17 August. One column, having captured Tolun, had proceeded to Chengteh. Leading elements reached the city on the 19th and occupied it the next day. The other column, having taken Changpei, proceeded to Kalgan, which fell to advance detachments on 19 August after resisting for two days. The leading units were well on the way to Peking on the 20th, when Marshal Malinovsky ordered them to halt at the border of China.

With no Japanese figures available it is necessary to rely on Soviet figures for Japanese casualties in Manchuria. These indicate 84,000 men killed, and 594,000 prisoners, an unspecified

number of them wounded. This includes the total Japanese manpower of the Kwantung Army upon surrender Soviet casualties have not been published. Their expenditure of ammunition is reported to have been 361,079 shells and 1,023,697 bullets. Of this amount the Transbaikal Army Group expended the least--14,746 shells and 42,134 bullets.

THIRD ARAB-ISRAELI WAR, 1967

The war that took place in the Middle East on six days in 1967, 5-10 June, could be considered three separate brief but intense wars, and it resulted in three Israeli Quick Wins, one over the Egyptians, one over the Jordanians, and the third over the Syrians, on the three separate fronts. The war began with a preemptive Israeli offensive against Egypt, as a result of political maneuvering beyond the scope of this study.

Israeli Operational Concept

Although, from the point of view of geographical location, Jordan posed the greatest physical threat to Israel (Jordan's West Bank frontiers, within artillery range of Tel Aviv, threatened the heart of the Israeli state; Jordan also held the holy city of Jerusalem), politically, the greatest overall threat to Israel's existence seemed to be from Egypt. Consequently Egypt was selected as the primary target.

Israeli planners intended to concentrate the attack on Egypt and overwhelm that nation's armies as quickly as possible, before dealing with Jordan or Syria. The organization and deployment of the Israeli Army reflected this decision. The Sinai and the Gaza Strip were to be attacked by forces of the Southern Command, under Brigadier General Yeshayahu Gavish. Southern Samaria and Judea, including Jerusalem, were the responsibility of Central Command, headed by Brigadier General Uzi Narkiss. Northern Samaria and Syria were the responsibility of Northern Command, whose commander was Brigadier General David Elazar. There was some flexibility, however, and units of both Southern and Central Command were used against Jerusalem, Central's and Northern's against the Jordanians in Samaria. And all three commands provided units for the Syrian operation.

Egyptian Front

Terrain

The border between Egypt and Israel in 1967 was that agreed upon in 1949, slightly modified in 1950 to include the so-called Gaza Strip, the narrow coastland area from east of Rafah to halfway between Gaza and Ashqelon. From the Rafah area the boundary ran southeast to the Gulf of Aqaba, between the Negev Desert of Israel and the Sinai Peninsula.

Most of the area of the Sinai is arid desert country with very few roads. In the north it is rolling, with many regions of sand dunes, and it becomes increasingly hilly and finally mountainous toward the southern and western portions of the peninsula. Along the Mediterranean Sea are scattered, semi-arid, cultivated areas, becoming an agricultural coastal plain in the Gaza Strip, where there are abundant roads and few obstacles to the movement of military vehicles. But in the desert and mountainous middle and southern regions, military movement was largely limited to a few desert tracks and fewer poor roads. The terrain and roadnet generally dictated the deployment of troops and were very important factors in the operational planning and tactical maneuvering of both sides.

Operational Plans

The Israeli offensive was to open with massive air attacks designed to gain air superiority by destroying the Egyptian air force. Ground operations were to be in four phases: (1) a breakthrough of the Egyptian lines in two sectors: along the Rafah-El Arish coastal axis by a division commanded by Brigadier General Israel Tal, and at Abu Ageila-Um Katef by a second division under Brigadier General Ariel Sharon; (2) introduction of a third division under General Avraham Yoffe, between the other two or south of Sharon's division, depending upon the Egyptian deployment, to penetrate deep into the Sinai to smash into the heart of Egyptian concentrations in the vicinity of Jebel Libni; (3) massing of the armored units of the three divisions in the area of Nakhl, the Mitla Pass, and Bir Gifgafa; and (4) advance to the Canal and capture of Sharm el Sheikh. Although the action moved so fast that some flexibility was essential, the four phases of the plan were carried out.

Each of the Israeli divisions had about 15,000

men. Their composition varied, but all had strong armored components. There were in addition to them independent units at Kuntilla, Eilat, and alongside the Gaza Strip, with an independent brigade in reserve.

The Egyptian General Staff had developed a defensive-offensive plan for the Sinai in 1966, but during the May 1967 crisis period President Nasser had sent additional forces into the Sinai and refused to permit them to deploy in accordance with the plan. As a result, there was no cohesive plan when the Israeli attack came. There were six Egyptian divisions and an armored task force less than a division in size: the so-called 20th Palestine Liberation Army Division, with supporting Egyptian units in the Gaza Strip; the 7th Infantry Division to the south of the Gaza Strip; the 2d Infantry Division in the Abu Ageila-Kusseima area; the 6th Mechanized Division in the area of Kuntilla-Nakhl; the 3d Infantry Division and an armored task force in Army reserve in the Jebel Libni-Bir Hassma region; and the 4th Tank Division in strategic reserve in the Bir Gifgafa region. An independent infantry brigade garrisoned the recently occupied positions at Sharm el Sheikh, and three hastily mobilized reserve infantry brigades were at the strategic passes at Gidi and Mitla. The total Egyptian strength amounted to about 100,000 men and 930 tanks.

In the 1956 War the Israelis had shown themselves to be more effective than the Egyptian Army. Since then the Egyptians had been substantially reequipped by the Soviets, and some had had combat experience in Yemen. However, there is considerable evidence that many of the most effective units and commanders in the Egyptian Army were still in Yemen.

Phase One

Air Attacks. Since 1965 massed formations of Israeli planes had been making frequent early morning flights westward across the Mediterranean. By mid-1967 the Egyptians had become so used to these flights that they were no longer considered cause for alarm or defensive reaction. At 0845 Egyptian time on 5 June, following such an early morning massed flight the planes, flying undetected at low altitudes, turned and almost simultaneously struck ten Egyptian airfields, achieving complete surprise. Three hours of accurate bombing, with wave after wave attacking and returning to attack again, resulted in the destruction of about 300 Egyptian aircraft on the ground and the death of 100 of Egypt's 350 qualified pilots. Only eight MiG-21s managed to take off and engage Israeli planes, accounting for 2 of the 19 Israeli planes lost, but all were themselves destroyed. Egyptian antiaircraft fire and SA-2 missiles were ineffective.

By this preemptive blow the Israeli Air force had achieved air superiority for the whole campaign. The Egyptians were able to fly a few raids but were never really a threat thereafter. Israeli pilots had demonstrated a high state of readiness and training, skilfully and boldly led by Air Force Commander General Mordecai Hod.

Tal's Division. General Tal's division, deployed outside the Gaza Strip near Khan Yunis, had two armored brigades, a paratroop brigade, and a reconnaissance force (nearly a brigade), with a total of about 250 tanks, and about 15,000 men.

On 5 June Brigadier General Shmuel Gonen's armored brigade of Tal's division, supported by tanks of Colonel Uri ben Ari's reconnaissance brigade, advanced and broke into Khan Yunis, despite heavy fire from artillery, antitank and machine guns, but made no effort to seize the city. They lost six tanks and several jeeps and half tracks and took numerous casualties, but they pushed on southwest in two columns, bypassing Rafah, and taking Arab antitank positions just north of the crossroads south of the town, with assistance from elements of ben Ari's reconnaissance brigade. Driving west along the coastal road they overran the stronly fortified position of the northernmost of the two brigades of the Egyptian 7th Division at Sheikh Zuweid. Late in the afternoon, following an initial attack by elements of ben Ari's brigade, Gonen captured Jiradi, five miles east of El Arish, after heavy fighting, in which he took many casualties and lost ten tanks.

Colonel Menachem Aviram's armored brigade, on the left of Gonen's meanwhile, had moved across the dunes to circle south of the positions of the Egyptian 7th Division. After a long day of heavy fighting and much maneuvering the Egyptian defenders were defeated. They suffered 1,500 dead and 40 tanks destroyed, while the Israelis lost 70 killed, over 200 wounded, and one tank destroyed. Egyptian soldiers were streaming westward into the desert.

Meanwhile Colonel Yehuda Reshef's independent armored brigade had followed Gonen's force to the outskirts of Khan Yunis and turned north toward Gaza, clearing mines and overwhelming outposts, to capture El Kuba, Ali Muntar, and Dir el Balah. The next morning Colonel Rafael Eitan's paratroop brigade, which had moved in to mop up Khan Yunis after Gonen's departure, joined Reshef in an attack on Gaza. After intense fighting, with air support, Gaza was officially surrendered by its military governor at 1245 on 6 June.

Eitan returned to Khan Yunis, still held by Egyptians, but met heavy resistance and had to withdraw to regroup and refuel. The following day he took the town.

Sharon's Division. Brigadier General Ariel

Sharon was assigned the mission of breaking through at Abu Ageila-Um Katef, to open the central road from Beersheba to 'smailia. His division was made up of Lieutenant Colonel Mordechai Zippari's armored brigade, Colonel Kutty Adam's infantry brigade, six artillery battalions, a reconnaissance unit, and Lieutenant Colonel Dani Matt's paratroop brigade.

The Egyptian positions had been developed into a major fortification, including Um Katef, about ten kilometers east of Abu Ageila, and Kusseima, about 30 kilometers southeast. Bounded on the north by sand dunes and on the south by the Jebel Dalafar mountains, the area was fortified with a typical Soviet defense system, with three concentric lines of trenches, barbed wire, minefields, and advanced outposts. Numerous antitank strongpoints included dug-in tanks, and antitank and self-propelled guns. Defending it was the Egyptian 2d Division.

At 0900 on 5 June lead elements of Sharon's division crossed the border, advancing toward the Abu Ageila-UmKatef position, without air support because of a sandstorm. Egyptian outposts fought delaying actions before withdrawing into the main defenses. Sharon's reconnaissance battalion and armored brigade reached the Abu Ageila highway at several places by 1500 and established a blockade to prevent the Egyptians from moving in reinforcements from Jebel Libni.

The plan was to attack in darkness, one armored battalion enveloping the Abu Ageila-Um Katef position from the north, while the brigade's mechanized infantry battalion conducted a holding attack against the front of the Um Katef strongpoint. The main attack was to be made by Adam's infantry brigade, attacking from the north of Um Katef, parallel to the line of trenches. As the infantry advanced, the armored battalion which had been in front of Um Katef was to follow them and assist in overwhelming the defenses.

Helicopters landed a battalion of paratroopers near the Egyptian artillery positions at dusk, and they successfully neutralized the artillery. At 2230 an Israeli artillery preparation pounded the trenches for three hours, after which the infantry advanced from the north. Early in the morning the armored battalion advanced safely through the minefields in front of Um Katef, where the engineers had cleared a corridor. They broke through the Um Katef position and were joined as planned by the other battalion, coming from the north.

Egyptian tanks came up from reserve at this point, and a fierce tank battle followed in the early morning darkness. After losing about 40 tanks the Egyptians withdrew at dawn, having destroyed 19 Israeli tanks. The Israeli infantry completed mopping up the Um Katef position and Abu Ageila as well, for the Egyptians had withdrawn from there under orders from Cairo.

Phase Two

Phase Two called for a deep penetration of the Egyptian center by Yoffe's division, to smash the second Egyptian line. The division, made up of two armored brigades, commanded by Colonels Isska Shadni and Colonel Elhanan Sela, was stationed between Tal and Sharon. Sela's brigade was to head southwest, passing through Sharon's division at Abu Ageila-Um Katef, and advance to Jebel Libni, while Shadni's crossed the sand dunes westward toward Bir Lahfan.

The desert proved to be heavily strewn with mines, and it was almost dark when Shadni's brigade reached the vicinity of Bir Lahfan and set up blocks on the roads leading north to El Arish, southwest to Jebel Libni, and southeast of Abu Ageila. At about 2100 two Egyptian armored brigades, sent from Jebel Libni to reinforce El Arish, hit Shadni's roadblock, precipitating an all-night engagement. After an air strike at 1000 on 6 June the Egyptians withdrew, having lost 28 tanks compared to about 14 for the Israelis.

Meanwhile, farther south on the frontier, an armored brigade commanded by Colonel Albert Mendler had successfully carried out a diversionary attack which overwhelmed the defenses of Kuntilla.

Egyptian Reaction

Numbed by the disastrous attacks on the Egyptian air bases and the series of ground attacks on their positions in the Sinai, Egyptian Army Commander Field Marshal Abdel Hakim Amer and his staff at GHQ in Cairo sent no coherent instructions to the forces in the desert during the first day of the war. However, as the picture became clearer, and one Egyptian position after another fell, at about dawn on 6 June Amer ordered all of his commanders to withdraw. This order was cancelled later in the day, upon the urging of the GHQ staff, but it was too late to stop the general withdrawal, which was turning into a panic rout, particularly in several units in which the commanders led the retreat.

Yoffe's Division. Late in the afternoon of 6 June Shadni's reconnaissance unit approached Jebel Libni from Bir Lahfan, where they came under long range tank fire. Gonen's brigade, coming up from behind, and Sela's brigade, arriving on the Abu Ageila road, joined in an attack. The Egyptian rear guard fought desperately to cover the withdrawal of the main force, losing 32 tanks in the battle, which raged well into the night, before the position was finally taken.

Phase Three

While the Egyptians were withdrawing rapidly toward the Canal, the third phase of the Israeli plan proceeded, with Sharon advancing to Nakhl,

Yoffe proceeding to the Mitla Pass, and Tal going to Bir Gifgafa.

Sharon's Division. In the early hours of 7 June Sharon's troops occupied Kusseima, which the Egyptians had deserted. He was then ordered to send his infantry northward to El Arish, where stubborn Egyptian defenders were interfering with the passage of supplies to west and south. With the paratroop and armored brigades and his supporting units, Sharon moved on down the road to the southwest, toward Nakhl. After encountering the abandoned JS-3 self-propelled guns of an Egyptian brigade, at the outskirts of Nakhl Sharon's tank battalions ambushed an Egyptian column that had fled west from El Thamad, which had fallen to Colonel Mendler's brigade. With Sharon swinging south and hitting the flank of the Egyptians, and a tank battalion of Colonel Mendler's brigade striking them from the rear, the battle raged for four and a half hours, resulting in the destruction of 50 to 60 Egyptian tanks, 100 guns, and 300 vehicles, and causing 1,000 Egyptian casualties. The remainder of the Egyptian soldiers dispersed into the hills. Sharon's division headed west toward Bir Thamada.

Tal's Division. On the morning of 7 June a task force commanded by Colonel Yisrael Granit, which had proceeded along the coastal road, reached the Suez Canal in the vicinity of Kantara. He was immediately ordered by Minister of Defense Moshe Dayan to withdraw, lest word of his position evoke international pressure for a ceasefire before the other Israeli forces had completed their missions.

Gonen's brigade on the 7th took the Egyptian defense position near Bir Hama after a brief fight with the defending rear guard of the 3d Infantry Division, consisting of an infantry brigade and a tank battalion. As the Egyptians withdrew they were engaged by Colonel Aviram's tank units, which had proceeded past Bir Hama, westward toward Bir Gifgafa. After a series of running battles, with them and other Egyptian units, Aviram's brigade reached the road junction north of Bir Gifgafa. While his AMX tank battalion went west to block the road to Ismailia, and a battalion of Shermans and a motorized infantry battalion moved south to block the road to Bir Thamada, Gonen's brigade, which had been close behind, swung south to try to encircle part or all of the Egyptian 4th Armored Division. One armored brigade was caught and destroyed, but the rest of the 4th Division was already west of the encircling forces, and parts of it already crossing the Canal.

Shortly after midnight, an Egyptian armored brigade, which had been sent from Ismailia to reinforce the 4th Division and not recalled when the division withdrew, ran into the AMX battalion, blocking the road northwest of Bir Gifgafa. Although the Israelis had the advantage of a prepared position, they had only about 40 light tanks, whereas the attackers had 50 or 60 T-54s and T-55s. After a desperate defense lasting over two hours, the Israelis, who had lost three tanks, eight halftracks, and more than 20 men and whose shells could not penetrate the heavily armored Egyptian tanks, began to withdraw. At that point a battalion of Gonen's Centurion medium tanks appeared, surprising the Egyptians, and destroying ten Egyptian tanks. The shattered Egyptian force drew back toward the Canal.

Joining with other units of Tal's division, Gonen's brigade led the way west from Bir Gifgafa before dawn on 8 June. Along the route numerous Egyptian tanks were encountered, many in hull defilade behind the crests of the dunes. Advancing on a broad front, Gonen's tanks, with their longer range guns, destroyed about 50 Egyptian tanks and reached Ismailia just after noon.

Granit in the meantime had been authorized in the early morning to proceed again to the Canal. After a sharp battle about ten kilometers east of Kantara, he finally drove off the Egyptians and proceeded past Kantara to join Tal's main body on the north-south road east of the Canal and northeast of Ismailia.

Yoffe's Division. By 0900 on 7 June, Shadni's brigade had taken Bir Hassma and proceeded toward Bir Thamada. There he divided his forces, sending one battalion southwest toward the Mitla Pass and the other northwest to block the Gidi Pass. The latter met little opposition, reached the pass and established a roadblock, which by evening had halted several Egyptian units.

As the other battalion headed toward the Mitla Pass, it found that remnants of the Egyptian 3d Infantry Division, 6th Infantry Division, and various other units were all converging on the road between Bir Thamada and the pass. Shadni had to fight his way through and around them. In the process many of his supply vehicles were put out of commission, and most of his tanks ran out of fuel and had to be abandoned. However, at about 1800 he reached the east end of the pass with nine tanks, two of them being towed, and a few halftracks with infantry and mortars. Promptly setting up an ambush position just east of the pass, he successfully engaged the Egyptians coming up the road behind him. Strafing and bombing Israeli aircraft helped to create an enormous traffic jam. As desperate Egyptians tried to overrun Shadni's few defenders, Yoffe ordered Sela, who had been mopping up at Bir Hassma, to proceed to this assistance. Sela also had to fight his way through the teeming Egyptians, and it was late morning before he reached Shadni at the pass.

Sela's brigade pushed its way through the Mitla Pass, but found further advance blocked by Egyptian strongpoints supported by tanks between the pass and the Canal. Waiting until dark, Sela's

tanks rushed out of the pass with lights on and guns blazing. This so surprised the Egyptians that some panicked and fled. Others put up stiff resistance. By 0200 on 9 June spearheads of Yoffe's division had reached the Canal, and other units arrived at various places along it and the Gulf of Suez in the morning. Combining forces, they moved south along the road east of the Gulf. At about midday at Abu Zenima they joined paratroopers who had come north from Ras Sudar, where they had been dropped just after units of Sela's armored brigade arrived. Farther south, Sharm el Sheikh had been found deserted by the Egyptians when naval and paratroop units had arrived to take it.

With Israeli forces in strength at the Canal, and the surviving Egyptians either across the Canal or captives, the Israeli objective had been attained. In four days they had destroyed a large proportion of the Egyptian army, captured the coastal towns of Gaza, Khan Yunis and El Arish, cleared the Gaza Strip, pushed west through the desert and the Sinai passes, and occupied the east bank of the Suez Canal and the whole Sinai Peninsula. Total Egyptian casualties were officially reported as 10,000 soldiers and 1,500 officers killed. The Israelis reported 5,000 Egyptian soldiers and 500 officers captured. In addition the Egyptians had lost about 700 tanks, 400 Russian-made field guns, 50 self-propelled guns, 30 155mm guns, and about 10,000 vehicles. Israeli losses were reported as 275 men killed, 800 wounded, and 61 tanks destroyed.

Jordanian Front

The West Bank region of Jordan is divided between Samaria, the area north of Jerusalem, and Judea, south of Jerusalem and north of the Negev Desert. The whole region is hilly and semiarid, the scattered cultivated areas containing mainly fruit and olive trees. In the uncultivated areas the dry country is broken by wadis, many in deep ravines. Elevations range from over 3,300 feet to 825 feet below sea level, at Jericho. Most of the ridges between Jerusalem and Jenin to the north and Hebron to the south average about 2,000 feet above sea level. The area around Jerusalem was heavily populated; elsewhere the population was sparse.

There were three major towns in Jordanian Samaria: Jenin in the north, Nablus, about 20 miles south of it, and Ramallah, about 10 miles north of Jerusalem. Jenin, at the foot of the Shomron (Samarian) hills, controls the approaches to the Jezreel Valley in the north. South of Jenin is the Dotan Valley, leading west to the coastal plain. Nablus lies in a valley between Mounts Gerazim and Ebal. Two roads connect Jenin and Nablus: that to the east passes through Tubas and Wadi Farra; the western road runs through Silat ed Dhahr and Dir Sharaf.

Operational Plans and Forces

Israeli leaders hoped that if they acted with restraint, King Hussein of Jordan would merely make a gesture of hostility to satisfy the other Arab nations and not open a second front. With the mass of their army engaged against Egypt in the Sinai, the Israelis wanted to hold the line on the other fronts, and during the night of 4/5 June they even sent a message to Hussein through the UN Commander, Norwegian General Odd Bull, informing him that they would not attack unless attacked.

Should Jordan open hostilities, however, the Israeli plan was for coordinated actions around Jerusalem and northern Samaria. Deployed in the area, under the Central Command and part of the Northern Command, were six brigades (one of them --the Etzioni Brigade, in Jerusalem--being exceptionally large). A seventh, Colonel Mordechai Gur's paratroop brigade, was available to be brought up from Southern Command.

The Jordanian Army, direct descendent of the British-led Arab Legion, had a strength of about 56,000. Most of it was stationed in the West Bank Area, seven brigades in a linear defense. One brigade was east of the Jordan, opposite Beit Shean. Of those on the West Bank, four were around the borders of Jordanian Samaria, one (centered in Hebron) was on the Judean ridge from Bethlehem to the southern border. Two brigades were concentrated in and around Jerusalem. The King Talal Brigade, commanded by Brigadier Ata Ali, was responsible for the old city and its immediate area. South and east of the city the 27th Infantry Brigade, with one battalion of the 60th Armored Brigade, covered the area from Bethlehem north to the Adumin Hill east of the city, overlooking the Jericho Road. The 40th Armored Brigade and two battalions of the 60th were on the plain east of the Judean hills. Each of the Jordanian brigades had approximately one battalion of light field artillery attached. There were also two batteries of 155mm Long Toms, one within range of Tel Aviv, the other within range of the principal Israeli airfield in the north, Ramat David. To strengthen the Jordanian forces three commando battalions had been sent from Egypt. Their commander, General Mohammed Riadh, was appointed commander of the Allied Arab Forces on the Jordanian front.

Operations

Jerusalem. As early as 0830 on 5 June, there was sporadic firing of small weapons around the perimeter of Jerusalem, but otherwise that sector was quiet until late in the morning. Jordan's King Hussein received word at 0850 that Israel had attacked Egypt. And soon thereafter Riadh received instructions from Field Marshal Amer to open a second front in Samaria and Judea. It appears that the king some time after 0900

ordered limited long-range artillery fire, but no ground or air action against Israeli positions.

Sporadically for about two hours the Jordanian 155mm Long Toms shelled Israeli military installations near Tel Aviv and in the Jezreel Valley northwest of Jenin. Rounds began hitting the Ramat David airfield at about 1000. Not long thereafter the Israeli General Staff ordered General Uzi Narkiss of the Central Command to carry out operations in the Jer[illegible] area and western Samaria.

Right on schedule at 1115, Israeli artillery and small arms in the vicinity of Jerusalem suddenly erupted against the Jordanian positions. The Jordanians immediately responded. Shortly after noon Ata Ali was ordered to occupy UN Headquarters at Government House. A battalion of the 27th Infantry Brigade seized the building and began to organize the demilitarized zone for defense.

General Narkiss planned to use half of Colonel Eliezer Amitai's Etzioni Brigade to hold the perimeter of northern and eastern Jerusalem while the other half seized the Abu Tur and Sur Bahir areas south of the Old City, to cut communications between Bethlehem and Jerusalem and threaten the Jordanian line of communications from Jericho to Jerusalem. Colonel Uri ben Ari's mechanized Harel Brigade, sent from near Tel Aviv, was to seize the ridge from Jerusalem north to Ramallah to cut off reinforcements. Colonel Gur's paratroop brigade, having been sent from the south, would make the main effort to envelop the city from the north.

In midafternoon twelve tanks of the Etzioni Brigade's tank battalion spearheaded an attack on Government House, while twelve more led an attack on Sur Bahir, and drove two Jordanian companies south toward Bethlehem. The latter tanks then joined the assault on Government House, where the attackers had run into stubborn defenders and lost two tanks. Six other were badly damaged. Together the Israeli units drove out the Jordanians,who had suffered 100 casualties among the total strength of about 500.

At about 1700, tanks of Colonel ben Ari's Harel Brigade moved out from the coastal plain toward the lightly defended ridges north of the Jerusalem corridor and northwest of the city, advancing steadily north and east. After seizing Sheikh Abdul Aziz and Radar Hill, in early morning the Israeli tanks overcame stiff resistance at the fortified position of Biddu, took Nebi Samuel, and reached the Jerusalem-Ramallah road by about 0600 on 6 June. At dawn a battalion of the Jordanian 60th Armored Brigade with about 30 Patton tanks appeared and a fierce tank battle followed, during which the Jordanians lost about six tanks before withdrawing.

Ben Ari's tanks easily took Tel el Ful, a position north of Jerusalem that dominated the nearby heights, then proceeded to Shuafat Hill, which they took with considerable difficulty in the afternoon. Then at last the Israelis halted to rest and refuel.

During the afternoon of 5 June Ata Ali's communications lines were knocked out by bombs as the Israeli Air Force concentrated on his position. A promise of reinforcements for the Jordanian defenders was dissipated by a sustained air attack that knocked out the relief column coming from Jericho. A second attempt also was halted by air strikes, but the infantry proceeded on foot until dawn, when they took cover.

Colonel Gur's paratroopers, who had been flown to an airport near Tel Aviv and been taken to the western outskirts of Jerusalem, crossed the demilitarized zone into the area between the Mandelbaum Gate and the Police School, supported by a tank battalion. The Jordanian defenders of the area were entrenched and deployed in concrete bunkers and fortified houses, and fighting was intense, lasting almost until 0800. By then the paratroopers had fought through to Mount Scopus, an Israeli enclave just north of Jerusalem, completely surrounded by Jordanian territory, and had reached the valley below the Augusta Victoria heights. The Israeli attacks were supported by massive air support, which inflicted a heavy toll on the defenders.

A daylight attempt to seize the heights was defeated, but at sunset Gur's paratroop brigade and tanks made a second vain attempt to take Augusta Victoria. Fire from the Jordanian defenders was heavy, and they drove off the Israelis in their only success of the battle.

Meanwhile, the Etzioni Brigade had taken Arab positions in Abu Tur, just south of the walls of the Old City, and descended into the Hedron Valley in the afternoon of 6 June. There they met with extremely heavy fire from the Jordanians and halted until dark. By this time, however, the defenders of Jerusalem had suffered heavy casualties, hadlost all of their artillery, had lost communications with higher headquarters, and found themselves almost encircled.

Early in the morning of 7 June General Narkiss, fearing that a ceasefire would be imposed before Jerusalem was captured, urged Gur to speed up the assault on the Old City as much as possible. Unknown to them, however, Ata Ali had withdrawn, leaving only a few stragglers in the city. Israeli planes bombed Augusta Victoria and Jordanian gun emplacements behind the Mount of Olives. A heavy artillery barrage followed. Then Gur's attack units moved out in a two-pronged assault. Almost without opposition they swept across the Augusta Victoria heights and the Mount of Olives

and into the valley below the city walls. Leaving two battalions to block the road to Jericho, Gur entered the city with some infantry at 0950, to be informed that the city officials had decided not to defend it.

Amitai's brigade resumed its advance from the vicinity of Mount Zion along the southern edge of the Old City walls. After the units assembled in the area of Ramat Rachel they moved south at 1400 on 7 June to occupy Bethlehem, the Etzion Bloc and Hebron before dark.

From north of Jerusalem on 7 June ben Ari's two battalions entered Ramallah and then advanced eastward toward Jericho, which they found had been abandoned. The Jordanians had in fact crossed the Jordan River, abandoning the Jerusalem-Ramallah-Hebron area at a cost of more than 1,000 killed and at least 3,000 wounded. Total Israeli casualties were over 800, with almost 200 killed.

Samaria. In the Northern Command Brigadier General David Elazar had an armored division consisting of two armored and one infantry brigades, commanded by Brigadier General Elad Peled, and a reserve infantry brigade in the area of Beit Shean. Elazar's objective was to secure the entire west bank area, by taking Jenin and Nablus and silencing the Jordanian Long Toms in the Dotan Valley.

The Jordanians had three infantry brigades, one reinforced armored brigade, two or three independent infantry battalions, and two independent armored battalions deployed in Samaria. The forward elements were stretched in defensive deployment along the frontier, and reserve units were concentrated for rapid deployment as needed.

At 1700 on 5 June Israeli forces crossed the border north and west of Jenin. Colonel Aharon Avnon's infantry brigade advanced south along the Afula road, and Colonel Moshe Bar Kochva's armored brigade headed northeast through the Dotan Valley. Bar Kochva's tanks soon encountered antitank units, protecting the 155mm guns. In a fierce fight which lasted well after dark the Israelis secured the antitank and gun positions. Continuing eastward they overran several Jordanian positions, including some entrenched tanks, and reached the road southwest of Jenin by midnight. Three hours later they launched an assault on the city from the south.

The Jordanians had anticipated an attack from the south and had three well coordinated lines of defensive positions, with many well concealed antitank guns. Bar Kochva's armored infantry, leading the attack, made little progress against the stubborn Jordanian defenders. When Jordanian tank units attempted a double envelopment with 30 Patton tanks, Bar Kochva sent up two battalions of Sherman tanks and then a third. In a confused night armored battle the Israelis finally drove off the defenders, and the armored infantry seized the antitank positions.

Shortly before dawn Avnon's brigade arrived from the north and closed in on the city from that direction. Resistance was fierce, but the converging brigades finally forced the last of the Jordanian tanks which had been fighting from concealed positions within the town to leave. As they hurried south to join their main body on the Tubas Road, Bar Kochva learned that his reconnaissance battalion had encountered Patton tanks approaching from Tubas. Leaving Avnon's infantry to mop up Jenin, Bar Kochva withdrew, regrouped, and headed southwest toward the Kabatia Junction.

Southeast of the junction the Israeli reconnaissance battalion had been skilfully enveloped by two battalions of Jordanian tanks. When Bar Kochva's weary units approached they found themselves facing a fresh Jordanian tank battalion. With his supplies of fuel and ammunition running low, he reported to General Peled, who called in air support. Repeated waves of fighter attacks occupied the Jordanian tanks, permitting Bar Kochva to rest and refuel.

In midmorning of 6 June Bar Kochva attacked the firm defensive position of the 25th Infantry Brigade in and around Kabatia. After fierce fighting, lasting 12 hours, an Israeli tank company smashed through the lines on the Jordanian flank after dark and opened a corridor to the surrounded reconnaissance battalion, which rapidly joined Bar Kochva's brigade, resting north of Kabatia.

Shortly after dawn on 7 June Bar Kochva renewed the attack. A battalion of Avnon's brigade had advanced to the Arraba Junction, on the western road to Nablus, where they threatened the rear of the Jordanian position at Kabatia and the defenders withdrew towar Nablus. Bar Kochva proceeded eastward, overcoming fierce Jordanian resistance on the way, and reached the outskirts of Nablus in the late afternoon.

While all this was going on, an armored brigade under Colonel Yuri Ram had crossed the border early in the morning of 6 June and advanced south from the eastern and southern slopes of Mount Gilboa. Passing through Tilfit (Salpit) in the valley east of Zababida, he planned to head for the Jenin-Nablus road, then turn south through Tubas, toward Nablus. In the valley below Tilfit, however, his reconnaissance company encountered Jordanian tanks well concealed on the heights west of the valley near Zababida, covering the road and the entire valley. Deploying his tanks on the eastern heights, Ram sent some half tracks into the valley to draw Jordanian fire in order to locate the Jordanian positions. This started an armor battle, as tanks fired back and forth across the valley at such long range that little damage was done to either force.

Ram finally . iled in an air strike, which destroyed several Jordanian tanks. Their burning enabled him to pinpoint Jordanian positions, where he directed artillery fire shortly after midnight, while his tanks advanced in two columns to cross the valley toward Zababida. This provoked a tank battle, which ended with the Israelis in possession of the town and the Jordanians heading south down the road to Tubas.

When Ran's reconnaissance company reported that Nablus seemed quiet, Ram left the main body of his command near the Tubas-Damier-Nablus junction and advanced with one tank company toward Nablus. After occupying the town with little opposition, he called up two more companies and attacked a large body of Jordanian tanks west of Nablus, in a confused battle that lasted six hours. Late in the afternoon Bar Kochva's brigade came upon the battle from the north. Thus opposed from two directions, the Jordanians withdrew. Fresh Jordanian tank units arrived, but finding themselves outnumbered, and dispirited by the defeats their forces had been suffering, the survivors of this confused engagement fought their way east to the Damier Valley road, and by dusk were well on their way to Damier.

Firing in and around Nablus continued until about 1830. Ram sent his tank reconnaissance battalion down the road to Damier and seized the bridge there. And Bar Kochva proceeded south on the road to Ramallah, linking up with an Israeli battalion which had been sent north from the city. At 2000 Jordan and Israel accepted a ceasefire.

Although precise figures are not known, Jordanian casualties are estimated at about 4,000 dead and almost 10,000 wounded.

Syrian Front

Action on the Syrian front took place mainly on the Golan Heights, a plateau which is a western extension of the Damascus Plain, bounded by Mount Hermon in the north, the upper Jordan Valley and the Sea of Galilee (Lake Tiberias) on the west, and the Yarmuk River on the south. A rugged escarpment, the Golan Heights, rises abruptly 1,500 feet from the below-sea-level Jordan Valley and the Sea of Galilee, and dominates eastern Galilee. Since 1948 the Syrians had built a defense line with non-continuous rows of bunkers and tank and gun emplacements more than ten kilometers deep, with about 265 guns along the length of the escarpment in position just behind it. Deployed there were three infantry brigades, the 8th, 11th and 19th. Three more were in the rear. East of Kuneitra on the road to Damascus was a reserve strike force of two armored and two mechanized brigades. Another armored brigade and a mechanized brigade were in the Damascus area.

Opposing the Syrian deployment was Brigadier General David Elazar's Northern Command, with three armored and five infantry brigades, several of which were deployed facing Jordanian Samaria.

During the first four days of the war Syrian artillery shelled Israeli settlements in the valley and were met with counterbattery fire and frequent Israeli air strikes on Syrian positions. Otherwise the only ground action came on 6 June, when a Syrian force of about one infantry battalion with 15 to 20 tanks made three attacks on separate positions just across the frontier and were driven off with the help of air strikes.

Elazar, eager to attack Syria, was restrained by Dayan until the ceasefire on the Jordanian front on 7 June released troops for transfer to the north, while the Egyptians had been driven toward the Suez Canal. Before Elazar was authorized to attack, however, Syria accepted a ceasefire at 0320 hours on 9 June. Nevertheless firing continued, and a few hours later Elazar was ordered to attack.

Elazar's plan was to break through to the Golan plateau in the northern sector in the vicinity of Tel Azaziyat and Qala with infantry and tanks, in the central sector near Darbashiya, and in the southern sector, north and south of the Sea of Galilee.

At 1130 an armored brigade, commanded by Colonel Albert Mendler, who had been sent north from the Sinai front, jumped off from the vicinity of Kfar Szold. With a number of bulldozers in the advance guard, the single column moved slowly up the steep rocky slope, under heavy fire from dug-in tanks and tantitank guns, which destroyed three of the bulldozers. In spite of taking a wrong path, Mendler's brigade overwhelmed several Syrian positions and reached the crest, where he split the brigade. One column quickly captured Zaoura, then joined the other in taking Qala.

To the south, meanwhile, the Golani Infantry Brigade, commanded by Colonel Yona Efrat, had struck to the east in two columns. Bypassing Tel Azaziyat, they converged on Tel Fahar. After three hours of heavy fighting they took that position. The Syrians then abandoned Tel Azaziyat. The Golani Brigade reached the crest of the escarpment by midnight.

Still farther south the infantry brigades of Colonels Emanuel Shebed and Yehu Gavish captured three key Syrian positions northeast of the Sea of Galilee. And Colonel Yuri Ram's brigade, which had been sent north from Jordan, moved out of Gonen, north of Darbashiya, after nightfall and took the village of Rawiya on the Trans-Arabian pipeline.

Shortly after dawn on 10 June Colonel Moshe Bar Kochva's brigade, which also had been sent up from Jordan, advanced from Dan behind the Golani

Brigade and took Tel Hamra and the village of Banias. While the main body moved toward the southern slopes of Mount Hermon, the rest of the force advanced northwest toward the Lebanon border. Mendler's brigade, meanwhile, had moved eastward toward Kuneitra, and Ram's brigade was approaching it from the southwest. Since the Golani Brigade was advancing toward Kuneitra from Mansura, the three soon surrounded the city. By 1430 it was secured.

Far to the south, between the Sea of Galilee and the Yarmuk River, General Peled with a reconstituted division advanced up the steep slope of the southern Golan Heights, with Colonel Avnon's brigade leading. He captured Tawafik at about 1500. A helicopter-borne paratroop battalion took the towns of Fiq and El Al, cutting the lines of communication of all the Syrian troops remaining in the southwestern Golan area, then rushed north toward Boutmiya and the Rafid Junction. Colonel Shehed's armored battalion swept through the central section of the Golan to join Peled at Boutmiya, and his infantry and paratroop battalion drove south into the Syrian bridgehead at Mishmar Hayarden and captured the Bridge of Jacob's Daughters. Then it turned east toward Boutmiya. Colonel Gavish meanwhile had cleared the eastern shore of the Sea of Galilee. Having taken all their objectives, the Israelis ceased firing at 1830. Israeli losses were reported as 115 killed and 306 wounded. Syrian losses are estimated at about 1,500 killed, 5,000 wounded, and 550 captured or missing. Approximately 70 Syrian tanks were destroyed and 40 captured intact, and 130 guns were captured or destroyed. With the official signing of the ceasefire in Kuneitra on 11 June the war came to an end.

OPERATION BARBAROSSA
THE GERMAN CAMPAIGN IN THE SOVIET UNION IN 1941

Initial Directive

In July 1940, a month after the conclusion of the French campaign, Hitler asked Field Marshal Walter von Brauchitsch, the Commander in Chief of the German Army, to submit plans for a campaign against the Soviet Union in the spring of 1941. The military objective was to defeat the Soviet Armed Forces in a short blitzkrieg--five months--or at least to advance far enough to capture important production centers of European Russia and to seize so much Soviet territory that the industrial and armaments plants in eastern Germany and the oil fields in Rumania would be beyond the range of the Soviet air force.

During initial discussions at Hitler's retreat in Berchtesgaden two converging thrusts were planned --a southern drive toward Kiev and into the Dnieper River bend, with the Luftwaffe neutralizing the Odessa area; and a northern drive across the Baltic states in the direction of Moscow. The seizure of the Baku oil fields would take place later. To realize this plan Hitler ordered an increase of the strength of the army by 40 divisions.

Strategic Considerations

The German Army General Staff realized that the Red Army's numerical strength, the vast and difficult terrain to be covered, the adverse conditions of Russian weather and the consequent necessity of defeating the Soviet Union in three to four months were all major problems. On the other hand, the Red Army had performed so badly in the campaign against Finland in the winter of 1939-40 that the General Staff had a very low opinion of the USSR's military potential. Moreover, it was generally assumed that the people in the areas occupied by the Soviet Union in 1939 and 1940 were anti-Soviet, and that dissatisfaction with the Communist system in the Ukraine, the Crimea, and the Caucasus was also widespread.

The Germans recognized that the ratio of strength between Soviet and German Forces was not at all favorable. Against some 170 Soviet divisions deployed in the western part of the Soviet Union plus ample reinforcements stationed in various other parts of the USSR, the Germans could at best put 145 divisions, including 19 panzer divisions, into the field. Small contingents of Rumanian and Finnish forces could be added to this total, but their equipment, capabilities, and combat efficiency were below the German. Thus, the German offensive forces would not have the advantage of numerical superiority. The only way to compensate for this deficiency was to mass forces at crucial points, and take risks at others. Achievement of surprise could compensate somewhat for the disadvantage in numbers, but concealing an operation of this magnitude would be difficult, and in the final analysis surprise could be counted on only in regard to the direction and timing of the attack.

The German forces had certainly had more combat experience than the Soviets. German officers were experienced in maneuvering large motorized forces, and their soldiers were well trained and confident. Not only did Soviet officers lack experience in combat, the Army's leadership had not yet recovered from the great purges of 1937-1938, which had eliminated most of the senior officers and unknown thousands of the lower ranks.* However, Soviet soldiers had received systematic training, were used to iron discipline, had an inclination to uncompromising obedience, and because of their largely rural background had an adaptability to weather and terrain that resulted in an Army that could not be counted on to disintegrate after its first defeat.

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*Two of five marshals (Budenny and Voroshilov) had survived; only five of the 80 members of the 1934 Military Soviet were left in September 1938; all 11 Deputy Commissars of Defense had been eliminated; every military district commander, plus some replacements, had been executed; 13 of 15 army commanders, 57 of 85 corps commanders, 110 of 195 divisional commanders, and 220 of 406 brigade commanders had been shot.

Terrain

In the vast western area of the Soviet Union, only one major river, the Pripet, flows from west to east, affording access to the interior. However, it and its tributaries are in fact such a maze of swampland that they constitute an obstacle rather than a gateway. Virtually all of the other streams and rivers of the Soviet Union run from north to south or south to north, and the German Army approaching from the west would have to cross one after another. The Dniester, the Bug, the Neiman, and the Dvina Rivers present no unusual obstacle, but the Dnieper, the Don, and the Volga Rivers and their tributaries are barriers of great complexity.

In addition to the rivers and swamps, much of the northern and central areas are heavily forested, and many of these rendered even more difficult to penetrate because they are combined with swampland.

Since the swampy woodland north and northeast of the Valdai Hills is not suited to mobile warfare, the Germans concluded that the crucial blows of an offensive would have to fall in central and southern European Russia. In the central area a low glacial moraine, the Smolensk-Moscow Ridge, is the watershed between the Black and Caspian Seas in the south and the Baltic and White Seas in the north. Access to this ridge was of paramount importance, but the western approaches are protected by a wide belt of swamps and forests which extends from the Pripet Marshes northward past Velikiye Luki and up to Leningrad.

The almost impassable forests and swamps of the Pripet Marshes divide this crucial area into two separate theaters of operation. In the southern zone the roadnet was poor, with main arteries generally running north and south. North of the marshes the communication system was better, with east-west roads running between Warsaw and Moscow, in the direction of the German advance. Traffic arteries to Leningrad also were favorable to the attackers.

The most favorable season for operations in the Soviet Union is summer, when the ground hardens, roads dry out, rivers can be forded, and all forces have maximum mobility. Sudden thunderstorms and periods of prolonged rain can change dirt roads and open terrain into quagmires even in summer, and in the spring and fall rain and mud make large scale operations virtually impossible. Winter in most parts of European Russia sets in suddenly and lasts five to six months. Except for about a month of clear weather after the muddy autumn, cold, ice, and snow make mobile warfare extremely difficult, and progress on foot slow and exhausting. The one advantage of winter operations is the freezing of rivers and swamps.

German Plans

Behind the frontier, European Russia's great depth offered a great advantage to the defenders. The German planners realized, therefore, that it was essential to engage the Soviet forces as close to the border as possible, in order to prevent them from fighting a series of delaying actions deep to the east. Only by the strict application of the principles of mass, economy of force, and movement could substantial Soviet forces be cut off from their rear communications and forced to fight on reversed fronts. Lacking the necessary forces to mount an offensive in strength along the entire front at the same time, the Germans would have to open gaps in the Soviet line at crucial points, envelop and encircle Russian forces, and annihilate them before they had a chance to fall back.

The German General Staff thought that in case of war the Soviets would adopt defensive tactics, except perhaps in the south, at the Romanian border, where they might attempt an offensive to seize the oil fields of Ploesti, or at least to attack them from the air. The Red Army could be expected to take up defensive positions to cover the eastern Ukraine and the interior of European Russia, along the line Dvina River-Polotsk-Berezina River-eastern edge of the Pripet Marshes-Dniester River, already fortified, and known as the "Stalin Line." This line, particularly strong in the south, was believed to be manned by the best units of the Red Army. The Soviets might withdraw to the Dnieper River, the Germans thought, but a further withdrawal would expose their industrial centers.

The plan developed by the German General Staff called for a three-pronged attack: one army group would attack from East Prussia toward Leningrad; another would advance via Minsk toward Smolensk and Moscow; the third would drive south of the Pripet Marshes toward Kiev, the coal fields of the Donets Basin, and the faraway oil of the Caucasus. The objective of the entire operation was to reach the Volga and the northern Dvina Rivers.

In June 1941 the Wehrmacht's intelligence branch estimated Soviet strength at about 170 infantry divisions, 33⅓ cavalry divisions, and 46 motorized and tank brigades. Of these 118 infantry and 20 cavalry divisions, and 46 motorized and tank brigades were assumed to be deployed in the western part of the USSR. The rest were in the interior, in Siberia, Central Asia, and the Far East.

The total strength of the Soviet Air Force was estimated at about 8,000 planes, 6,000 of them in Europe. These included:

2,000 fighters, 300 of them modern
1,800 bombers, 800 of them modern

700 fighter-bombers, many obsolete
700 naval planes of obsolete design
800 obsolete reconnaissance planes.

The Germans expected to destroy most of the Soviet Air Force during the initial phase of the offensive and wipe out about two-thirds of the Red Army's forces in the border zone, pinning down the rest, an estimated 60-70 divisions, in the interior.

At the end of May 1941 German intelligence identified three main concentrations of Soviet forces: in the Baltic states, to the west of Minsk and near Bialystok, and in the Ukraine on both sides of the Lvov-Berdichev-Kiev line. Strong operational reserves were spotted in the area Shepetovka-Proskurov-Zhitomir, southwest of Minsk, and in the Pskov area.

War Directive No. 21
Operation BARBAROSSA

On 18 December 1940, in War Directive No. 21, Adolf Hitler promulgated the formal plan for his grand assault upon the Soviet Union. Under the code name "Barbarossa," this decisive directive embodied Hitler's desire to crush Soviet Russia in a lightning campaign and to establish a defense line against Asiatic Russia along the Volga River and north to Archangel. If necessary, the last industrial region remaining in Soviet hands located in the Urals would be destroyed by the Luftwaffe.

The German forces which were to participate in Barbarossa were organized in three groups, designated Army Groups North, Center, and South, with two other organizations, the Finnish Army and the German Army of Norway, to assist (see Figure 1). To them the Army High Command assigned the following tasks:

With its main forces massed on the right flank, Army Group North was to launch a powerful attack from central East Prussia through Kovno toward the area south of Pskov, to cut Soviet forces in the Baltic states and push them back to the sea. Establishing itself around Lake Ilmen, Army group North would be in a favorable position for an advance toward Leningrad. The Fourth Panzer Group, in cooperation with the Sixteenth and Eighteenth Armies, was to break through the Soviet border lines along the Gumbinnen-Kovno highway, reach the area south of Pskov as soon as possible, and then continue to push toward the north or the northeast. The Sixteenth Army was to follow the panzer group via Dvinsk toward Pskov, making its main effort on its right flank. The Eighteenth Army was to concentrate its forces east of and along the Tilsit-Riga highway, break through the Soviet border defense positions, advance toward the northeast, cross the Dvina River near Yekabpils, and destroy the encircled Soviet forces southwest of Riga. Then the army was to push toward Pskov, thus preventing the withdrawal of the Red Army from the area southwest of Lake Peipus, and set the stage for the seizure of Estonia and the islands of Hiiumaa and Saaremaa.

Army Group Center was to mass extremely strong forces on both wings, while weaker ones were in the center. On the left the Ninth Army and the Third Panzer Group were to break through the Soviet lines near Suwalki and push toward Molodechno and Orsah. On the right, the Fourth Army and Second Panzer Group were to advance along the main highway Baranovichi-Minsk-Orsha. The objective of the two forces was the encirclement and destruction of all Soviet forces between the border and Minsk. Thereafter the Second and Third Panzer Groups would move on Smolensk from the southwest and northwest, to prevent Soviet forces from reorganizing along the upper Dnieper and Dvina Rivers. The Fourth Army was to advance behind the Second Panzer Group through Bobruisk and Borisov toward Mogilev. At the same time, the Ninth Army, taking advantage of the Third Panzer Group's advance, was to reach the Dvina around Polotsk.

Army Group South, committed south of the Pripet Marshes, was to concentrate its main effort on its left flank, attacking in the direction of Kiev. After reaching the Dnieper River and taking Kiev, a strong panzer force would thrust deep into Soviet territory and envelop the Red forces by following the course of the lower Dnieper. The mixed German-Romanian forces in the south would tie down the opposing Soviet forces during the advance of the army group's left wing, then launch an attack to prevent the Soviets from making an organized withdrawal across the Dnieper.

On the left, the Sixth Army was to screen the north flank of the army group along the Pripet Marshes and follow the First Panzer Group closely to Zhitomir. Then the army would shift strong forces southeastward along the west bank of the Dnieper and join the First Panzer Group in the destruction of the Soviet Forces fighting in the western Ukraine. The First Panzer Group was to thrust via Berdichev and Zhitomir toward the Dnieper River and Kiev, and then, bearing southeastward along the Dnieper, block Soviet routes of withdrawal toward the east, and destroy the enveloped or encircled Red troops. The Seventeenth Army was to attack from the vicinity of Przemysl toward Vinnitsa, concentrating its main force on the left flank. The Eleventh Army was to prevent possible Soviet penetration into Romania, tie down the Soviet forces opposite the Romanian border, and upon receiving specific orders from the army group launch an offensive, thus preventing the Soviet troops from making an organized withdrawal toward the Dnieper.

The Finnish Army would attack west of or on both sides of Lake Ladoga and seize Hanko. The Finns were to time their offensive to coincide

Figure 1. ASSIGNMENT OF GERMAN FORCES, EASTERN FRONT, 21 JUNE 1941

Army/Group	Location	Inf Div	Mtn Div	Pz Div	Mot Div	Cav Div	SS Div	Sec Div	Total	Air Fleet	Bombers	Ftr/Recon
1. Army Group South (FM Gerd von Rundstedt)												
Eleventh	Romania	7[a]							7			
Seventeenth	Poland	10[b]	1					2	13			
Sixth	Poland	5						1	6	Fourth	360	210/30
1st Pz Group	?	6		5	2		1		14			
Reserve		1							1			
Totals		29	1	5	2		1	3	41			
2. Army Group Center (FM Fedor von Bock)												
Fourth	Poland	12						2	14			
2d Pz Group		6		5	2	1	1		15			
Ninth	Poland	7							7	Second	490	390/30
3d Pz Group		4		4	3				11			
Reserve		2						1	3			
Totals		31		9	5	1	1	3	50			
3. Army Group North (FM Wilhelm von Leeb)												
Sixteenth	E.Prussia	8							8			
4th Pz Group		2		3	2		1		8	First	270	110/50
Eighteenth	E.Prussia	7							7			
Reserve		3							3			
Totals		20		3	2		1		26			
OKH Reserve		21	1	2	1		1	2	28			
OKH Totals		101	2	19	11	1	4	6	145			
German Army of Norway (Gen. Nikolaus von Falkenhorst)												
Finnish III Corps									2			
German XXXVI Corps									2½	Fifth	40	10/10
German Mtn Corps									2			
Total									6½			
East Front Grand Total									151½		1,160	720/120

Source: OKW, Kriegstagebuch, I (Frankfurt, 1965)

[a]Plus 14 Romanian divisions

[b]Includes three light infantry divisions

with Army Group North's crossing of the Dvina River. In the far north the Germans wanted to seize Murmansk, denying it to the Soviets as a base for attack against northern Finland and Norway. An attack toward Kandalaksha would cut Soviet lines of communication to Murmansk.

Plans for the concentration of troops were prepared by the General Staff with due consideration for secrecy. The first echelon was to begin to move into the theater in February. The second would start in mid-March and would be concentrated in rear areas away from the border. At the beginning of April, as late as possible in order to maintain secrecy, Hungary would have to be approached regarding the transit of troops. The third echelon was to begin its movement in mid-April. From then on concealment would become difficult. The transfer of the fourth echelon was planned for the period from 25 April to 15 May.

The target date for Barbarossa was set at 15 May. On 27 March 1941, however, an unexpected coup by Serbian officers caused Hitler to order an emergency operation against Yugoslavia, which resulted in postponement of the launching date to 22 June, a delay of five and a half weeks, which was to contribute to the outcome of the operation.

Moderate in the beginning, in order to maintain secrecy, the pace of troop transfer was stepped up as D-Day approached. All the infantry had to march by night from their assembly areas to the jumping off positions. The OKH reserves were not moved east until the beginning of the offensive, when they assembled in the areas west of Jaroslaw, east of Warsaw, Lublin, and the East Prussian region.

Distribution of German Forces

Hitler and his top military commanders believed that they could defeat the Soviet Union in three or four months. There were 151½ divisions, including 19 panzer division, available for the invasion, distributed among the individual army groups and armies as shown on Figure 1. Six and a half of these were in the German Army of Norway, and there was one additional German division with the Finnish forces. The total strength was:

Officers and enlisted personnel	3,050,000
Tanks	3,350
Artillery pieces	7,184*
Motor vehicles (including armored Reconnaissance cars)	600,000

*Soviet sources mention 48,000 guns and mortars. Lototskiy, S.S., *The Red Army* (Moscow, 1971), p. 114.

Each army group was supported by an air fleet, with a total of about 2,000 planes, of which 1,160 were bombers and dive bombers, 720 fighter planes, and 120 reconnaissance planes.

Distribution of Soviet Forces

While the Germans were massing their troops in the east in the spring of 1941, the Soviet General Staff drew up a defense plan and embarked on reorganization of defenses of the western frontier, 4,500 kilometers long, including 1,125 kilometers of seacoast. Extensive mobilization measures were initiated in May and June. By the beginning of June 790,000 reservists had been called up, increasing the total strength of the Soviet armed forces to 5,000,000 effectives. Before the outbreak of war, Soviet official sources state, the Soviet Union had concentrated in its western regions 170 rifle, cavalry, tank,and motorized divisions, 2 rifle brigades, and supporting units, with a total strength of 2,900,000 men. These forces possessed 1,800 heavy and medium tanks (including 1,475 modern KVs and T-34s), in addition to about two or three times as many light and obsolete ones, 34,695 artillery guns and heavy and medium mortars, and several thousand aircraft, of which the Soviets considered only 1,540 to be of modern design.

The defense of the 3,375 kilometers of land frontier was organized in a zone 300 to 400 kilometers in depth. Close to the border, in the first echelon of defense, 56 divisions and 2 brigades were deployed up to 50 kilometers in depth. Behind them, divisions of the second echelon were about 50 to 100 kilometers from the border. All tank divisions were deployed in the second and third echelons. Divisions of the first echelon had only a few units, up to one regiment, holding a broad front, while the main force was kept in barracks or camps 10 to 50 kilometers to the rear. Average frontage per division was about 50 kilometers, and along the Prut River and in the Carpathians 100 to 120 kilometers.

These fronts were much wider than that envisaged in Soviet doctrine, as set forth in published regulations, that is 8 to 12 kilometers per division, or 25 to 30 kilometers in fortified areas. The actual frontages, however, were required to permit coverage of the long frontier by available forces while still retaining reasonable density in a defense in depth. Actually in the frontier areas fortifications were still under construction. Even in those few areas where the defensive structures had already been built, the armament and equipment had not yet been installed.*

*It should be pointed out that, while building a new defensive line closer to the new frontier,

The Soviet forces in the western part of the USSR were organized in five military districts, to be called fronts on the outbreak of war. The Leningrad Military District (Northern Front) covered the area north of Narva to Polyarnyy. The Baltic Special Military District (Northwestern Front) went from the south shore of the Gulf of Finland along the Baltic coast and 300 kilometers of the East Prussian frontier. The Western Special Military District (Western Front) covered 450 kilometers from Kopzove to Vlodava. The Kiev Special Military District (Southwestern Front) ran from Vlodava to Mogilev Podolskiy. And the Odessa Military District (Southern Front) went from Kemenets Podolskiy to the Black Sea. The forces assigned to each are shown on Figure 2.

On the eve of the war the planned concentration of Soviet forces was not yet completed. The so-called Reserve Army Group a total of 32 divisions, had not yet been deployed on the line of the Western Dvina and Dnieper Rivers as a second echelon. Soviet lack of preparedness was due to several causes: misjudgment of the possible time of German attack--despite plenty of warnings; Stalin's conviction that it would be possible to avoid war in the summer of 1941, and thus win time; and strict orders not to "provoke" the Germans by strengthening border defenses.

Toward the evening of 21 June it became obvious to the Soviet military leaders that Germany would attack the USSR within the next 24 hours. It was necessary without loss of time to inform the troops and withdraw them from the frontier outposts to defendable positions, to relocate the air force to reserve airfields, deploy the troops of the first echelon along the lines of defense, and initiate the deployment of the second echelon and reserves of the military districts. However, the People's Commissariat of Defense was unable to communicate with Military Districts in the five or six remaining hours of 21 June. Moscow finally transmitted the directive to alert the troops to the Military Districts at 0030, 22 June. The Red Army therefore had less than three hours to prepare itself for the German thrust.

The German Offensive

The German offensive attack on the Soviet Union began at 0315 on 22 June 1941, taking the Soviet forces along the border by surprise. In some places Soviet troops were caught in their camps and barracks. The Luftwaffe inflicted heavy initial losses on the Soviet Air Force, catching most of the planes on the ground, and destroying about 2,000 in the first two days. Heavy bombers struck at Soviet towns, communications centers, rear installations and naval bases, even before the Soviets officially announced the outbreak of war. The field fortifications in the border areas, either incomplete or unmanned, were quickly pierced by German troops.

Concentration of Soviet troops along the main line of advance of German panzer groups was negligible. The 40 kilometer front where the Fourth Panzer Group advanced was defended by one Soviet division (125th Rifle Division). The thrust of the Third Panzer Group on a 50 kilometer front was met by the 128th Rifle Division and one regiment of the 188th Rifle Division. The Second Panzer Group found in its 70 kilometer sector only elements of the 6th, 42d, and 75th Rifle Divisions, and the 22d Tank Division (none in a state of readiness). The First Panzer Group, advancing on a front of 65 kilometers, met the 87th and 124th Rifle Divisions.

Soviet commanders proved helpless before the onslaught. The first reaction to the offensive was confusion. The German Army Group Center intercepted a radio query from a Red Army formation to its headquarters. "We are fired upon. What shall we do?" The answer was, "You must be insane. Why is your message not in code?" Similar queries were received by many other headquarters. In general, however, the Soviet troops recovered fairly quickly, and in numerous places offered strong local resistance.

By the end of June, the German High Command had good reason to be satisfied with the progress of the operation. In the Army Group North area the situation had developed according to plan. The Dvina River had been crossed at Dvinsk and Yekabpils by 26 June, and the Germans estimated that nearly 15 Soviet divisions had been destroyed. In Lithuania and Latvia, however, the Soviets were offering strong resistance in a series of delaying actions.

In the Army Group Center area, the ring of encirclement around the Soviet forces west of Minsk had been closed. The Second and the Third Panzer Groups had linked up near Minsk on 28 June. Although the encircled units made an uncoordinated effort to break out of the pocket, they had only a very limited success. Eventually some 20 Soviet divisions were wiped out in the Minsk pocket, and the Germans captured 300,000 prisoners, 2,500 tanks, and 1,400 guns.

In the Army Group South sector, the First Panzer Group reached the area east of Rovno, its advance having been repeatedly held up by counter-attacks of well-led Red Army units. Farther to

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the Soviets--in one of the great blunders of World War II--stripped the Stalin Line of all its armament and dismantled all other equipment. Thus when the war started the Red Army found itself practically without fortifications either near the frontiers or in the interior.

Figure 2. SOVIET ORGANIZATION, WESTERN FRONT, JUNE 1941

Army/Corps	Location	Divisions				
		Rifle	Tank	Mechanized	Cavalry	Total
1. Leningrad Military District (Northern Front)(Lt.Gen.M.M.POPOV)						
Twenty-third	Viipuri-Keksholm					
Seventh	N&NE Lake Ladoga					
Fourteenth	Belomorsk-Murmansk					
X Mechanized Corps	Karelian Isthmus					
Totals		19		1		20
2. Baltic Special Military District (Northwestern Front)(Col.Gen.F.I.Kuznetsov)						
Eighth Eleventh	Prussian frontier					
Twenty-seventh	South of Pskov					
Totals		19	4	2		25
3. Western Special Military District (Western Front)(Army Gen. D.G.Pavlov)						
Third Army XI Mechanized Corps	Grodno					
Tenth Army						
VI Mechanized Corps	Bialystok					
XIII Mechanized Corps						
Fourth Army XIV Mechanized Corps	Brest-Pinsk					
Thirteenth Army	Minsk (reserve)					
V Mechanized Corps VII Mechanized Corps	Bobruisk					
Sixteenth Army						
Twenty-first Army	Vitebsk (6 divisions each)					
Twenty-second Army						
Totals		24	12	6	2	44
4. Kiev Special Military District (Southwestern Front)(Col.Gen.M.P.Kirponos)						
Fifth Army XXII Mechanized Corps	Lutsk					
Sixth Army IV Mechanized Corps	Lvov					
Twenty-sixth Army	Borislav					
VIII Mechanized Corps	400 km back					
Twelfth Army	Kamenets Podolskiy-Chernovtsy					
XV Mechanized Corps	Radekhov-Ostrog					
XIX Mechanized Corps + 1 rifle corps	Zhitomir (reserve)					
Totals		32	16	8	3	59
5. Odessa Military District (Southern Front)(Army Gen.I.V.Tyulenev)						
Ninth Army						
Eighteenth Army	Northwest of Odessa					
IV Independent Rifle Corps	Crimea					
Totals		13	4	2	3	22
Grand Totals		97	36	19	8	170

Sources: Zhukov, G.K. Vospominaniya i Razmyshleniya (Moscow, 1969), p. 250.

the south, the advance of the Seventeenth Army had progressed to the area around and south of Lvov, but against strong resistance. Formations of the Soviet Southwestern Army Group, having recovered from the initial shock, were showing considerable skill in blocking the advance.

In general, in view of the heavy losses suffered by the Red Army, the overall success of the German operation seemed to be assured. In a diary entry of 3 July, Colonel General Franz Halder, Chief of the Army General Staff, expressed the opinion, shared at that time by most German military leaders, that the mission of destroying the Red Army west of the Dvina and Dnieper Rivers had been accomplished, and that it ssemed to him no exaggeration to state that the Russian campaign had been won in less than two weeks.

By 8 July, of 164 Soviet Rifle divisions identified by the Germans 89 had been destroyed, 46 were still capable of commitment, 18 were employed in secondary theaters such as Finland, and the whereabouts of 11 divisions was unknown.

In the south, the offensive of Army Group South hinged upon the progress made by the Sixth Army and the First Panzer Group. To achieve a decisive success the latter would have to penetrate the Red Army defenses that blocked the German axis of advance in the direction of Vinnitsa and Koresten. The mounting pressure exerted by the Soviet Fifth Army, which was threatening the German north flank from the Pripet Marshes, had to be eliminated at the same time. Moreover, to prepare the way to the encirclement of Soviet troops southwest of Berdichev, the Eleventh Army would have to advance northeastward toward Vinnitsa and assist the First Panzer Group. By mid-July the Soviet Fifth Army had diverted much of the German Sixth Army from its original mission, but the First Panzer Group was advancing southeastward toward Uman, and the Seventeenth Army, despite stubborn Soviet resistance and heavy rain, had penetrated the Vinnitsa area. The Eleventh Army had reached the Dniester River.

The objective of the Army Group Center was to bring about the collapse of the vital Soviet defensive triangle anchored on Orsha, Smolensk, and Vitebsk. There, between the Dnieper and the Dvina Rivers, was a corridor which the Germans would have to control in order to continue the advance toward Moscow. The Soviets were preparing a strong defense in this area, using forces which had escaped from the Minsk pocket and also fresh units being moved up. Another Soviet concentration was being built up near Velikiye Luki for future commitments against Army Group Center or Army Group North. To accomplish its mission, Army Group Center would have to make a double envelopment, with the Second Panzer Group advancing in the general direction of Bobruisk-Roslav and the Third Panzer Group along the upper Dvina via Polotsk and Vitebsk. The infantry divisions of the Fourth and Ninth Armies would have to close up and support the armor if the Orsha corridor was to be enveloped.

The Soviet Orsha-Smolensk-Vitebsk defense line was crushed by mid-July, and the encirclement near Smolensk was closed, when Guderian's panzer group met with General Hermann Hoth's panzers advancing from the north. The Germans captured another 100,000 prisoners, some 2,000 tanks, and 1,900 guns. The Soviet forces, although split into isolated and encircled or enveloped groups, continued stubbornly to resist, slowing the advance of Army Group Center toward Moscow, and even occasionally striking back. To divert the German forces from the Smolensk sector, a counteroffensive operation was carried out at Bobruisk by General R.I. Kuznetsov's Twenty-first Army. The Twentieth Army under General P.A. Kurochkin had pinned down several German divisions by enveloping both German flanks at Smolensk. Between 10 and 15 July this army launched 22 counterattacks in division or corps strength.

The Sixteenth Army fought its way eastward against stubborn resistance in the difficult terrain east of Opochka, while the Fourth Panzer Group turned northward, advancing between Lakes Ilmen and Peipus toward Leningrad. The two panzer corps of the Fourth Panzer Group became separated during the course of their advance. The corps on the right moved toward Novgorod with the aim of isolating Leningrad from the east. The corps on the left advanced along the east shore of Lake Peipus and toward Narva, to close the corridor between Lake Peipus and the Baltic, and resume the advance toward Leningrad from the west.*

After one month of fighting the effective strength of the German infantry divisions had been reduced by approximately 20 percent, and that of panzer and motorized divisions by 50 percent. German intelligence estimated Soviet strength at 93 divisions, 78 of them rifle, 13 tank, and two cavalry. (Soviet sources indicate that 324 divisions were dispatched to the front in the summer of 1941.) The strongest force, 32 rifle and three and a half tank divisions, was facing Army Group Center. Next strongest, 26 rifle, six tank and two cavalry, was facing Army Group South. Army Group North was opposed by 20 rifle and three and a half tank divisions. OKH estimated that Army Group South would cross the Dnieper River by mid-August, and that Army

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*The splitting of the Fourth Panzer Group was highly undesirable from the German point of view. The Army High Command had planned to keep the group intact until it reached the area southeast of Leningrad. The city would thus be cut off from the east, and the way paved for the advance of the Finns approaching along the shores of Lake Ladoga.

Group Center, after mopping up Soviet pockets of resistance, might resume its advance around 5 August. The Soviets were building up strength west of Moscow, and very strong opposition might be expected there. Army Group North would probably have to regroup before it could launch a final drive on Leningrad.

Hitler, convinced that the most important objectives were the Crimea and Leningrad, was insistent on peeling off the panzer forces from Army Group Center as soon as the fighting around Smolensk subsided. Hoth's Third Panzer Group was to be sent to assist Army Group North in its assault on Leningrad, and Guderian's Second Panzer Group would turn south and southeast to join the Fourth Army, under Army Group South, in destroying the Soviet Fifth Army and breaking into the rear of the Soviet Southwestern Army Group. Army Group Center, with infantry alone, would proceed toward Moscow.

Hitler's plans were opposed by many of the German top commanders, including General Halder and Field Marshal von Brauchitsch, Commander in Chief of the German Army, who made several attempts to present their views. Army Group Center, they argued, would retain only 20-22 divisions, including all reserves in rear areas, to launch an offensive along a front of approximately 250 kilometers against an estimated force of 19 Soviet divisions, of which three were tank divisions. Since possession of Moscow, communications hub of Russia, was vital from a military, political and economic standpoint, the Soviet Supreme High Command was expected to commit all available forces to defend the city.

The German generals argued that to forestall the Soviets from building a defense line all the way from the Baltic to the Black Sea, along which they would attempt to stop the German advance before the onset of winter, the Germans would have to smash the Red Army's resistance by a concentrated thrust to Moscow. With a maze of defensive positions around the city, no quick advance to Moscow could be expected without panzer forces. On the contrary, the operation would be costly, painstaking, and might bog down altogether. By a concentrated attack on Moscow the German Army could destroy the bulk of the Red Army, split the Soviet theater into two parts, and seriously impair the Soviet unity of command. All secondary operations should be abandoned, or curtailed, unless they contributed to the basic concept of a powerful offensive against Moscow.

The plan of the German General Staff called for a direct offensive against Moscow on two axes: from the south along the Roslavl-Moscow road, and from the north the line Bely-Rzhev-Dmitrov. On the right the Second Panzer Group would thrust into the area south of Moscow, cut the communication lines leading from the south to the capital, and support the right wing of the southern army. On the left, the Third Panzer Group would drive in the direction of Kalinin, cut the lines of communications between Leningrad and Moscow, seize the area north of Moscow, and support the left wing of the northern army. The offensive could probably begin before 15 August, and it could be assumed that Moscow would be taken early in September. Although no immediate resolution of these differences was made, the panzer groups were diverted to north and south in August by Hitler's order.

Army Group South fought heavy battles at Kiev and Korosten in July, but the Sixth Army could not take Kiev. General Potapov's Soviet Fifth Army fought stubbornly northwest of Korosten, pinning down a force estimated by the Soviets as 12 divisions. In a month of bitter fighting German troops managed to advance no more than 60 or 70 kilometers. The First Panzer Group, however, had broken through the Soviet Second and Eighteenth Armies and headed toward Pervomaysk.

During the first half of August Army Group South partially succeeded in destroying Soviet forces on the western bank of the Dnieper River, where main forces of the Soviet Southwestern Army Group were drawn into large scale fighting. On 5 August the First Panzer and Seventeenth Armies encircled the Soviet Sixth and Twelfth Armies (about 16 divisions) near Uman, tipping the scales in the Germans' favor. Thereupon the Soviet Supreme Headquarters ordered the bulk of the armies of the Southwestern and Southern Army Groups to retreat across the Dnieper and hold its left bank, while holding Kiev, Dnepropetrovsk, and several bridgeheads on the right bank. By the end of August the entire Dnieper bend was cleared of Soviet forces, as many as possible having withdrawn across the river.

On 20 July the Soviet forces of the Western Army Group were ordered to counterattack, retake the region of Smolensk, and throw the Germans of Army Group Center back to Orsha. They struck in force at Smolensk, Yelna, and Yartsevo. In Smolensk, the Germans for several days fought the stubbornly attacking troops of General Lukin's Sixteenth Army. Fierce fighting went on at Yelna, and the Germans were temporarily forced to give up the town. By 10 August, however, local German attacks near Rogachev and Roslavl had relieved the pressure against the southern flank. Yartsevo changed hands several times, as General Rokossovsky's troops held up the tanks and infantry of General Hoth's Third Panzer Group. The town itself was reduced to rubble. Although the Soviet counteroffensive was not well organized, it had slowed the German advance and seriously threatened the whole blitzkrieg concept. Whereas in the first days of the war the Germans had advanced at an average daily rate of 30 kilometers,

in late July and August their speed had dwindled to six or seven kilometers a day.

Army Group North during the early summer made progress on the right, and most of the infantry divisions succeeded in closing with two panzer corps along the Luga River and near Novgorod. By 7 August the German Eighteenth Army had split the two corps of the Soviet Eighth Army in northern Estonia, driving one corps back toward the city of Tallin and its naval base, which it defended for another three weeks, and the other Soviet corps to the Luga River line beyond Narva. Although the Soviets had erected a series of concentric defense lines around Leningrad and raised ten People's Volunteer Divisions to man them, the Germans enjoyed a marked superiority in strength. On 10 August Field Marshal Leeb's Army Group North launched a three-pronged attack on Leningrad. The main axes were: (1) Narva-Kingisepp-Leningrad; (2) Luga-Leningrad; and (3) Kekshol-Leningrad. The Soviets responded by rushing three new armies to Leningrad, and ordering the Northwestern Army Group to counterattack the German forces near Staraya Russa.

Meanwhile, the German Army of Norway had initiated operations in Finland. Petsamo was occupied, but some units bogged down near the Litsa River, and others which were driving toward the Murmansk railroad, made very slow progress in the forests and swamps of central Finland. The Karelian Army, under Finnish High Command, advanced along the eastern shore of Lake Ladoga to the pre-1940 Soviet-Finnish border. On the Karelian Isthmus the Finnish forces launched their offensive against Viipuri on 31 July, after Soviet forces in the area had been weakened by the withdrawal of some units needed for the defense of Leningrad.

As the Germans pushed deeper and deeper into the Soviet heartland, the Soviet Government took steps to adjust the country and its armed forces to the situation. Changes were made in the organization and command of the army, to strengthen the control over its operations. To coordinate operations of the various army groups, commands were set up for the Northwestern, Western, and Southwestern Theaters. Overall command was centralized in the General Headquarters of the Supreme High Command (Stavka), under Stalin as the Supreme Commander. All defense matters were placed under a State Defense Committee, which mobilized industry, and among other measures moved more that 1,500 factories east beyond the Ural Mountains.

On 18 August Halder, in a memorandum to Hitler, stressed the importance of seizing Moscow before the autumn rains began. Whereas operations in the north and the south would lead to elimination of the Baltic Fleet, capture of Leningrad, and seizure of the important industrial areas of the Donets Basin, he pointed out, an all-out offensive in the center would result in destroying the main Soviet forces and cutting the entire Soviet front in two. However, said Halder, the offensive could meet with success only if the forces of Army Group Center were properly massed and all other operations were subordinated.

But Hitler was not interested in Moscow. To him the prime objective remained capture of the Crimea and the industrial region of the south and cutting off the Soviets from the oil wells in the Caucasus, while encircling Leningrad and linking up with the Finns in the north. On 21 August he ordered a concentric attack by Army Group South and part of Army Group Center against the Soviet Fifth Army.

Part of Guderian's Second Panzer Group was already near Gomel, on the southern flank of Army Group Center. He was ordered to divert his whole group south toward the Ukraine. The leading panzers attacked toward the Ukraine on 25 August. On the third day they broke through the lines of the Soviet Thirteenth Army and captured intact the 700 meter long bridge over the Desna River east of Novgorod Severskiy. On 9 September a weak spot in the Soviet defense was found, between Baturin and Konotop. Through it the panzers pushed southward toward Romny, where the Soviet defenders were so surprised that they were unable to take advantage of their well prepared positions. Meanwhile the First Panzer Group and the Seventeenth Army had broken through the exhausted Soviet Thirty-eighth Army near Cherkassy and Kremenchug and headed northeast toward Romny. The two panzer groups made contact near Lekhvitsa, about 100 kilometers east of Kiev, on 16 September, closing the outer encirclement of four armies of the Soviet Southwestern Army Group. The Second and Seventeenth Armies subsequently joined in an inner encirclement, capturing Kiev and part of the Ukrainian territory east of the Dnieper.

German troops had reached the approaches to the Crimea, and nearly 600,000 Soviet troops had been cut off. Within the pocket, disorganization of the Soviet units was complete, and no concerted attempt was made to break out. The way was open for a sustained German drive eastward toward Kharkov and Rostov, as the remnants of the Soviet Southwestern Army Group tried to establish a defense on the line Belopolye-Lebedin-Shishaki-Krasnodar-Novomoskovsk.

Farther to the south, Romanian forces had blockaded and besieged Odessa, one of the main bases of the Soviet Black Sea Fleet. On 10 August they attacked the Soviet positions. Bloody fighting continued for over two months. Finally, with the Soviet position in the Ukraine and the Crimea extremely grave, Soviet troops abandoned the city on 17 October.

Meanwhile, Army Group North by 8 September reached the outskirts of Leningrad, cutting all Soviet surface communications with the city except across Lake Ladoga. Attacks on the city were halted after several days, to avoid a long and savage battle through a city of immensely strong buildings, with a maze of canals and small waterways. Leeb, transferring his panzer forces to Army Group Center for the push to Moscow, tightened the ring around Leningrad, strengthened his eastern flank near the Valdai Hills, and improved his positions along the Volkhov River. Insufficient forces, bad weather and fierce Soviet resistance prevented him from advancing east of Lake Ladoga to link up as planned with Finnish units.

The Battle for Moscow

Although Kiev had not yet fallen, and Army Group North was far from taking Leningrad, and despite the approach of autumn, on 6 September Hitler ordered a major operation to take Moscow. A pincers attack, primarily with panzer forces, was to cut off the Soviet forces west of Vyazma in a dual operation from Roslavl and east of Velizh, then when the bulk of the Soviet forces had been destroyed, the German attack forces were to advance to Moscow, along a front extending from the Oka River on the right to the Upper Volga River on the left, to envelop the city from north and south and simultaneously strike at the center from the west. Originally ordered for launching in about ten days, the operation was hurriedly organized for the end of the month.

Basic to the operation was the return of the panzer units which had been taken away from Army Group Center only weeks before. Divisions transferred from Army Groups North and South and from reserve were to increase the force in the Roslavl area to six panzer divisions, under the command of the Fourth Panzer Group, and that in the Velizh area to three panzer divisions under the Third Panzer Group. The five divisions of the Second Panzer Group (three panzer, two infantry), returning from the Ukraine, were to make a wide enveloping drive from Glukhov toward Orel, preparatory to an advance toward Moscow.

The Ninth Army and the Third Panzer Group, comprising 23 divisions in all (three of them panzer and two motorized), constituted the northern pincer of the offensive. The southern pincer was made up of the Fourth Army and the Fourth Panzer Group, with 22 divisions, five of them panzer and two motorized. In all, Army Group Center had 70 divisions for the operation, 14 panzer and eight motorized. They were to be supported by the Second Air Fleet, with about 1,000 aircraft.

Opposing German Army Group Center with a frontage of 750 kilometers were parts of three Soviet Army groups, by this time considerably reorganized from the original grouping shown on Figure 2. From north to south were the six armies of the Western Army Group (Twenty-second, Twenty-ninth, Thirtieth, Nineteenth, Sixteenth, and Twentieth), two of the Reserve Army Group (Twenty-fourth and Forty-third), and three plus an operational group from the Bryansk Army Group (Fiftieth, Third, and Thirteenth Armies). The remainder of the Reserve Army Group (Thirty-first, Forty-ninth, Thirty-second, and Thirty-third) was in the rear in the Vyazma defense line.

Altogether the Soviets had a combined force of about 800,000 effectives, 6,800 guns and mortars, 780 tanks (of which only 140 were battleworthy medium and heavy), and about 550 largely outdated planes. All Soviet divisions were undermanned, consisting largely of reservists with little or no refresher training. They were short of ammunition and equipment. The mobility was very low; even horses were in short supply. The Germans enjoyed a superiority of over 20 percent in manpower, nearly 120 percent in armor, over 200 percent in artillery, and almost 100 percent in planes.

On 30 September, the German offensive was launched. The Second Panzer Group* attacked the Bryansk Army Group in the Shostka area and advanced toward Orel. Yeremenko's Bryansk Army Group was in the process of preparing an attack toward Glukhov as Guderian struck the surprised Thirteenth Army in the rear. The next day the Second Panzer Corps broke through the defense lines of the Soviet Fiftieth Army. Events moved with such speed that the Soviet commanders, as they admitted, lost control of their troops. On 3 October the German IV Panzer Corps burst into unsuspecting Orel.

Farther north, on 4-5 October the Fourth Panzer Group broke through the defense line of the Soviet Forty-third Army of the Reserve Army Group, took Spas-Demensk and Yukhnov and enveloped the Soviet Vyazma defense line from the south. The Third Panzer Group, on the left, smashed through the lines of the Soviet Thirtieth and Ninteenth Armies in the center of the Western Army Group and enveloped the Vyazma defense forces from the north. As a result, the Soviet Ninteenth, Sixteenth and the Twentieth Armies of the Western Army Group and the Thirty-second, Twenty-fourth, and Forty-third Armies of the Reserve Army Groups found themselves in a deep double envelopment. The Soviet High Command ordered the Vyazma defense forces to withdraw, but it was too late. German panzer and motorrized columns cut off the routes of retreat.

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*The Second Panzer Group had to march over 600 kilometers after turning its axis of advance almost 180°, before it could establish contact with the Army Group Center.

By 7 October the five Soviet armies were encircled in the area to the west and northwest of Vyazma. Only the Forty-third escaped. Moreover, German troops had captured Bryansk and Karachev, and split and encircled the armies of the Bryansk Army Group.

The liquidation of these two pockets was time consuming, for the surrounded units of the Red Army offered strong resistance trying to break out. Only a small number of troops was able to squeeze through the rings of encirclement. The rest, some 650,000 of them, were captured.

On 5 October, the Second Panzer Army (as of 5 October the First and Second Panzer Groups were redesignated panzer armies), which was approaching Mtsensk against light opposition, was ordered to advance rapidly toward Tula in order to break through to Moscow from the southwest. At the same time the Third Panzer Group was to cut off the main railroad connecting Moscow with Leningrad, drive to the Volga River and approach Moscow from the northwest. These two panzer enveloping groups would simultaneously protect the flanks of the armies which were to launch an attack in the center.

The period between 7 and 20 October was marked by heavy fighting On 7 October, the autumn rain began to turn the ground into mud, slowing the movement considerably. On 18 October Hoth's Third Panzer Group took Kalinin. Then the panzer group, with the Ninth Army close behind it, pushed toward the "Moscow Sea," a huge artificial lake some 110 kilometers north of Moscow. On the southwest, on 20 October the Fourth Army and Fourth Panzer Corps reached the areas east of Kaluga and Mozhaisk.

Except for the Second Panzer Army's advance closer to Tula and a few local gains, this was the extent of the German advance at the end of October, as heavy rain, snow, damp, and penetrating mist made wholesale movement impossible. The advances of up to 250 kilometers had brought German forces 80 to 120 kilometers from Moscow, in position to attack the city. The question became whether to resume the offensive at the close of the muddy autumn season and before the onslaught of the heavy winter snows.

To OKH it appeared that the Red Army had exhausted its reserves and was throwing every available man and gun into the defense of the capital. Wide sectors of front were unprotected, and the Soviets were relying heavily on untrained, badly organized and equipped People's Volunteer units. Postponing the attack to spring would give them time to rearm and reorganize their forces. The great political and military significance of Moscow made an attack in the few weeks of good weather seem worth the gamble. On the other hand the German forces were not equipped or clothed for winter. Moreover the combat strength of the infantry divisions had dropped to 65 percent, and that of panzer divisions to below 50 percent, with a high percentage of losses in officers. Panzer losses ranged from 65 to 75 percent. It was estimated that the real value of the 136 divisions on the eastern front was equivalent to only 85 full-strength divisions, and there were no units in reserve. A major reverse could have disastrous consequences, and launching an offensive under these circumstances would indeed be a gamble. Moreover, the southeast flank of Army Group Center in the area east of Kursk and Orel was greatly exposed. There the German Second Army was scattered over a wide area, having only occasional contact with units of Army Group South. The flow of supply was disrupted, and only the most urgently needed rations, ammunition, and fuel could be moved forward, with great difficulty. The situation could hardly be expected to improve soon.

After weighing pros and cons, OKH decided to risk the offensive, apparently not taking into full account the demands which the winter offensive would make upon their troops, and basing their estimates of Soviet strength on poor intelligence data. Unnoticed by German intelligence, fresh and well trained Soviet divisions from the Far East and Siberia were already arriving at the front and deployed near Moscow. The transfer of these troops, which had begun before June 1941, was speeded up through the summer and fall. From the Far East 15 rifle and three cavalry divisions, eight tank brigades, 1,700 tanks and 1,500 planes were moved westward, approximately half of the ground strength of the Far East armies.

In expectation of the renewed German drive against Moscow, the Soviet Supreme Command took a number of measures to break up the offensive. General Zhukov in October was named Commander of the Western Army Group, replacing General Konev, who in turn a week later became the commander of the newly created Kalinin Army Group. On 10 November the Fiftieth Army and the entire defense force of Tula were transferred to the Western Army Group, and the Bryansk Army Group was disbanded.* The new infantry tank units which Zhukov received from the Supreme Headquarters reserve were concentrated in the most vulnerable sectors, mainly around Volokolamsk, Klin and Istra, where the Soviets expected the main panzer attack. The Soviet Sixteenth Army in the Volokolamsk-Istra sector was strengthened by five

*Until 10 November the Bryansk Army Group was responsible for the defense of Tula. The two remaining armies of the army group, the Third and Thirteenth, were transferred to the Southwestern Army Group.

cavalry divisions. Additional forces were moved also to Tula and Serpukhov, where the Second Panzer Army and the Fourth Army were expected to attack. This left flank of the army group was reinforced by General Belov's I Guards Cavalry Corps and by one rifle and one tank division, and one tank brigade.

In addition to regular army formations, the city of Moscow provided five divisions of People's Volunteers and hundreds of smaller units and tank-destroyer detachments, which turned out to be very useful when the Germans broke through the first defense lines.

Even though the Western Army Group received substantial reinforcements and deployed six armies by mid-November, however, there were few Soviet troops in depth, especially in the center, because of the length of the front line, which extended over 600 kilometers. But, at the same time Supreme Headquarters' carefully guarded reserves were being moved up to the front, near Moscow. The First Shock Army and the "new" Twentieth appeared to the north of the capital near Zagorsk, the Tenth and Sixty-first Armies to the southeast, in the Ryazan and Kashira areas.

The German Army High Command decided to make another attempt at double envelopment as soon as the weather and supply situation would permit. The immediate objectives were to be the Moskva River and the Volga Canal, and continuation of the operation would depend upon the prevailing situation. The Second Panzer Army was to drive northward, enveloping Moscow from the southwest. The frontal attack from the west was to be delivered by the Fourth Panzer Group and the Fourth and Ninth Armies. The enveloping thrust from the northwest was to be delivered by the Third Panzer Group.

On 15 November, Bock's Army Group Center started off on its final advance toward Moscow, with an attack by the Third Panzer Group against the right flank of the Soviet Thirtieth Army of the Kalinin Army Group. At the same time the Fourth Panzer Corps attacked Rokossovky's Sixteenth Army in the sector south of the Shosha River and near Teryayeva Sloboda, enjoying some initial success. The defenses of the Thirtieth Army gave way, and on 16 November the Third Panzer Corps began to pursue its attack toward Klin against little resistance, because the Soviets did not have reserves in this sector. On the same day forward elements of the Fourth Panzer Group attacked Volokolamsk. Shortly after that, heavy fighting broke out near Istra.

Guderian's Second Panzer Army began its offensive on 18 November, by-passing Tula to the southeast, and driving toward Moscow. While the Soviets offered stubborn resistance in the center and northeast, they seemed to give way opposite Guderian's forces in the south. The 3d, 4th and 17th Panzer Divisions advanced in the Venev sector, where units of the Soviet Fiftieth Army were dug in. Having broken through the advance defenses German troops seized Bolokhovo and Dedilovo. To stem Guderian's advance Zhukov moved one rifle and one cavalry division quickly into the area of Uzlovaya. Fierce fighting developed, and on 21 November the main force of the Second Panzer Army took Uzlovaya and Stalinogorsk. The XLVII Motorized Corps drove on toward Mikhailov.

At that point Zhukov decided to reinforce the Kashira sector with the 112th Tank Division, the Ryazan sector with one tank brigade and other units, the Zaraisk sector with one tank brigade and two independent tank battalions, and the Leptevo sector with one rifle regiment and a tank company.

On 23 November heavy fighting developed around Venev. Two days later, the German 17th Panzer Division, having by-passed Venev, approached the town of Kashira, where it encountered General Belov's reinforced I Guards Cavalry Corps and was forced to retreat southward toward Mordves. On 26 November the 3d Panzer Division cut the Tula-Moscow railroad and highway north of Tula. Heavy fighting continued in the Kashira-Mordves sector until 30 November, with heavy losses suffered by both sides. The Germans, unable to break through the Soviet defenses in front of the Second Panzer Army, were forced to stop their advance toward Moscow from the south.

Since the southern area of the pincer attack was thus halted, the attack on Moscow was left to the Third and Fourth Panzer Groups from the northwest and Kluge's Fourth Army, slowly pushing east astride the Smolensk-Moscow road. On 23 November, the Third Panzer Group broke into Klin, opening a gap between the Sixteenth and Thirtieth Armies. Two days later the Soviet Sixteenth Army was driven from Solnechnogorsk, and German troops reached Dmitrov-Yakhroma-Kryukovo. On 29 November units of the 7th Panzer Division crossed the Moskva-Volga Canal near Yakhroma, and established a bridgehead in striking distance of Moscow. But advanced units of the Soviet First Shock Army, newly formed of fresh Siberian reserves, attacked and threw the Germans back across the canal. The Fourth Panzer Group was within 40 kilometers of Moscow when it was stopped at Krasnaya Polyana.

Kluge, with the meeting of two panzer columns east of Moscow no longer possible, launched a frontal attack north and south of Naro Fominsk on 1 December, between the Soviet Fifth and Thirty-third Armies. He succeeded in breaking into the flanks of the Thirty-third Army and advancing along the Smolensk-Moscow highway toward Kubinka. After 25 or 30 kilometers, however, the German forces were stopped near Golitsyne by reserve units of the Western Army Group

and elements of the Fifth and Thirty-third Armies. This ended the last German attempt to break through to the Soviet capital.

In the first days of December, with winter already producing temperatures as low as -40°F., it was evident that the Germans had neither the manpower nor the arms needed to continue their drive. The German troops were in a state of almost complete exhaustion. Orders to halt the offensive were issued to the Fourth Army first, and then to the other formations.

With the German offensive also stopped in the other sectors, the Red Army began to seize the initiative. In the south Kleist's First Panzer Army had taken Rostov on 20 November but had to give it up when Soviet forces assaulted the city on three sides on 28 November. On 1 December OKH ordered withdrawal to the Mius River, where the German troops were able to dig in. The other sectors of Army Group South remained quiet, but it became obvious that the Red Army had concentrated strong forces to stop any German advance toward the Caucasus or Stalingrad.

In the area of Army Group North no gains were made beyond Tikhvin. Along the front south of Lake Ilmen Soviet forces had been counterattacking intermittently since the second half of November, and similar attacks were launched by the troops in Leningrad in an attempt to relieve pressure on the Moscow front.

As of 1 December 1941, the German forces in the East had suffered 753,046 casualties, (about 24 percent of the average strength 93.2 million men) in the Soviet theater from 22 June to 26 November 1941. Of these 158,773 were killed in action, 563,082 were wounded, and 31,191 were missing.* The Germans were short some 340,000 replacements; with infantry companies at half strength, the average number of men available for combat varied from 50 to 60 per company.

German estimates show that during the period 22 June to 30 November 1941 total Soviet casualties were 5,600,000 men. Of these, 2,200,000 were killed or disabled and 3,400,000 were prisoners. During the same period, despite heavy losses, the strength of the Soviet field forces increased from 2,900,000 men at the outbreak of war to 4,200,000 in November.

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*OKW, *Kriegstagebuch*, pp. 1120-1121.

ALLIED BREAKOUT IN NORMANDY, 1944

For over six weeks after Allied forces landed in Normandy on 6 June 1944, progress inland from the beachheads had been steady, but very slow. The rate of advance was less than anticipated because of effective German use of the terrain. The Norman fields were crisscrossed by hedgerows, large mounds of earth covered with tangled foliage which provided excellent defensive positions. Allied forces had to take these obstacles one at a time, since they effectively hampered large-scale and tactical maneuver. Although Allied tactics and technological improvization were ultimately able to cope with the hedgerow defenses, expansion of the beachhead was thrown severely behind schedule. By 25 July, the Allies had advanced only as far as they had expected to be on 11 June, a line stretching from Caen through Caumont to St. Lo and then west to the coast on the Gulf of St. Malo.

The buildup of troops on the Cotentin peninsula suffered from the lack of adequate port facilities. Cherbourg had been captured on 27 June but the Germans had destroyed its waterfront to such a degree that the port was not functional until 7 August. Nevertheless, by 2 July 1944, using improvised facilities on the invasion beaches, the Allies had put ashore in Normandy some one million men, in 13 American, 11 British and one Canadian divisions, 566,648 tons of supplies and 171,532 vehicles.[1] By 25 July, these figures had increased to 18 American divisions (13 infantry five armor) and 16 British and Canadian divisions (10 infantry, five armor and one airborne).

For this initial period of Allied lodgment, General Dwight D. Eisenhower, the Supreme Allied Commander, had assigned overall command of land forces in Normandy to General Sir Bernard L. Montgomery, who also directly commanded the 21st Army Group. The 21st Army Group consisted of the Canadian First Army, under Lieutenant General Henry Crerar, on the extreme Allied left, from Caen to the Bay of the Seine, and the British Second Army under General Sir Miles Dempsey, holding the area from Caen westward to the Drome River. In late July the Canadian First Army consisted only of the British I Corps. The British Second Army, from east to west, comprised the Canadian II Corps, and the British XII, XXX, and VIII Corps.

Westward from the Drome to the Gulf of St.

Malo, was the zone of the American First Army, under command of General Omar Bradley, comprising, east to west, the V Corps, the XIX Corps, the VII Corps, and the VIII Corps.

The Allies by 25 July 1944 were holding an east-west line running roughly from Caen to Lessay, facing south. Opposite them were elments of Field Marshal Guenther von Kluge's Army Group B: the Fifth Panzer Army under General Heinrich Eberbach, holding an area from the Dives River, east of Caen, to the Drome; and the Seventh Army under General Paul Hausser holding the area from the Drome to the Gulf of St. Malo. The operational boundary between the Fifth Panzer Army and the Seventh Army was approximately the same as that between the British Second Army and the US First Army.

From east to west, the Fifth Panzer Army consisted of the LXXXVI Corps, the I SS Panzer Corps, the II SS Panzer Corps, and the XLVII Panzer Corps. The Seventh Army faced the Americans with the II Parachute Corps and the LXXXIV Corps. There were 27 divisions in these six corps. Thirteen divisions (eight infantry and five panzer) faced the British and Canadians and 14 (nine infantry, two parachute, one panzer grenadier and two panzer) faced the Americans.

Plans

Impatient with their progress in Normandy, the Allies evolved plans which they hoped would enable them to smash through the German lines. First, the British Second and American First Armies would push somewhat farther south to provide more room for additional troops and supplies in the peninsula. This permitted concentration in the beachhead of Lieutenant General George S. Patton's US Third Army. Then the British Second Army would initiate offensive operations around Caen in hopes of attracting the German armored troops and reserves to that area, leaving mainly infantry divisions in the west, facing the Americans. Against this German infantry, in an operacode named COBRA, the American First Army would attempt to break through the German line, launching a full-scale attack after extremely heavy air and artillery bombardment of the German positions in front of the attacking forces. Patton's newly-established Third Army would be available to exploit this breakthrough, using part of its force to drive south and west into Brittany to capture the major Breton ports and secure that area for Allied supply, and the rest to drive eastward, deep behind German lines.

Between 8 and 17 July, successive attacks were made near Caen by the British I Corps, the British VIII Corps, and the Canadian II Corps. Intended largely as a diversion, these attacks succeeded in taking Caen and forcing a bridgehead over the Orne River. In accordance with Allied expectations, the Germans reinforced the sector in front of the British at the expense both of the western sector and their reserves. By 25 July, the German LXXXIV Corps had approximately 30,000 men and 100 tanks and/or assault guns facing the US VII and VIII Corps. Near the Gulf of St. Malo were remnants of the 243d and 91st Divisions, the latter controlling elements of the 77th Division and a Battle Group of the 265th Division. In the center, the Periers area, remnants of the 17th SS Panzer Grenadier Division were on the line, plus most of the strong 2d SS Panzer Division, reinforced by the 6th Parachute Regiment. To the east was the weak and exhausted 5th Parachute Division minus two of its three regiments. Next in line, in the area designated for the COBRA attack, was the Panzer Lehr Division. On the extreme east flank, the II Parachute Corps held two miles of front with 650 troops of the 352d Infantry Division (all that remained), plus some attached troops. In LXXXIV Corps reserve was the battle-torn 353d Infantry Division, south of Periers. In Seventh Army Reserve were the fresh 275th Infantry Division, less Battle Group Heinz, which, with the 5th Parachute Division, a regiment and two 2d SS Panzer Division companies, was attached to Panzer Lehr Division.

On the 25th, after a day's postponement by bad weather, American and British long-range heavy bombers began the planned "carpet bombing" operation near St. Lo, dropping 4,200 tons of bombs in an area 2,500 by 6,000 yards. US forces had been pulled back from the impact area but even so they took 558 casualties from bombing inaccuracies.

The effect of the bombing on the Germans was enormous. As many as 70% of the German troops in the area were incapacitated, either injured or dazed by the explosions. The stunning effect on the enemy lasted throughout the day and must be accorded major significance in the initial Allied breakthrough.

The main effort of COBRA was to be made to the south by three infantry divisions of the VII Corps, the 9th, the 4th, and the 30th, from right to left. These divisions would make the initial penetration of the enemy lines, breaching them between the towns of Marigny and St. Gilles. They would occupy these towns, protecting the flanks of the breach, while the 2d and 3d Armored Divisions and the 1st Infantry Division, which was motorized, were to push through the three-mile gap in exploitation. The 2d Armored Division, which would be on the left of the Allied exploitation thrust, was to move south and set up blocking positions at crucial road junctions or bridges along the east-west road from Brenal to Tessy-sur-Vire. This, coupled with air interdiction, was expected to prevent the Germans from bringing reinforcements to the battlefield.

The 3d Armored Division and the 1st Infantry Division would then drive toward the west coast of the Cotentin Peninsula, near Coutances, and encircle elements of the German Seventh Army which were opposite the US VIII Corps.

Operations

After the tremendous air bombardment, the three assaulting infantry divisions (9th, 4th, and 30th) moved out. In spite of the aerial bombardment and its massive physical and psychological effects, fight was still left in the surviving Germans, and by nightfall initial Allied objectives had not been taken. To the American VII Corps commander, Major General J. Lawton Collins, however, it appeared that the German defense efforts were sporadic and uncoordinated--evidence that the main line of resistance had been penetrated. Thus, in spite of the fact that the troops had not reached the objectives originally deemed essential for the employment of armor, the decision was made to begin the armored exploitation.

On 26 July, the 2d Armored Division and elements of the 3d Armored Division moved out, initially not in an exploitation role, but primarily to maintain the momentum of the attack. It advanced to within two miles of Coutances, where stubborn opposition was met from units attempting to hold open an escape corridor for German Seventh Army troops withdrawing in front of the VIII Corps, now advancing with four infantry divisions abreast. Other elements of the VII Corps were probing deep to the south against fading resistance.

With the fall of Coutances on 28 July, the German withdrawal began to degenerate into a disorderly retreat. Both the VII and the VIII Corps hastened toward Avranches, which was taken two days later. By the 31st the west coast of the Cotentin Peninsula was cleared of the enemy.

Meanwhile the left wing of the US First Army --the XIX and V Corps--was encountering stiff resistance, and further east German armored forces held the British to small gains. By the end of the month the Fifth Panzer Army was still firmly holding the Germans' right flank, but the left was shattered. The Seventh Army's westernmost corps, the LXXXIV Corps, consisted of remnants of seven divisions, some with no more than 300 combat effectives.

From Avranches, the US VIII Corps, now part of Pattor's Third Army, turned west into Brittany. Its other corps--the XV--headed southeast toward Mayenne. Swinging wide and moving fast, by 6 August the XV Corps had taken Le Mans and had forced the Germans hastily to extend their left flank 75 miles to the south. The First Army VII, XIX, and V Corps--also had driven southeast all along its front toward Vire and Mortain. On 7 August the Germans counterattacked westward in force at Mortain in an effort to retake Avranches, and thus cut the line of communications of the Third Army. This mission had been given by Kluge to Panzer Group West. Collins' VII Corps, with the help of reinforcements promptly provided by Bradley, halted the attack.

The Allies now saw a chance to trap most of the German forces in central and western Normandy, for the German attack, combined with the advances of the two American armies, placed the Germans in a deep salient with Allied forces on three sides. Bradley therefore ordered Patton to drive north from Le Mans with the XV Corps. Montgomery ordered Crerar's First Canadian Army to head south from the area of Caen to Falaise, in the hope that the two forces would meet and pinch off the neck of the salient, trapping the Germans to the west. If successful, most of the Fifth and Seventh Armies, and all of the Panzer Group West would have been surrounded.

The XV Corps hastened north, and on 13 August the French 2d Armored Division was within sight of Argentan. Some French units entered the city but were soon driven out by German tanks. The French position was vulnerable, for the closest Allied troops on their left were at Mayenne, about 25 miles away. To the right of the French the US 5th Armored Division was pinned down by German artillery southeast of Argentan.

Meanwhile, Hitler, annoyed that Kluge had failed to take Avranches, ordered Panzer Group West to attack there on 11 August. General Heinrich Eberbach was to command the group, turning over command of the Fifth Panzer Army to SS Colonel General Josef (Sepp) Dietrich. As a result of the strong attack of the US XV Corps toward Argentan, however, Eberbach, with three divisions, was ordered instead to stop the US XV Corps, then threatening Alençon. Before he could assemble his units to attack, however, he had to use them in defense in order to try to stop the rapidly advancing American XV Corps. He committed elements of the 116th Panzer Division, which started arriving near Argentan on 12 August, successfully holding up the US 5th Armored Division's attempt to advance to Argentan from Sees.

The 1st SS Panzer and 2d Panzer Divisions, now both considerably understrength in men and tanks, arrived in the area the next day and were put into a defense line Ecouche-Argentan. With this inadequate force Eberbach tried to prevent the Allies from closing the gap between the US Third Army and the Canadian First Army. By 13 August the gap was only about 25 miles wide.

Argentan was actually on the British side of the boundary separating the newly established American 12th Army Group from the British 21st

Army Group. Without an order from Montgomery to change the boundary, American 12th Army Group units would proceed north of the line at the risk of colliding with the Canadians advancing toward Argentan from Falaise. The French 2d Armored Division, as has been noted, by reaching Argentan had opened a gap on its left flank, highly vulnerable to a German attack. These factors caused General Bradley on the afternoon of 13 August to order the Third Army not to proceed beyond Argentan. This decision, which has been greatly criticized ever since, allowed the Germans to keep the gap open as an escape route, although Hitler had not authorized Kluge to order his troops to withdraw.

On 18 August, Kluge was relieved from command as the result of suspicion on Hitler's part that the Field Marshal had been attempting to negotiate a truce with the Allies. He was replaced by Field Marshal Walter Model. On 18 August, Kluge committed suicide.[2] Model, who up until this point in the war had seen action only on the Eastern Front, was soon impressed with the strength of Allied airpower, and the manner in which this degraded German combat capabilities.

Since June, the Allies had been concentrating air interdiction missions against key German transportation lines which could reach the invasion area. Railroads had been effectively knocked out and the Allies had then begun attacking roads and bridges, particularly those across the river barriers of the Seine, Eure, Loir and Loire. It was impossible for the German troops to travel along any major road in daylight. The German supply problem became crucial.

Model decided to withdraw as many troops as possible behind the lower Seine River, regardless of other considerations. On 20-21 August, General Paul Hausser, commanding the German Seventh Army and, since 16 August, all the troops in the exit corridor from the Falaise pocket, managed to extricate almost half the survivors of his force from the jaws of the Allied pincers. The entire operation around Falaise cost the Germans some 10,000 dead and 50,000 captured. Almost all of the Seventh Army's heavy weapons and transport vehicles were left in the pocket.

Montgomery, meanwhile, had made plans for a possible encirclement of all German forces south and west of the lower Seine River. Following the Allied link-up in the Falaise-Argentan area, Allied forces would drive deeper into France with the intent of linking up on the left bank of the Seine, cutting off German units which had escaped the Falaise encirclement and securing bridgeheads across the lower Seine.

Patton's Third Army was in the best position to carry out this maneuver from the south. Patton, confident of First Army commander Lieutenant General Courtney Hodges' ability to defeat the German Seventh Army counterattack toward Avranches, had continued to push his troops farther east into France. Turning eastward from Le Mans and Argentan on 14 August, the Third Army raced eastward with such speed that supply by air was often necessary to maintain its momentum. By the capture of Mantes-Gassicourt on 19 August, the German escape route was confined to crossings of the lower Seine northwest of Elboeuf.

Joining the Third Army in the southern half of this "long hook," was the XIX Corps of Hodges' First Army. When the COBRA offensive had been opened, the US XIX and V Corps had been squeezed out of the operation by the advance of the US VII Corps across their front. They therefore swung behind the VII Corps, and joined in the attempt to close the Falaise pocket on the right of the VII Corps, the V Corps pushing on toward Argentan and the XIX Corps continuing east on the left flank of the XV Corps of Patton's Third Army.

Carrying out the northern envelopment of Montgomery's "long hook" was the Canadian II Corps. After the German survivors escaped from the Falaise pocket, the Canadians drove from Chambois on toward Elboeuf. The entire British Second Army had experienced some delay in reorganization after their operations around Falaise, and this had delayed the Canadian advance. Roads had become clogged with considerable amounts of materiel left by the fleeing German troops. Also the Allies had to shift their advance from the north-south axes closing on the Falaise pocket, to east-west axes to enable them to continue pursuit across France. The sorting out of these problems required sufficient time for the Germans to improvise rearguard delaying positions. Although these positions could not halt the Allied advance once it was again moving, and the retreating German Seventh Army abandoned an enormous amount of materiel, the delays enabled most of the retreating troops to withdraw into the loops of the Seine east of Rouen before the two prongs of the Allied long hook could close to cut them off. Thus when the Canadian II Corps met the US XIX Corps on 26 August, the Allies had failed in the attempt to cut off fleeing German units before they could reach the Seine.

Allied air interdiction attacks had destroyed the bridges across the Seine, but an adequate ferry capability still existed, and the German troops managed an orderly retreat across the river. Due to heavy rain the Allied drives, as well as Allied air interdiction, eased up at this time, and the ferries could even be used during daylight hours.

The operations around Avranches and Falaise, and the subsequent retreat to the Seine, had destroyed the German Seventh Army as an effective fighting force. The Fifth Panzer Army was not in much better shape. On 28 August it had a reported

combat strength of 1,300 men, 24 tanks, and 60 pieces of artillery. However, most of the troops had been extricated and could later be reorganized into fighting units.

While these operations in northern and eastern Normandy were in progress, the XX and XII Corps of Patton's Third Army to the south were making startling advances across France. Using the Loire River as its southern flank, the XII Corps reached Orleans on 16 August and the XX Corps was at Chartres on the 18th. Their advance continued, and by 25 August the XII Corps had reached Troyes, on the upper Seine. The XX Corps had crossed the Seine at Melun, between Paris and Fontainbleau.

Patton's remaining corps, the VIII, had been dispatched to the Breton peninsula to deal with the German units which were occupying the major ports in Brittany. With the aid of about 30,000 French Resistance fighters, the peninsula was quickly overrun. By the end of the first week in August, about 45,000 German garrison troops and the remnants of four German divisions were in defensive perimeters around St. Malo, Brest, Lorient, and St. Nazaire. Even if the VIII Corps troops attempted to fight and force the Germans out of these positions, it was quite likely that the port facilities would be destroyed before the garrisons would surrender. By investing these ports, the Allies prevented the escape of the German troops inside and avoided the high casualties which would occur in an attempt to force the Germans out.

Following the advance to the lower Seine, the focus of Allied attention shifted to Paris. Eisenhower had intended to avoid a battle for Paris for fear that the cost in lives would be extremely high and that the city itself might suffer untold destruction. His plan was to encircle the city and force its garrison either to surrender or to flee. On 22 August, however, the French Resistance inside the city rose against the small German garrison and managed to contact Patton's headquarters and request that Allied troops enter Paris as soon as possible. With the Allies advancing and the populace in revolt, the German commander in Paris, Generalleutnant Dietrich von Choltitz, could do little to defend the city.[3]

Thus, by 25 August 1944 the Allies held all of northwest France--except for the three tiny German enclaves on the coast of Brittany at Brest, Lorient, and St. Nazaire--as far east as the Seine and Yonne Rivers and as far south as the Loire. The Fifth Panzer Army was attempting to keep footholds on the left bank of the Seine until it could finally manage to get all its troops across the river.

On 15 August, a second Allied invasion force had been landed in southern France, capturing Toulon and Marseilles--a major port closer to the front than Brest--by 28 August. These troops were now driving north through the Rhone valley and could be expected in the near future to link up with the main Allied forces in eastern France.

Nonetheless, the German forces had not been destroyed and could reasonably be expected to be quite effective in the future if given time to refit and reorganize. The Allies, if they were going to retain their advantage, would have to strike a decisive blow while the Germans were still off balance, and while the weather was good enough to allow them to use Allied air superiority to its fullest extent.

There was considerable difference of opinion as to how this decisive blow might best be struck. Both Montgomery and Bradley believed that the Allies could gain the quickest victory by concentrating their efforts. On 4 September, Montgomery suggested to Eisenhower that all resources and available forces be used to support one drive, either to the Ruhr or to the Saar. The rest of the Allied forces would conduct only limited holding attacks while the main thrust won the war. Montgomery believed that the Ruhr was a more profitable objective than the Saar and saw no reason why the main drive could not reach Berlin. Bradley favored a single thrust further south, or at most two major drives: Montgomery's and another by 12th Army Group due east, cutting Germany in two at its narrowest point and then moving on Berlin from the southwest.

Eisenhower favored an advance on a broad front. He feared that a single Allied thrust deep into German territory could dissipate itself as it progressed. The need to protect its line of communications as it advanced would weaken the combat power of the attacking forces. Furthermore, he felt that logistical constraints would limit the size of this attacking force to no more than 10-12 divisions.

This "broad front" strategy provided for a main effort by the 21st Army Group making a northeastward thrust along the Channel coast in an attempt to overrun the sites from which the new German V-weapons were being launched at England, and then continuing on to take Antwerp. Without the port of Antwerp, the advance across the lower Rhine and into the Northern German Plain would be extremely difficult. While Montgomery's army group was driving north along the coast, the US 12th Army Group was to continue pursuing the enemy, the First Army abreast of the British in northern France while the Third Army drove east toward Verdun and the upper Meuse, with the Saar as its objective.

Eisenhower implemented the broad front strategy rather than either of the alternatives suggested by his subordinates. In the view of one historian,

"Either /Bradley's or Montgomery's/ plan might have won the war quickly, Montgomery's probably the sooner because it was the bolder, followed a quicker route and also would unmask the vital Antwerp--the third largest port in the world--to Allied arms. Unfortunately, Eisenhower chose neither and adhered to his original plan of advancing on a broad front . . . . Many historians have taxed him with timidity for this decision, and with much justification. The Germans were at that moment punch-drunk and a single daring blow might have knocked them out."[4]

At the beginning of September there were several organizational changes in the Allied armies. On 1 September, General Eisenhower moved his headquarters to the continent from England and assumed direct control of land operations. Montgomery now commanded only the 21st Army Group. On 5 September, the US Ninth Army began operations under the command of Lieutenant General William H. Simpson. Its mission, under the 12th Army Group, was to reduce Brest and other western French ports, while the British would perform the same task against the German garrisons bottled up in ports on the English Channel.

There had been no question that the Allied armies would continue pursuit of the German forces beyond the Seine; Eisenhower had made the decision to cross the Seine on 19 August. Part of the rationale of his broad-front strategy was to keep the Germans off balance in all sectors so that they would be unable to organize an effective defense at the West Wall, a series of fortified positions along the German border which were intended to prevent the Allies from entering Germany.

The West Wall, however, was in no condition to resist the Allied onslaught for long. It was generally in disrepair, and time was required to rearm it. Much of its armament had been stripped away for use in the Atlantic Wall which was to have repelled the Allied invasion. Hitler had consistently forbidden the preparation of effective defensive positions in the belief that their existence encouraged his generals to fall back upon them rather than fight. The result was that there were no adequately prepared defensive positions into which the army might have withdrawn.[5]

Once the Seine was breached, there was no other position, not even the Somme, capable of halting the Allies. By 30 August, Patton's XX, XII and XV Corps had reached the Meuse River.* This movement had required enormous supply efforts, aided by the capture of enemy fuel. By the 30th, even these efforts were insufficient and Patton had to stop for lack of fuel. The Third Army spent the first three days of September consolidating its positions on the Meuse. On the 4th it was able to begin a slow advance from the Meuse to the Moselle.

Hodges' First Army advanced across the Seine on 26 and 27 August on a 170-mile front centered on Paris. Consisting of (northwest to southeast) the XIX Corps, the V Corps and the VII Corps, First Army troops had by 30 August captured Laon and four trainloads of German soldiers. Continuing on to the Belgian border, the three corps of the First Army conducted their own pincers movement with the XIX Corps providing the encirclement on the left flank and the VII Corps providing the encirclement on the right flank, while the V Corps held the enemy from the front. Bradley had hoped that the First Army would be able to block the German retreat and eliminate the major part of the German forces in France. Hodges' effort was expected to cut off two panzer and eight to ten German infantry divisions. The effort involved a shift in the First Army's axis of advance to the northeast. This meant that the XIX Corps, attempting to take Tournai, would have to cross the operational boundaries of the 21st Army Group.

At first the creation of this pocket, closed near Mons, appeared to be a failure; few German troops or supplies were taken by the advancing Americans of the XIX or V Corps. On the right, in VII Corps' area, however, things were different. Thousands of Germans, mostly from the LVIII Panzer, the II SS and the LXXIV Corps, were moving into the area southwest of Mons. By 3 September the Allies had taken 25,000 prisoners, the remnants of twenty disorganized divisions.[6]

On the Allied left, from Mantes-Gassicourt to the English Channel, the 21st Army Group started its advance along the coast. Beginning on 29 August, Montgomery made an impressive advance, pushing V-weapons units out of the Pas de Calais and moving from the Seine to Antwerp in five days.

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*In an attempt to trap the retreating German forces at Elboeuf, the XV Corps on Patton's left flank had crossed First Army and British boundaries to complete the southern arm of the pincers. After the Germans withdrew into the bridgehead from which they would evacuate to the right bank of the Seine, and after Montgomery began to sort out the confusion resulting from the attempt to close the Falaise pocket and get all Allied units moving in a generally northeasterly direction, the XV Corps was shifted farther south, to the extreme right flank of Patton's army. Resuming offensive operations near Chaumont at the beginning of September, the XV Corps crossed the Meuse and by 14 September was on the Moselle River near Epinal. On 11 September, units of the XV Corps linked up with units of General Patch's Seventh Army, advancing up the Rhone Valley. This meeting at Sombernon cut German lines of communication with south-central and western France.

Crerar's Canadian First Army crossed the Seine near Rouen; he sent his armor after the retreating Germans while his infantry took Dieppe, le Treport and St. Valery-en-Caux by 2 September. The British I Corps swung almost due west, bottling up a German garrison in Le Havre, and the Canadian II Corps invested Boulogne, Calais and Dunkirk. Ostend was captured by the Canadians on 9 September.

Dempsey's Second British Army crossed the Somme on 31 August and advanced rapidly against disorganized resistance. Driving through the main industrial region of northern France and into Belgium, armored spearheads took Brussels, Antwerp and Ghent by 5 September.

The German Fifteenth Army was now in extreme danger of being cut off by a British Second Army effort to advance north of Antwerp and cut off the Beveland Isthmus. This would have necessitated a German withdrawal by sea to Rotterdam which would save the German troops but not their equipment. The British did not close this German escape route, however; nor did they occupy or cut off the mouth of the Scheldt.

The US Seventh Army, which invaded southern France, advanced up the Rhone valley, pushing before it German Army Group G under General Johannes von Blaskowitz. Although Army Group G was nearly cut off from reaching the main German forces north and east of the Seine by the rapid advance of the Allied troops, Blaskowitz skillfully conducted an exceptionally arduous retreat from the south and by 1 September had managed to make contact with units of Army Group B.

As the German situation grew more desperate, Hitler for the second time recalled Field Marshal Gerd von Rundstedt from retirement to take command of the German forces in the west. Model retained command of Army Group B after Rundstedt's arrival on 5 September.

From June to mid-September 1944, the Germans had already lost approximately 500,000 troops, 200,000 of which had been trapped in the coastal fortresses. Materiel losses were impossible to estimate, but were clearly enormous, and Allied interdiction sorties were continuing to make it close to impossible to bring up supplies. After the crossing of the Seine, the German situation appeared to deteriorate much more rapidly. No coordinated or effective attempts were made to organize a defense. All German units were struggling as best they could to reach the West Wall, under a terribly punishing continuous attack from the air.

By 6 September, the Allies held a line from Antwerp through a point east of Brussels to Namur, from Namur south to a point between Verdun and Nancy, then back to Orleans and along the Loire to Nantes. The Allied supply situation--which had halted the Third Army a week before--had become severe for all Allied armies. Once across the Seine, the Allied armies met little resistance from the fleeing Germans; in only a few instances did the Germans attempt to make a stand against the onrushing Allies. Consequently, the Allies advanced more quickly than their supplies could keep up with them. The Germans still had garrisons in Brest and Lorient, and, although Antwerp had been taken, the enemy still controlled its western approaches through the Scheldt River. The linkup with forces from the south of France was still five days away; so the Allies in northern France could not draw upon the supplies coming through Marseilles. "The normal logistical structure based on a depot system could not be established under the pressure of supplying forward units on a day-to-day basis during the war of movement. The result was that 90 to 95 percent of all supplies on the Continent at the end of August lay in depots near the original invasion beaches. Virtually no supplies existed between these stocks and the army dumps three hundred miles away. With supply loads being carried increasingly farther forward and carriers requiring more and more time to complete longer round trips, the deliveries to the armies dwindled during the last few days of August to several thousand tons per day."[7]

The French rail system, over which it had been hoped to move supplies to the front, had been so greatly damaged by Allied air interdiction that it could not now carry sufficient volume of supplies to meet the Allied requirements. Motor transportation was far more important. The most famous truck line was the Red Ball Express, trucks driven constantly from the ports to the front, with only enough time off to allow for proper maintenance and servicing. This system began in late August and ran until November. By mid-September the Express had delivered 135,000 tons of supplies to army service areas.

The Allies also employed air transport for resupplying their combat units at the front, and captured German supplies occasionally helped to make up shortages. But the strain of operating these extended supply lines, on both men and machinery, took its toll, and that toll caught up to the Allies as they approached the West Wall.

By 14 September, units of the Canadian First Army, on the Allied left, held a line running from north of Ostend on the coast, westward to Bruges and on to Antwerp, from where it followed the line of the Albert Canal. The British Second Army had achieved a bridgehead over the Albert Canal. The US First Army had reached the West Wall in the vicinity of Aachen while the Third Army's front had run into unexpectedly strong German resistance along the Moselle River, except near Nancy where it held a bridgehead on the east bank of the river. The US Seventh Army had taken its place in the Allied line near the source of the Saone River.

During the two weeks from the end of August to the middle of September 1944, the Allied supply problem had reached its most acute stage. The first of the Allied armies to feel the pinch, beginning on about 30 August, had been Patton's Third Army, but each army was in its turn hampered by inadequate supply, resulting in the temporary release of pressure on the German units in front of them. These German units, therefore, each gained about one week during which they rested their troops, reorganized their defenses and prepared for the renewal of the Allied attack in their sectors. As the Allies did not resume a coordinated offensive until adequate supply was reaching all their forces, the entire German front had a general respite of approximately two weeks; this period was used to resupply the German forces with tanks and artillery and attempt to reconstitute shattered units around the numerous cadres which had survived the calamitous retreat across France relatively intact. Almost miraculously, in this two week period before 14 September, the Germans succeeded in creating a firm front.

NORTH KOREAN INVASION OF SOUTH KOREA

Being unable to conquer the Republic of Korea (South Korea) by political means, the Soviet-sponsored and dominated government of the Korean People's Democratic Republic (North Korea) became determined to invade South Korea and unite the country by force.

The 38th parallel, as a demarcation line between the northern and southern parts of Korea, came into being as a military expedient toward the end of World War II to facilitate the capitulation of the Japanese forces. At that time it was decided that the Japanese troops north of the parallel would surrender to the Red Army, and those south of the parallel to the US forces. There was no indication in the agreement that Korea was to be divided into two parts, and that the 38th parallel would become a political frontier. Nevertheless, this is what happened, as the Soviet Government, immediately after Japanese troops surrendered in Korea, decided arbitrarily that the 38th parallel was to become a permanent line that separated the two military zones.

On 9 September 1948 by establishment of the Korean People's Democratic Republic Communist rule in the north became a fact. From that time until the invasion of June 1950 the North Korean Government used all means short of full-scale war, including border raids, guerrilla action, and sabotage, to cause chaos in the south, thus creating favorable conditions for taking over the country from within, or forming a Fifth Column to help invading North Korean forces.

Terrain and Climate

The Korean Peninsula is a mountainous area about 950 kilometers long, varying in width from 320 kilometers at the widest point to a waist of 200 kilometers extending from Chinnampo on the west coast to Wonsan on the east. This narrow waistline, although it appears to be a suitable defensive position, does not lend itself to conventional deployment of deep zone defense because of the haphazard intermingling of boggy rice-paddies and abrupt mountains.

A great chain of the Taebaeks mountains runs north-south along the east coast from the border with Manchuria almost to Pusan, with the highest peaks (some with elevations over 2,500 meters) located principally in the eastern and northeastern part. Several spur ranges extend across the country southwestward from the main east coast range to the Yellow Sea.

The west coast is broken by numerous estuaries and indentations, where the tide rises from seven to ten meters, making navigation very difficult. Farther inland the land in the west is characterized by rice paddies, terraced slopes, hills, and twisting narrow valleys. All of these complicate the problems of ground operations. But western Korea is still a better area for military maneuvering than eastern Korea, and there are even places where the going is good for armored units.

The principal rivers of Korea are the Yalu, Tumen, Imjin, Han, Kum, and Naktong. They flow generally south and west. Most are broad and deep, and barriers for military forces. During the rainy season they become almost impassable.

The highway system of Korea in 1950 was poor and not designed for heavy motorized traffic. The roads were narrow and winding even in the level areas, and in the mountains there were very few roads. Some roads were surfaced with gravel or crushed rock, but most were dirt. On the other hand, transport by rail between Korea's

principal cities was fairly good. The main line connected the port of Pusan in southeast Korea with Sinuiju at the Manchurian border. From Seoul, one branch line ran to the northeast coast and another to the southwest. In case of war, however, the railways could not provide reliable methods of transportation, since they could be interrupted at the many tunnelled areas.

The climate in Korea is severe in winter and hot in summer, with temperatures ranging from -40° F to 105° F. The cold and snow make operations difficult for a modern mechanized army during the winter months, especially in the northern regions. In February and early March the ground thaws into mud, and from late June through August heavy rains turn the country's dusty roads into quagmires.

Opposing Forces and Operational Plans

North Korea

The North Korean People's Army (NKPA) was officially established on 8 February 1948. As of June 1950 it was organized in two corps, with eight infantry divisions at full strength* (1st, 2d, 3d, 4th, 5th, 6th, 7th, and 15th), two more infantry divisions (the 10th activated in March and the 13th activated early in June) at half strength, an independent infantry regiment (the 766th), a motorcycle reconnaissance regiment (the 12th) one tank brigade (the 105th, which became a division in late June) compose. of three tank regiments (107th, 109th and 203d) each with 40 tanks, one motorized infantry regiment (206th) and one independent tank regiment. The North Koreans then had a total of 150 Soviet-made T-34 tanks at the start of the war.

In addition to the NKPA, North Korea had five brigades of Border Constabulary (BC), an internal security force, organized, trained, and supervised by Soviet personnel. It numbered about 18,600 men, and drew its personnel from Communist youth groups.

On the eve of the invasion of South Korea, the NKPA and the BC were 135,000 strong. This included 77,400 in the first line infantry divisions and in the independent tank regiment assigned to one of these divisions (7th Division), 6,000 in the 105th Tank Brigade, 5,000 in an independent rifle and an independent motorcycle regiment, 18,600 in the BC, and 5,000 in the Army and I and II Corps headquarters.[8]

*The NKPA divisions were triangular in organization and had a strength of approximately [illegible] men.

The Soviet Union provided the NKPA with all the necessary military armament and equipment. In addition to T-34 medium tanks there were 76mm and 122mm howitzers, 122mm guns, 76mm self-propelled guns, 45mm antitank guns; 61mm, 82mm, and 120mm mortars, all supplied with ammunition, and trucks, jeeps, radios, communication equipment, and medical supplies. The North Korean Air Force had about 180 aircraft, all Soviet-made, of which 70 were bombers and 40 fighters. The rest were mostly trainers and reconnaissance planes.

The North Korean forces were well trained and well led. Most of the high ranking officers of the NKPA were Koreans who lived in the Soviet Union and as Soviet citizens had served as line or staff officers with the Soviet armed forces in World War II. The North Korean General Staff was composed almost entirely of such individuals. The service heads and branch heads also were for the most part former Soviet citizens. The other officers had served with the Chinese People's Liberation Army (CPLA) or were commanders of Korean partisan units. In addition, a large group of Soviet military advisers were attached to GHQ, and advisers were assigned to various combat units and to the technical and quartermaster branches.

About 65 percent of the NKPA was made up of Koreans who had formerly served in the CPLA, giving the army combat experience and efficiency that it would not otherwise have had. Substantial numbers of these veterans were in the ranks of the 1st, 4th, 5th, 6th, and 7th Divisions. Many other NKPA at least had officers and noncommissioned officers from the CPLA.

South Korea

In January 1946 occupying US authorities established the South Korean Constabulary Force, which in August 1948 became the Army of the Republic of Korea (ROK). By June 1950 nearly 98,000 men were in the Army, about 6,000 in the Coast Guard, 1,100 in the Marine Corps, nearly 2,000 in the Air Force, and approximately 48,000 in the National Police. Of the 98,000 men in the Army, some 65,000 were in the combat units, and 33,000 in various headquarters and service organizations.[9] The United States Korean Military Advisory group, composed of less than 500 US officers and enlisted men, advised the ROK government and its armed forces on military matters.

The combat forces of the ROK Army were organized into eight divisions, the 1st to 8th (less number 4) and the Capital Division. Five of them (the 1st, 2d, 6th, 7th, and the Capital) had three regiments; two (the 3d and 8th) had two regiments; and one division (the 5th) had two regiments and one battalion. Only four divisions (the 1st, 6th, 7th,

and the Capital) were near full strength of 10,000 men. The rest had about 7,000 each. The state of training was, in general, satisfactory. The majority of the units had completed small unit training at company level and were engaged in battalion training. There were, however, few men with active combat experience.

The ROK Army had 27 armored cars, over 1,000 artillery pieces and mortars, including 105mm howitzers and 81mm and 60mm mortars, about 140 antitank guns, and some 1,900 60mm bazookas. It had about 2,100 US Army motor vehicles. There were no tanks, and no heavy combat equipment of any type. The supply of artillery and mortar ammunition on hand was low, enough for only a few days of combat. An estimated 15 percent of the weapons and 35 percent of the vehicles were unserviceable.

The South Korean Air Force had 12 liaison type aircraft and 10 trainers. No South Korean pilots were qualified to fly combat missions. The South Korean Navy consisted of 15 mine sweepers, 10 mine layers, four patrol craft, one LST, and various other small craft.

Operational Plan

By the end of May 1950 North Korean plans for invasion of the Republic of Korea were completed. Their preparation had been closely supervised by Soviet advisers and a special group of high ranking Soviet staff officers specifically assigned for this purpose. The overall planning control was under General Antonov, the Chief of Staff of the Soviet General Staff.

The plan called for a surprise attack across the 38th Parallel on a 250 kilometer front, following the major roads, from the Yellow Sea to the Sea of Japan. The main effort was to be directed toward Seoul through the Uijongbu Corridor. Supporting thrusts were to be launched against the Ongjin Peninsula in the west, against Chunchon in the central mountain chain, and along the east coast combined with an amphibious landing at Kangnung and Samchok. The North Koreans planned to envelop and destroy the main South Korean forces north of the Han River, then to take Seoul. If its capture did not result in immediate capitulation, they anticipated little resistance south of the Han and expected to occupy the entire peninsula in about a month.

Commander of the invasion force was General Chai Ung Jun. He was assigned seven infantry divisions, one armored brigade, and several smaller independent units. In the reserve, the North Koreans had three infantry divisions and some BC units. The North Korean Navy was to provide vessels for coastwise transport and for amphibious operations.

Deployment of Forces

During the period 15-24 June the North Korean Command moved all the forces assigned for the offensive, approximately 90,000 men, supported by 150 T-34 tanks, to the close vicinity of the 38th Parallel, and deployed them along their respective planned lines of departure for the attack on South Korea.

In the western sector, the NK 6th Infantry Division advanced two of its regiments toward Kaesong and one regiment toward Ongjin. The NK 1st Infantry Division, with the supporting 203d Tank Regiment of the 105th Tank Brigade, concentrated its main force between Namchonjom and Kumhwa, ready to attack toward Korangpo-Munsan.

In the western-central sector the NK 4th Infantry Division, with the attached 107th Tank Regiment of the 105th Tank Brigade, concentrated in the Yonchon area ready to advance toward Tongduchon, and the NK 3d Infantry Division, with the attached 109th Tank Regiment of the 105th Tank Brigade, assembled near Unchon for the thrust along the Kumhwa-Uijongbu-Seoul road.

In the center the NK 2d Infantry Division assembled between Kumhwa and Hawchon ready to advance toward Chunchon, an important road center on the Pukhan River. Some 50 kilometers farther east the NK 7th Infantry Division (with its attached tank regiment), concentrated in the Inje area, was ready to jump toward Hongchon.

On the east coast the NK 5th Infantry Division and the 766th Independent Infantry Regiment, as well as several guerrilla units, were assembled near Yangyang and poised to cross the parallel along the coast road. Some elements of these units were assigned for amphibious landings at the Samchok and Kangnung areas.

Organizationally the entire front zone was under two army corps. The western and the western central sectors (1st, 6th, 3d, and 4th Divisions and the 105th Tank Brigade) from the Yellow Sea to Chunchon (exclusive) were under the I Corps. The and the east coast sectors (2d, 7th, and 5th Divisions), from Chunchon (inclusive) to the Sea of Japan, were under the II Corps. The North Korean Command had three infantry divisions in reserve: the 10th Division in Sukchon, the 13th Division in Sinuiju, and the 15th Division in Hoeryong.

The ROK Army order of battle on the eve of the North Korean offensive was as follows:

In the west, the ROK Independent 17th Regiment was deployed on the Ongjin Peninsula, having one battalion on the line facing the NKPA, and two battalions in reserve.

The Kaesong sector was defended by the ROK 1st Division, with one regiment manning the defense line, and two regiments in reserve at Kimpo and Munsan.

The Tongduchon sector on the main route of approach toward Uijongbu and Seoul was defended by the ROK 7th Division, with one regiment near the parallel, and the other in reserve.

In the central sector, the ROK 6th Division deployed one of its regiments in Chunchon to man the front line, and kept two remaining regiments in reserve in Hongchon and Wonju.

In the steep east coast area the ROK 8th Division deployed one regiment near the 38th parallel at Kangnung, and the other in reserve at Samchok. On the day of the North Korean invasion, the ROK Army had only five regiments on the entire front line. Since many officers and men received weekend passes, the forces actually in effective positions along the 38th parallel amounted to no more than four full strength battalions.

The ROK reserve infantry divisions were deployed in the following areas: the 3d Division was operating against the guerrilla-infested areas east of Taegu and north of Pusan. The 5th Division was concentrated in the Chonju and Kwangju areas. The 2d Division was concentrated in the Taejon, Chongju, and Onyang areas. The Capital Division, located in Seoul, was primarily a "show" unit that paraded for special events.

The Initial Phase of the Operation (25-29 June 1950)

At 0400 on a rainy Sunday morning 25 June 1950, the NKPA started to shell the South Korean positions. Following a 20 minute artillery preparation North Korean divisions moved south across the 38th Parallel. The unexpected blow surprised the ROK Army garrisons in their thinly held defense positions.

In the west, the Ongjin Peninsula, cut off by water from the rest of South Korea, was easily taken by the 14th Regiment of the NK 6th Division. Of the ROK regiment defending the area only some 1,700 survived and were evacuated by ship. East of the Ongjin Peninsula two regiments of the NK 6th Division assaulted Kaesong. After a short battle most of the ROK 12th Regiment defending the city was killed or captured. By 0930 the city was taken, and the division advanced toward Musan.

In the meantime the NK 1st Division and supporting tanks had attacked the Munsan-Koranggo area, where it confronted units of the ROK 1st Division. After two days of combat most of the division was encircled and destroyed. Remnants of the division retreated toward the Han River

The main attack, toward the Uijongbu Corridor, was delivered by the NK 4th and 3d Divisions and two tank regiments of the 105th Tank Brigade. The advance developed along two roads which converge at Uijongbu and from there lead straight into Seoul, less than 20 kilometers away. Toward the evening of 26 June both the North Korean Divisions had entered Uijongbu, and started to move toward Seoul. Two ROK divisions covering approaches to Uijongbu (the 7th and the 2d) were badly hit and withdrew into the hills, thus leaving the road to Seoul practically open.

On 27 June, elements of three North Korean Divisions (1st, 3d and 4th) regrouped and advanced south against weak and uncoordinated delaying action. The 3d Division reached the suburbs of Seoul at about 1930, and in the afternoon of 28 June it seized the entire city. The bulk of the troops of three ROK divisions were either killed or taken prisoner, and enormous amounts of transport, equipment and heavy weapons were captured by the NKPA. Evacuation was impossible because ROK engineers had prematurely blown up bridges over the Han River, with total disregard for the tactical situation.

In the mid-center sector the NKPA attacked along two axes. The 2d Division struck against Chunchon, and the 7th Division against Hongchon. Both cities, according to the North Korean plan, were to be taken during the first day of operation, but the ROK 6th Division repelled the NKPA assaults. The unexpected stand of the South Koreans forced the Commander of the NK II Corps to stop the movements of the NK 7th Division toward Hongchon and divert it to Chunchon, which it reached on the evening of 26 June. Joint attack on the city by the 2d and 7th Divisions on 27 June resulted in its capture the next day. The 7th Division immediately pressed south toward its initial objective, the city of Hongchon, which it took a day later. The NK 2d Division, having suffered extremely heavy losses, turned west toward Seoul.

On the east coast, across the high Taebaek Range from the NK 7th Division sector, the NK 5th Division attacked the ROK 8th Division at daybreak on 25 June. The North Korean attack directed south along the main highway was supported by an amphibious landing north and south of Samchok, about 60 kilometers south of the parallel. Under heavy North Korean pressure, the ROK 8th Division, after suffering considerable losses, and having its retreat to the south cut by the amphibious force, withdrew toward the west (27 June) across the mountain range, taking along most of its equipment and weapons

At the end of June the entire territory north of the Han River was overrun by the North Koreans. The NKPA had suffered relatively small losses, the most serious by the 105 Division at the battle of Uijongbu, and by the 12 Division in the

battle for Chunchon. The South Koreans had lost over 50,000 men killed or captured, and almost 70 percent of their heavy armament and equipment. Of all the ROK divisions engaged in the initial fighting, only two (the 6th and the 8th) escaped with their organization, weapons, equipment and transport relatively intact.

Now, the North Koreans believed, the stage was set for a second lightning strike, toward Pusan, then either a total victory, or a call for a ceasefire, combined with interminable negotiations that would destroy South Korean independence.

Reaction of the United States and the United Nations

While the North Koreans were meeting with success, at the request of the United States the United Nations had acted quickly and firmly. The Security Council convened an emergency session on 25 June and adopted a resolution that condemned North Korea for the armed attack on South Korea and called for (1) immediate cessation of hostilities; (2) immediate withdrawal of the North Korean forces back to the 38th parallel; (3) every assistance to the United Nations in the execution of this resolution and (4) denial of assistance to the North Korean authorities.

President Harry Truman, on the evening of 25 June, ordered General of the Army Douglas MacArthur, Commander in Chief Far East, to send ammunition and equipment to Korea with naval and air escort, provide ships and planes to evacuate US personnel from Korea, and send a survey party to Korea to determine what should be done. He also ordered the Seventh Fleet to proceed from the Philippines and Okinawa to Japan. These things were under way when General MacArthur reported, the next evening, that the ROK forces were in danger of complete collapse. Truman promptly authorized him to use the naval and air forces in his command on targets south of the 38th parallel, to drive the North Korean military forces out of South Korea. US aircraft started limited operations against North Korean targets on 27 June. On the same day the UN Security Council called on member nations to give military aid to South Korea. Upon receipt of a report from his survey committee that the United States would have to send ground troops in order to hold South Korea, MacArthur himself went to Korea to inspect the situation. As a result of his recommendations and other reports from the area, on 30 June President Truman ordered two divisions to Korea from Japan and installation of a naval blockade of North Korea. MacArthur at once ordered the 24th Division to proceed to Korea.

[illegible] command at this time had four divisions [illegible] Army in Japan, the 7th, 24th, [illegible] and the 1st Cavalry Division (infantry). All infantry regiments but the 24th, of the 25th Division, had only two battalions, and other units were correspondingly short. There was a shortage of artillery, and tank units were equipped only with light tanks (to permit movement over flimsy Japanese bridges). Combat training was on the battalion level, and larger units, as General MacArthur had repeatedly informed Washington, were far from combat ready. However, Far East Command had conducted staff exercises for division and higher headquarters. Also under Far East Command were the Ryukyus Command, the Marianas-Bonin Command, the Thirteenth Air Force, Naval Forces Far East, and the Far East Air Force.

US Naval Forces Far East at the start of hostilities comprised one cruiser, four destroyers, and a number of amphibious and cargo-type vessels. US Far East Air Force was composed of nine groups, with about 350 combat-ready aircraft. With those in storage and being salvaged, the FEAF controlled a total of over 1,100 planes.

Entry of US Ground Forces Into Combat

On 28 June, the day Seoul was taken, General MacArthur observed elements of the NK 6th Division cross the Han River about seven kilometers northwest of the capital. They captured the Kimpo Airfield on 29 June and advanced toward Inchon, which was taken on 2 July.

The main North Korean thrust, south of Seoul along the road toward Suwon and Osan, was delivered by the NK 3d and 4th Divisions and the tanks from the 105th Tank Division. In the morning of 30 June, after a short artillery preparation, the 8th Regiment of the 3d NK Division crossed from Seoul to the southern bank of the Han River, established a bridgehead in the vicinity of the Sobingoo ferry, and started to consolidate its position. The NKPA main crossing effort, aimed at Yongungpo, the big industrial suburb of Seoul south of the river, came on 1 July. The NK 4th Division crossed the Han River southwest of Seoul and immediately began a two-day battle for Yongungpo defended by the remnants of the ROK 5th Division. The city fell on 3 July, and by morning of 4 July the NK 3d and 4th Divisions stood ready to resume the drive south along the main rail-highway axis south of the Han River.

The NKPA advance along the Yongungpo-Suwon-Osan-Chonan highway was spearheaded by tanks and the 5th Regiment of the NK 4th Division. Late in the afternoon of 4 July Suwon was taken, despite efforts by elements of the ROK 2d Division to stop the southward movement of the North Koreans.

In the meantime advance elements of the US 24th Division, under the command of Lieutenant

Colonel Charles B. Smith, commander of the 1st Battalion, 21st Infantry Regiment, had landed near Pusan, Korea, in the afternoon of 1 July and moved by train to Taejon, arriving there early the next day. By 6 July the entire division had arrived in Korea. Command of all US troops there was assigned to Major General William F. Dean, Commanding General 24th Division. One week later, with US troop strength in Korea increasing, Lieutenant General Walton H. Walker, Commander, US Eighth Army, assumed command of all US forces there.

As the NKPA pursued the fleeing ROK forces south of Suwon, it made first contact with US ground forces. On 5 July the 107th Tank Regiment of the NK 105th Tank Division, and elements of the NK 4th Division struck Task Force Smith, approximately one half of a battalion combat team, detached from the 21st Infantry Regiment, about three kilometers north of Osan, forcing it to withdraw with heavy losses. Next the North Korean force pushed south toward Pyongtaek and Chonan, where it delivered a powerful frontal attack, combined with an envelopment movement, on the US 34th Infantry Regiment, inflicting many casualties and causing it to withdraw. Chonan was taken on 8 July by the 16th and 18th Regiments of the 4th Division and elements of the NK 105th Tank Division. The 3d Division, which followed in the second echelon, arrived after the end of the battle and was deployed east of the town.

Advancing south, the 4th Division, after a fierce battle with elements of the US 24th Division, captured Chonui on 10 July. There the 3d Division passed the 4th on the highway leading to Chochiwon and took the town on 12 July. The 4th Division took the right fork toward Konju, pursuing the retreating US 34th Infantry Regiment across the Kum River, which it crossed with its forward elements on 12 July. From Seoul south the division had borne the brunt of the fighting first against the remnants of the ROK Army defending the southern bank of the Han River, and then against the US 24th Division. When it reached the Kum River it was down to 5,000 to 6,000 men, about half its authorized strength.

As the principal North Korean attack moved down the Seoul-Taejon highway, in the mountainous central section and on the east coast other NKPA divisions advanced southward. The 2d Division, east of the 3d and 4th, although very low in morale, and having suffered an estimated 40% casualties at Chunchon, was proceeding south toward Chinchon when it was ambushed by the ROK Capital Division and the South Korean police. After a three-day battle the ROK units withdrew, since the loss of Chonan and Chonui had outflanked their position. The exhausted NK 2d Division entered Chinchon and continued without pause to Chongju. ROK artillery inflicted about 800 more casualties on the division before the ROK defenders withdrew, after learning of the loss of Chochiwon to the west.

The NK 1st Division, having followed the 2d for a distance and been attacked by two ROK units with losses of mortars and artillery as well as men, turned southeast toward Chungju. On its left the 7th Division (redesignated the 12th on 2 July) had taken Hongchong, although the ROK 6th Division fought effectively against it, and after some bitter fighting took Wonju also from the 6th Division. There the 12th Division split, part of it proceeding to take Chungju and the other part going southeast toward Mungyong, where the ROK 6th Division had withdraws. The NK 15th Division meanwhile had followed the 12th to Wonju, turned westward through Yoju and south to take Changhowon from stubborn defenders, and then Koesan, about 30 kilometers northwest of Mungyong.

During the ten days of mid-July the North Korean strategy in the central part of the theater of operations was designed to cross the Mungyong and Tanyang passes of the Han-Naktong watershed and strike a decisive blow against the southern part of the peninsula. Two more NKPA divisions, the 13th and the 8th, had moved into the area to assist in the attack. The 1st, 13th, and 15th Divisions, supported by the 109th Tank Regiment of the NK 105th Tank Division, advanced through the western corridor defended by the ROK 6th Division, while the 8th and the 12th proceeded across the eastern one, where the ROK 8th had moved in. The battles through the mountain passes were difficult and bitter, with heavy losses on both sides. On 12 July advanced elements of the NK 12th Division crossed the upper Han River, and two days later the main force of the division captured the river crossing at Tanyang, outflanking the ROK 8th Division and forcing it to retreat southward. By mid-July the NKPA forces had pushed their way through the passes and entered the valley of the upper Naktong River.

Still farther to the east, cut off by the Taebaek Range from the operations in the center of the peninsula, the NK 5th Division and 766th Independent Unit (regiment) were advancing south almost entirely unopposed. The division's 11th Regiment turned west at Hangnung and proceeded for eight days through some of the roughest parts of Korea for a distance of about 300 kilometers. At Chunyang it met up with elements of the ROK 8th Division, which was on its way to the Tanyang area. A hard battle followed, and the NKPA force suffered considerable losses before rejoining the division at Ulchin on 10 July. On 7 July General MacArthur ordered troops sent to the east coast and naval air units to support the ROK defenders. They arrived in time to bolster the ROK 3d Division, which held up the NK 5th Division near Pyonghae until 13 July. Heavy fighting continued on the coastal road through July, as the NKPA fought to control Yongdok and the approaches to Pohangdong.

Meanwhile, a call to the members of the United Nations had produced promises of support, primarily materiel and naval. On 7 July the Security Council approved a unified command of UN forces in Korea and requested the United States to designate a commander in chief. President Truman appointed General MacArthur to the post the following day.

Operations South of the Kum River

In the morning hours of 14 July, units of the NK 4th Division crossed the Kum River in the vicinity of Kongju and engaged the US 34th Infantry Regiment, on the western flank of the US 24th Division. On its right was the 19th Regiment. The 21st was in reserve southeast of Taejon, which the division was deployed to defend. All three regiments were understrength, the 21st in particular having suffered very heavy losses, and the total strength of the division was 11,140 men.

The 34th Regiment fought fiercely, but before the day was over it had been pushed back toward Nonsan, and the flank of the 19th Infantry Regiment was exposed. The following day North Korean troops began to cross the Kum River near Taepyong and attack the 19th Infantry Regiment. They crossed in force on 16 July and pinned down the American regiment by a frontal attack. While they carried out a double envelopment of the flanks they took particular advantage of the exposed left flank, establishing a roadblock five kilometers to the south of the Kum River on the main supply road near the village of Taman. The US 19th Infantry Regiment withdrew, but lost most of its heavy equipment and transportation, and about 650 men.

With two divisions across the Kum River, the North Koreans were ready to advance on Taejon, about 25 kilometers away. The town was defended by the remnants of the US 19th Infantry Regiment and other elements of the US 24th Division, all together about 4,000 men. The NK 4th Division carried out the envelopment of the city from the west and southwest, and was able to establish a very effective roadblock east of Taejon on the road leading to Okchon. The NK 3d Division, supported by tanks of the 105th Tank Division, made a frontal attack with part of its forces and with the rest enveloped the city from the east and northeast. After two days of heavy fighting Taejon was taken on 20 July.[1]

Meanwhile, the NK 6th Division drove rapidly south along the west coast toward Chonju. Opposed only by weak and disorganized South Korean units, the division occupied Kwangju and the southwestern port of Mokpo by 25 July. Next, turning east, the 6th Division pushed toward Chinju, thus embarking on a strategic envelopment of major proportions. The plan was to cut lines of communication in the rear of the American and ROK forces, drive through Masan, and capture the port of Pusan.

Operations on the Pusan Perimeter

The US 25th Division had arrived in Korea in the second week of July and been deployed east of the 24th, in the central mountain area near Sangju, where it was to help the ROK forces prevent the North Koreans from entering the upper Naktong River valley. Gradually the division pulled back, as did the ROK 6th Division south of Mungyong. Since it was apparent that the two US divisions, the 24th and 25th, then in Korea, could not halt the North Korean advance, plans to land the US 1st Cavalry Division behind the North Koreans at Inchon were abandoned in favor of landing it at Pohangdong on the eastern coast, near the fighting front. On 18 July the first elements were ashore, landing over the beaches, and for the next two days the 5th and 8th Cavalry Regiments headed toward Yongdong, where they relieved parts of the 24th Division and assumed responsibility for protecting the Taejon-Taegu corridor. Their arrival brought the strength of the Eighth Army to about 39,000 men. But they were unable to hold Yongdong. On all sides the UN forces were being pushed back in late July, and General Walker ordered the entire Eighth Army to initiate a withdrawal across the Naktong River on 1 August, and prepare a defensive area focussed on the vital port of Pusan.

In form, the territory still held by the US Eighth Army and the ROK Army resembled a rectangle about 150 kilometers from north to south and about 80 kilometers east to west. The Pusan Perimeter Positions, as they became known, were bounded on the east and south flanks by the sea; the west flank was the Naktong River; the north side of the perimeter followed the Naktong upstream as it bends to the east, and then left the river and ran slightly south of due east to the vicinity of Yongdok on the coast of the Sea of Japan. Along the perimeter the most important terrain feature was the Naktong River. In its lower course the river is approximately 400 to 800 meters wide and more than two meters deep. It formed a huge moat on almost three-fourths of the land front of the perimeter.

The deployment of opposing forces on the eve of the decisive battles of the Naktong River defense lines was as follows.

In the southwest the NK 6th Division and the 83d Motorized Regiment of the 105th Tank Division faced the US 25th Division and the attached 5th Regimental Combat Team along the line running northward from Chindongni on the coast to the confluence of the Nam and the Naktong Rivers. Next on the line along the Naktong River to the point where it bends to the east stood the 4th, 10th, 3d, 2d and 15th Divisions, facing the US 24th and 1st Cavalry Divisions and the 1st Division. Eastward along the upper Naktong the NK 1st and 13th Divisions confronted the ROK 6th Division, further to the east the NK 8th Division faced the ROK 8th Division, and the NK 12th Division faced the ROK

Capital Division. Finally, on the east coast the NK 5th Division and the 766th Independent Regiment faced the ROK 3d Division.

As the troops were withdrawing into the Pusan Perimeter in late July, more US troops were arriving to reinforce them. The 5th Regimental Combat Team from Hawaii started landing on 31 July and was attached to the 24th Division. On the same day the first elements of the 2d Infantry Division, sent from the United States, also arrived in Pusan. The rest of the division followed soon thereafter. The 1st Provisional Marine Brigade arrived from California on 2 August. In addition, a steady stream of officer and enlisted replacements had begun to arrive by air. By 4 August US Army troops in Korea numbered 50,367, with an additional 4,713 Marines, 4,051 men in the Far East Air Force, and 107 in other organizations. More than 47,000 men were in combat units. In the five ROK infantry divisions there were about 45,000 men left of a total of about 82,000 in the ROK Army. They had suffered losses of an estimated 70,000 men since the start of the war. US forces had already lost 6,000.

North Korean losses too had been heavy; estimates indicate about 58,000. There were by this time eleven divisions and two independent regiments in the North Korean combat forces, with a strength of perhaps 70,000 men, facing the 92,000 of the combined US-ROK forces.[12]

The UN defense along the Naktong River, which formed the greatest portion of the Pusan Perimeter, was thin, but reserves were concentrated several kilometers back, prepared to counterattack where the North Koreans attempted to cross the river. A series of strongpoints on the highest points were designed to cover the most likely crossing areas.

The North Koreans decided to attack the Pusan Perimeter along four lines of advance toward Pusan: (1) in the Masan area south of the confluence of the Nam and Naktong Rivers, (2) through the five-kilometer wide pocket of land formed by a great loop in the river opposite Yongsan, known as the Naktong Bulge, to the rail and road lines at Miryang, (3) through Taegu, and (4) through Kyongju, and down the east coast.

The first North Korean crossing of the Naktong River, other than reconnaissance, came on 5 August. Under cover of darkness, forward battalions of the North Korean 4th Division's assault force crossed the river in the US 24th Division sector about 50 kilometers south of Waegwon, with the objective of taking Yongsan. Engineering troops labored feverishly to build underwater bridges of sunken logs anchored by rocks to provide night river crossings for tanks and vehicles. Since these causeways were about 20 centimeters under water, UN aircraft had difficulty in detecting them.

As the NK 4th Division enlarged the bridgehead, more troops were moved across the river. By 15 August, despite numerous counterattacks by the US 24th Division, the North Koreans were still holding the bridgehead. Only after the 24th Division was reinforced by the 1st Marine Brigade on 17 August was it able to strike decisively at the North Koreans and force them to withdraw to the west bank of the Naktong on 18 August. As the division pulled back westward across the river it left nearly all of its heavy equipment and weapons.

Meanwhile the NK 6th Division, deployed to the southwest near the coast in the Masan area, engaged in fierce combat with the US 25th Division, as it tried to advance on the Chindong-Kunpul line. An American counterattack on 7 August forced the North Koreans to retreat almost to Chinju. However, the North Koreans regrouped and attacked again, pushing the counterattacking troops back to the original defense line, on the approaches to Masan.

North of the NK 4th Division, the main effort was aimed at taking Taegu. On the right of this attack the 10th Division fought its way across the wide river bend below Tuksongdong, but was held off by the US 1st Cavalry Division. Three other NK divisions, the 3d, 15th, and 13th, attacked southward, pushing back elements of the 1st Cavalry Division and the ROK 1st Division. The North Koreans advanced toward Taegu from three directions: north (Tabudong), northwest (Kumchon) and southwest (Tuksongdong). But they were unable to break through the UN defenses and take the city.

On the north face of the Pusan Perimeter, under the pressure of the NK 1st Division, the ROK 1st and 6th Divisions retreated to the Uihung line (below Uisong). At the same time, farther east, the NK 8th and 12th Divisions pushed the ROK 8th and Capital Divisions to the Youngchon-Kigye line, an advance of about 80 kilometers.

On the eastern flank, along the seacoast, the North Koreans achieved a considerable success. On 5 August the NK 5th Division attacked the ROK 3d Division and drove it south. On 10 August, elements of the NK 5th Division infiltrated around the ROK 3d Division and cut the coastal road below it at Hunghae, eight kilometers north of Pohangdong, and virtually surrounded the division. On 11 August elements of the NK 12th Division penetrated from near Kigye into Pohangdong, through a gap on its left, and overran the rear command post of the ROK 3d Division as well as many logistical installations.

The fighting in the vicinity of Pohangdong became fierce. While, on 17 August, the remnants of the ROK 3d Division were evacuated by sea and landed below Pohangdong, elements of the ROK Capital Division, supported by US Task Force

Bradley of the 2d Division, forced the 12th NK Division to withdraw through Kigye northward to the Topyongdong area. Pohangdong was reentered by the ROK 3d Division on 19 August.

At the end of August the North Korean Command decided to make another determined effort along the entire Pusan Perimeter and take Pusan, employing 13 infantry divisions, one tank division, two tank brigades, and miscellaneous other units. The assembled force numbered about 98,000 men, of which 30,000 were undertrained new recruits, including a considerable number of forcibly recruited South Koreans. Despite the long lines of communications, and frequent air attacks by planes of the Far East Air Force, the North Koreans had managed to maintain supplies of ammunition and motor fuel for its 100 tanks and 250 artillery pieces and even to bring in new weapons and equipment. But there was a shortage of small arms, trucks, clothing and food.[13]

The buildup of supplies and troops for the UN forces had accelerated in August. Six medium tank battalions arrived during the month, and the US 3d Infantry Division was ordered to the area. In addition 11,115 officer and enlisted replacements arrived. The first non-American UN ground unit, the British 27th Infantry Brigade with 1,578 men, was sent from Hong kong on 20 August. On 1 September Eighth Army strength was almost 79,000 men, and the 1st Provisional Marine Brigade had a strength of 4,290. They were well supplied, and combat experience had greatly improved their fighting quality. Their weapons included about 500 tanks and 400 artillery pieces. Measures had been taken to increase the numbers and improve the training of ROK recruits, and the ROK Army by 1 September numbered close to 92,000 men.[14]

The North Korean plan envisaged five major attacks: (1) in the southwest, the 6th and 7th Divisions were to break through the defenses of the US 25th Division, take Masan and continue to advance toward Pusan; (2) along the Naktong River the 9th, 4th, 2d, and 10th Divisions were to capture Miryang and proceed down the Pusan-Taegu railway and highway by way of Changnyong and Yongsan in the US 2d Division area; (3) the 3d, 13th, and 1st Divisions were to attack the US 1st Cavalry Division and ROK 1st Division and advance to Taegu; (4) to the east of Taegu, the 8th and 15th Divisions were to take Hayang and Yongchon, defended by the ROK 8th and 6th Divisions; (5) on the left flank, the 12th and 5th Divisions were to smash through the ROK Capital and 3d Divisions, and after capturing Pohangdong and Kyongju advance to Pusan, creating, together with the 6th and 7th Divisions approaching from the west, a threat of double envelopment of the entire UN force.

The North Korean offensive began on 26 August with a strong secondary attack in the Pohangdong area on the east coast, threatening the eastern corridor to Pusan. The 5th and 12th Divisions broke through the Kigye--Pohanggong line and penetrated about 20 kilometers south in the direction of Kyongju. Along the coast Pohangdong was captured on 6 September, but North Korean efforts to take Yonil airfield, eight kilometers to the south, were unsuccessful. The arrival of US reinforcements (24th Infantry Division) turned the tide. By 12 September the North Korean advance had stopped. The North Korean forces were operating with long supply lines exposed to US air attack and naval bombardment, and had taken considerable casualties in men and equipment in their all-out drive. The 12th Division was nearly destroyed, and the 5th Division was trying to regroup its remaining units near Pohangdong.

To the east of Taegu the NK 8th and 15th Divisions, supported by the 17th Tank Birgade, launched the assault on 1 September. The objective of the 8th Division was Haygan, that of the 15th Yongchon. In 12 days of fighting the 8th Division suffered heavy losses and was able to advance only a few kilometers. The 15th Division took Yongchon on 6 September but could not break through the ROK positions southeast of the town. After a fierce battle that lasted several days, the North Korean forces withdrew toward the north, pursued by the ROK 8th Division. Thus, in this sector too, the NKPA offensive was unsuccessful.

On the Taegu front, three divisions of the NK II Corps executed a converging attack on the city from the north and northwest. The 3d Division attacked in the Waegwan sector northwest of Taegu, the 13th Division down the mountain ridges north of Taegu following the Sangju-Taegu road, and the 1st Division along the high mountain ridges just east of the road. By 5 September the NKPA had advanced some seven kilometers in bitter fighting, captured several important strongholds, and reached a point about eight kilometers from Taegu. Massive attacks against the US 1st Cavalry and ROK 1st Divisions, which defended the Taegu sector, continued unabated until the middle of the month. However, the city was not taken.

The two remaining assualts were made by the divisions of the NK I Corps, against the US 25th Division on the left of the UN line, and the US 2d Division, which had been deployed on its right. Shortly before midnight of 31 August, the NK 2d and 9th Divisions, with the 4th Division following, struck across the Naktong River in the US 2d Division sector. Toward morning they broke through the defenders and approached Yongsan, the gateway corridor leading to Miryang, some 20 kilometers to the east, and the Pusan-Taegu railroad. The NK 9th and 4th Divisions were halted by a US counterattack on 3-5 September, and they were unable to resume the offensive. The NK 2d Division had penetrated into the Changyong area in the evening of 2 September and cut the

Changyong-Yongsan road. Repeatedly the North Koreans tried to break through the US defenses and advance eastward, but their attacks were unsuccessful. With their strength largely spent, their push forward stopped.

In the south the NK 6th and 7th Divisions pushed east on the night of 31 August-1 September, along the main Chinju-Koman-Masan highway, against units of the US 25th Division. They had taken Haman and were approaching Masan when the US forces counterattacked. After several days of fierce fighting the North Koreans withdrew.

By the end of the second week of September the North Korean Army's offensive had tapered off along the entire Pusan Perimeter. The attackers had been unable to follow up their initial gains in order to make a decisive breakthrough and drive the UN forces out of the southeast corner of the Korean peninsula. When on 15 September US forces landed at Inchon, Soviet-North Korean plans for a quick victory ended in disaster.

FOOTNOTES

1. Dwight D. Eisenhower, *Crusade in Europe*, (Garden City, 1948), p. 270.

2. Probably fearing that he might be implicated in the 20 July attempt to assassinate Hitler.

3. Negotiating with Resistance leaders through the Swedish Consul General, Choltitz promised that he would neither order the city destroyed nor resist the Allied advance once it reached the city limits if the members of the Resistance would help him maintain law and order within Paris. The bargain was made on 19 August and adhered to from 20 August until French and American troops liberated the city on 25 August.

4. Robert Lecki, *The Wars of America*, Vol. 2, (New York, 1968), p. 284.

5. LTG Bodo Zimmerman, "France, 1944" in Seymour Freiden and William Richardson, eds., *The Fatal Decisions*, (New York, 1956), pp. 222-223.

6. Martin Blumenson, *Breakout and Pursuit* (Washington, 1961), p. 684.

7. *Ibid.*, p. 689.

8. Appleman, Roy E., *South to the Naktong, North to the Yalu* (Washington, D.C., 1961) pp.10-11.

9. *Ibid.*, pp. 13-14.

10. The resolution was adopted by the vote of nine to zero, with one abstention (Yugoslavia) and one absence (USSR). The Soviet Union had boycotted the meetings of the Security Council since January 1950, over the issue of seating the representative of the People's Republic of China as the official Chinese representative.

11. General Dean, Commander of the 24th Division, after leaving Taejon became separated from his group. Subsequently, after weeks of wandering in the Korean mountains, he was taken prisoner. He remained in North Korean hands until after the armistice was signed.

12. Appleman, *op. cit.*, pp. 262-264.

13. *Ibid.*, pp. 393-396.

14. *Ibid.*, pp. 379-382.

THE SINAI CAMPAIGN
1915-1917

Following the assassination of Archduke Franz Ferdinand, heir to the Austrian throne, at Sarajevo on 28 June 1914, Europe moved inexorably toward war. At the end of July Germany, which was allied with Austria-Hungary against England, France, and Russia, began secret negotiations with Turkey with the goal of establishing an alliance between the two nations as Turkey's strategic position controlling the Dardanelles and the Bosporus allowed it to dominate Russian access to the Mediterranean from the Black Sea. Germany had had great military, economic, and political influence in Turkey for some thirty years, and on 2 August 1914 Germany and Turkey concluded a secret alliance.

On 4 August, after Germany had declared war on Russia and had invaded Belgium, Britain declared war on Germany. On 29 October, the Turkish fleet began to bombard Russian seaports on the Black Sea, sinking two Russian vessels. Russia immediately declared war on Turkey, with Great Britain and France following suit on 5 November.

Although Turkey's geographic position precluded the possibility of direct intervention in Europe, at the behest of Germany it undertook attacks against three Allied areas on its Asiatic borders: against Russia in Transcaucasia; against the British-controlled Suez Canal; and against the British-dominated Persian oilfields near Basra.[1]

Of primary concern to British interests in the Middle East was protection of the Suez Canal, which runs through Egypt for 100 miles from the Mediterranean Sea to the Gulf of Suez.

Following Turkey's entrance into the war, Egypt, which had nominally been a Turkish province, became a British protectorate when, on 17 December 1914, the pro-Turkish Khedive, Abbas II Hilmi, was deposed by the British and was succeeded by his uncle, Hussein Kamil.[2]

Because of Britain's control of the sea, the only routes of approach to the Canal available to Turkey lay across the virtually waterless Sinai Peninsula. The Sinai was crossed by three east-west routes: the coastal road in the north, which passed by a few wells in the 120 miles between El Arish and Kantara; the almost completely barren and waterless central route 150 miles to the south; and the 150 mile long Pilgrims' Road, which passed by some wells on its way from the southern end of the Canal opposite the City of Suez through Aqaba to Medina and Mecca.[3]

On 14 January 1915 a Turkish force of 20,000 men, under the command of German Colonel Freyherr Friedrich Kress von Kressenstein, advanced from Beersheba across the rugged Sinai Desert in a move to capture the Canal. The force included the 10th and 25th Divisions, one regiment of the 23d Division, one cavalry regiment, and several camel companies, supported by nine field artillery batteries, one battery of 5.9 inch howitzers, and some 10,000 transport camels. During the night of 2-3 February the Truks arrived at the east bank of the Canal opposite Ismailia, surprising the Egyptian garrison of some 30,000 men under command of General Sir John Maxwell on the west bank. The Turks attempted to cross the Canal on rafts which they had dragged across the desert, but they had no success in the face of intense British rifle and artillery fire. By the afternoon of 3 February British machine gun, artillery, and naval gunfire had forced the Turks to withdraw back to Beersheba, with losses totalling 400 killed and 1,500 captured. A small Turkish force of three battalions, two mountain batteries, and a squadron of camel troops, however, remained in the desert to harass the British forces.

The British evacuation of Gallipoli in 1915 released Turkish troops and greatly increased their potential threat to the Suez Canal. As a result, fortification of the east bank of the Canal was begun. Troops removed from Gallipoli were rushed to Egypt, bringing the strength of the Egyptian garrison to a total of approximately 300,000 men, in 14 divisions. Command of this garrison was assigned to General Sir Archibald Murray. However, by mid-1915, after further evaluation of the Turkish threat to Suez, the British forces were reduced to four infantry divisions and a sizable force of cavalry.[4]

At the beginning of 1916 the British command in Egypt began preparations to seize El Arish at the northeastern edge of the Sinai Desert, in the belief that a defense of the Canal from the eastern edge of the peninsula would require fewer troops and be strategically more sound than was a

defense based on the Canal itself.[5] Due to the almost total lack of water in the Sinai and the difficulty of the terrain which would hamper both movement and logistics, the British advance was to be accompanied by the construction of a standard gauge railway and a 12-inch water pipeline into the desert to support the operation. Major General Sir Philip W. Chetwode's Desert Column of cavalry and the Imperial Camel Corps Brigade, acting as a screening force, preceded the construction units.

On 23 April 1916 now General Kress von Kressenstein, with a force of 3,500 men, six mountain guns, and four machine guns, routed the British advance guard from the oases of Oghratina and Katia, about 40 kilometers (25 miles) east of the Suez Canal. Throughout the spring of 1916 Turkish troops harassed the British advance by attacking the railroad and pipeline projects. Construction of the pipeline proceeded at a slightly slower rate than that of the railroad; so when in May 1916 the railway reached Romani, 23 miles east of the Canal, General Murray ordered his forces to halt and establish a base at that site. He then defended the railhead with one division, whose water had to be transported by camel from the Canal.[6]

In mid-July General Kress, with a force of 16,000 Turkish troops, supported by four batteries of German and Austrian heavy artillery, two trench mortar companies, and an Arab camel corps, advanced from Beersheba into the desert to attack the British base and railhead at Romani. On 19 July, British reconnaissance aircraft located the Turkish column as it marched across the Sinai, and General Murray was kept informed of its progress. The left flank of the British force rested on the sea, where it was protected by British warships. Since the Turks had insufficient forces for a frontal assault, Murray reasoned that the Turks intended to strike at the right flank of the Romani position, which would allow him, in turn, to attempt an envelopment of the Turkish right flank. Murray quickly established a dummy position just south of the main British defenses, where the sand gullies provided a good natural defense. There he placed two brigades of Australian light horse cavalry, with strong reserves behind them. They were to contain the Turkish forces on the British right, while on the British left the main British forces outflanked the Turkish right.[7]

The Turkish force attacked Romani at about midnight on 3-4 August 1915. Intense fighting raged throughout the next day. The British infantry held its ground, while the Australian cavalry gradually pulled back, drawing the Turkish force into a maze of sand dunes and gullies. At 1900 the British infantry counterattacked against the Turkish right flank. The Turkish soldiers, many of whom were in terrible condition from a lack of water, began to retreat. The infantry charge was almost immediately followed by a counterattack on the Turkish left flank by British cavalry. The Turks fled in great disorder, leaving at least 2,000 dead and wounded and 4,000 prisoners.* They also abandoned most of their guns and numerous pieces of equipment. The British, whose losses totalled 1,130 men, pursued the retreating Turks, but, after a rearguard engagement, 19 miles east of Romani on 9 August, they were forced to return to Romani for lack of water.

Construction of the railroad and pipeline pushed slowly ahead throughout the remainder of 1916. The Desert Column and Camel Corps Brigade reached El Arish in mid-December, and by 20 December the entire Egyptian Expeditionary Force, totalling more than 16,000 men, was based around that city. At that time the British discovered that the Turks had withdrawn the bulk of their forces from the vicinity of El Arish, and had concentrated at Gaza and Beersheba, where they were establishing a line of fortifications. The capture of El Arish marked the completion of the original British plan; it certainly secured the Suez Canal against further major attack. However, while General Murray had sufficient troops to stop any Turkish offensive into the Sinai Peninsula, his forces were inadequate to undertake a major offensive deep into Palestine; one infantry division had been withdrawn to France leaving him with three infantry divisions and eight cavalry brigades which were formed into two divisions.

Between the British forces at El Arish and the Turkish forces in Beersheba and Gaza were three Turkish outposts: one at Magdhaba, a second at Magruntein, and the third at Rafah. On 23 December, the Anzac Mounted Division and Camel Corps Brigade drove the Turks out of Magdhaba, taking 1,282 prisoners with the loss of 146 men. On 8 January 1917, the Anzac Mounted Division and two cavalry brigades surrounded Magruntein on the Egypt-Palestine frontier. After a fierce two-day battle, in which the Turks lost 1,600 men captured, the Turkish garrisons evacuated both Magruntein and Rafah. British losses totalled 487 men killed. At this point, British air reconnaissance confirmed that the main Turkish forces, some 16,000 strong, were occupying a series of positions in and between Gaza and Beersheba.

In December 1916, following the collapse of Rumania and the Allied failure to achieve significant gains in the Somme offensive, British Prime Minister David Lloyd George had begun to

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*Figures taken from *The Military History of World War I.* Vol. V: *The Campaigns on the Turkish Front* lists casualties as 4,000 killed and 4,000 captured. *The Compact History of World War I* lists more than 5,000 killed and 4,000 captured.

urge an advance into Palestine, simultaneously supporting the ongoing Arab revolt against the Turks in the Hejaz. This would curtail the possibility of Turkish assistance to Germany in Europe, and possibly result in the capture of Jerusalem. As a result, Murray made plans for an advance on Gaza. Between January and March the troops of the Egyptian Expeditionary Force were allowed time to reorganize, to accumulate supplies, and to complete construction of the pipeline to the border.

The city of Gaza contained numerous wells and was a vital objective as a watering place for the more than 10,000 horses of the British Desert Column which would spearhead the advance. Gaza was protected by hedges of thick, thorny cactus, which made it a strong natural fortress, and, as a result, the Turks had not dug many trenches around the city.

The British operation in Palestine was to be directed by Major General Sir Charles Macpherson Dobell, General Murray's second-in-command. Dobell planned to move his cavalry divisions to positions east and northeast of Gaza, where they would form a barrier and prevent Turkish reinforcements from reaching the city. The 53d Infantry Division would seize the Ali Muntar ridge east of Gaza and then attack the town itself. The 54th Division was to protect the right flank of the attack, while the 52d Infantry Division remained in reserve. The understrength Turkish 27th Infantry Division of approximately 4,000 men held the city of Gaza. The 16th Infantry Division was in position to the northwest, midway between Gaza and Tel es Sheria and the 3d Infantry Division was east of Gaza at Hujo.

The British attacked in thick fog on the morning of 26 March. By 1030 the 53d Division had seized the Ali Muntar ridge and was at the edge of town. At the same time, the cavalry divisions, with the aid of compass bearings, completed their envelopment of the city.[8] However, as a result of faulty communications, the cavalry divisions were unaware of the success of the 53d Division. Short of water and afraid of Turkish attacks from the north and east, Dobell, who was directing the battle from El Arish, ordered the cavalry to withdraw. This movement exposed the right flank of the 53d Infantry Division, and it too was forced to withdraw. Only much later did Dobell realize that he had been misled by a communications breakdown.

The attack was renewed on the following day, and several abandoned positions were recaptured, but by that time General Kress had prepared a counterattack against the British right flank which threatened Dobell's line of communications. The British, who were short of water, were forced to withdraw to avoid being cut off. They had suffered 3,967 casualties; Turkish casualties were 2,446. Murray, however, reported the action as a victory, claiming that his troops had inflicted 8,000 casualties for the loss of 3,500.[9]

As a result of his overly optimistic report and events on the Turkish fronts, on 30 March London ordered General Murray to advance immediately and capture Jerusalem. Although Murray wrote asking for use of two more infantry divisions with supporting artillery, he received only one, the 74th Infantry Division, which had been forming in Egypt since early spring.

By April the Turks had reinforced their defenses in and around the city of Gaza: the 3d Infantry Division was in Gaza, the 53d Infantry Division, with air and artillery support, was on the Ali Muntar ridge, and the 16th Infantry Division was guarding the Turkish left flank. In addition, the remainder of the Turkish Fourth Army, under General Kress, had fully deployed and had constructed an extensive line of fortifications between Gaza and Beersheba. On 17 April, General Dobell decided to carry out a frontal attack on the Gaza-Wadi es Sheria line with three infantry divisions. The 53d Infantry Division was positioned opposite Gaza on the coast, while the 52d and 54th Divisions faced the Ali Muntar ridge. The 74th Division was in reserve, and the two cavalry divisions were assigned to protect the right flank of the attack. The French battleship Requin and two British monitors provided naval gunfire support from the Mediterranean, and 170 artillery pieces, 16 of them heavy, supported the action on the shore.

The 52d and 54th Divisions advanced up the long slope of the Ali Muntar ridge toward Gaza, meeting very little opposition on the first day. On the 18th the British consolidated their forces. At 0530 on the 19th the main attack began, with a naval bombardment. At 1715 the 53d Division attacked Gaza up coast. Fifteen minutes later the 54th and 52d Divisions attacked up the ridge, meeting stiff resistance. Fierce fighting lasted throughout the day. The attackers were driven off in the evening, having suffered 6,444 casualties, compared with 2,000 Turkish losses. For the second time Murray sent an optimistic report to London, but by now the government was extremely suspicious of the general, wondering why, after two "successes," he had still not captured Gaza.[10]

In June General Murray was relieved of command of the Egyptian Expeditionary Force. He was replaced by General Sir Edmund Allenby, who previously had been in command of the Third Army in France. Allenby was a big, aggressive man with a violent temper, but he was also a very able soldier, and he quickly restored the plummeting morale of his new command. Allenby demanded and received reinforcements of three infantry divisions, aircraft, artillery, and service units, bringing his total force to approximately 88,000 men. He

then organized his infantry forces into two corps: the XX, under the command of General Chetwode, and the XXI, under Lieutenant General Edward Bulfin. The Desert Mounted Corps was placed under the command of Lieutenant General Sir Henry G. Chauvel. Furthermore, he moved General Headquarters from Cairo, where it had remained under Murray, to Rafah.

Both the Turks and the British were faced with difficult problems of logistics. At the time of Allenby's arrival in the Sinai, the British had completed construction of a single-track railroad from Kantara, on the Suez Canal, to Rafah--a total distance of 118 miles. At Rafah the railroad split, with one branch running to the port of Dier-el-Balah on the Mediterranean coast south of Gaza, and a second reaching almost to Shallal, about midway between Gaza and Beersheba and just west of the Wadi Ghazza. Ships delivered supplies daily at Dier-el-Balah, and the pipeline supplied water as far as Rafah. In August the British began double-tracking the railroad, and the water pipeline was extended to Shellal.

The Turks were also dependent upon a single-track railroad, which ran from Constantinople to Aleppo. From Aleppo branches ran to Baghdad into the Hejaz by way of Deraa, and through Syria and Palestine to Beersheba and Gaza. Since Britain completely controlled the sea, all Turkish supplies had to come over the railroad. However, at four points en route to Gaza all supplies and equipment had to be transferred from one train to another because of changes in the gauge of the tracks.[11]

The Turkish forces in Palestine were also reinforced during the summer of 1917, and by September 35,000 Turkish troops were dispersed along the strongly-fortified, 32-mile long, Gaza-Beersheba line. The Turkish defenses actually comprised a series of strong defense posts which were separated by distances of approximately 2,000 yards; major positions were at Gaza, Tel es Sheria, Khuweilfeh, and Beersheba. The forces were reorganized into two armies, the Eighth on the coast and the Seventh in the Judean Hills, under the overall command of General Erich von Falkenhayn, former Chief of the German General Staff. The collapse of Russia and Rumania allowed Turkey to release some of its best divisions from the Caucasus front, and in March, concentrated in the Yilderim ("lightning") Force, they were located near Aleppo. Enver Pasha, Turkish Minister of War, had intended to use these troops to retake Baghdad, but he was finally convinced that Allenby's campaign in Palestine posed a greater threat to Turkish security, and he accordingly diverted Yilderim Force to Palestine.[12] These units formed the core of the new Seventh Army, although not all of the troops had arrived in Palestine by the time Allenby launched his attack.

During the summer of 1917 Allenby adopted a plan which had been recommended to him by General Chetwode, and which would allow him to break the stalemate and take both Gaza and Beersheba in a single offensive.[13] He would carry out an artillery and naval gunfire bombardment of Gaza for several days, in order to create the impression that that almost impregnable city was his primary objective. Meanwhile, he would secretly concentrate his main forces near Beersheba, with its vital water supply and weaker defenses, and seize it in a surprise attack. After the fall of Beersheba the British XX Corps would swing around behind the Gaza fortifications and capture that city from the rear. The only complication to the plan was that because of the chronic shortage of water, the need for secrecy, and the distance from Beersheba to the pipeline, Beersheba would have to be taken in one day and its wells secured intact.

On 27 October the artillery bombardment of Gaza commenced. At the same time, the 52d, 54th, and 75th Infantry Divisions of the XXI Corps moved up to positions facing the city, which was defended by the Turkish 53d and 3d Infantry Divisions of the Eighth Army. On 30 October naval guns opened fire on the city. Meanwhile, the British 53d, 74th, and 60th Divisions of the XX Corps, the Australian and Anzac Divisions of the Desert Mountain Corps, the Imperial Camel Corps Brigade, and heavy and medium artillery--a total of 44,000 men --moved secretly into position below Beersheba. The Yeomanry Cavalry Division stood on the Wadi es Sheria opposite the center of the Turkish line, to contain the Turkish center and provide liaison between the two British corps. The 10th Infantry Division was held in corps reserve. Beersheba was defended by elements of the 27th Infantry and 3d Cavalry Divisions of the Turkish Seventh Army, totalling some 5,000 men. Elaborate plans had been developed to keep the British troop movements and concentrations secret, and these were perfectly executed.

On the morning of 31 October the XX Corps attacked Beersheba, achieving complete surprise. By nightfall the 74th and 60th Divisions had taken the main defenses southwest of Beersheba and had almost reached into the city itself, while the 53d Division guarded their left flank. In the late afternoon the Australian Cavalry Division charged from the southeast and seized the city with its wells intact. Although the advance of the Anzac Cavalry Division east of Beersheba had been contained by the Turkish defenders, the Turkish forces in Beersheba withdrew northwestward toward Tel es Sheria, where they were reinforced by the 16th and 19th Infantry Divisions. The British XX Corps then turned northwest toward Gaza, which they intended to attack on 2 November. However, as the Turks withdrew they reinforced their position on the height of Khuweilfeh, north

of Beersheba, which dominated the advance route of the XX Corps. In addition, the thirst of the British troops had increased as a result of hot winds blowing in from the desert, and the local water supply turned out to be much lower than intelligence reports had estimated.[14]

Allenby decided to use the 53d Infantry Division and one cavalry division to contain the Khuweilfeh position while, on 6 November, the remainder of the XX Corps, including the 10th Division, and the cavalry launched a major attack against the Tel es Sheria outpost.

Meanwhile, on the night of 1/2 November the XXI Corps had launched an attack against the Gaza defenses along a three-mile front, with its left flank resting on the coast. Its goal was to secure the outer Turkish positions and divert Turkish attention to the south in preparation for the attack from the north by the XX Corps. Despite the support of eight tanks, the infantry suffered very heavy losses.

Finally, at 0400 on 6 November, the XX Corps broke through the Tel es Sheria defenses, and by 0600 the cavalry had begun its envelopment of Gaza from the northeast. Since they were in imminent danger of being cut off, all Turkish forces withdrew from the Gaza defenses. On the morning of 7 November the XX Corps occupied the city of Gaza.

THE FIFTH ARMY CAMPAIGN AT THE WINTER AND GUSTAV LINES
Italy, November 1943 - May 1944

After a drive northward from southern Italy, which started early in September 1943, the Allied 15th Army Group, with the US Fifth Army, under Lieutenant General Mark W. Clark, south and west of the Apennines and the British Eighth Army on the right flank to the Adriatic Sea, in mid-November reached strong German defensive positions across south-central Italy known as the Gustav Line, about 80 kilometers north of Naples and about 130 kilometers south of Rome. There the Germans planned to keep the Allied armies from advancing to Rome and the northern Apennines for at least six to nine months.

The main positions making up the Gustav Line began at the Tyrrhenian coast, ran roughly north along the Garigliano River, then up the west bank of the Rapido River to the heights above Cassino. To protect the work on the main line of fortifications which was still in progress, as well as to delay the advance of the US Fifth Army, the Germans constructed immediately in front of it a system of forward positions about 15 kilometers wide that was to be known as the Winter Line. Although the forward line was planned as a temporary position it turned out to be a formidable barrier.

In the US Fifth Army zone, which ran from just above Mount Colli along the hills west of Venafro and Mignano and down the east bank of the Garigliano River to the Sea, the Winter Line was a succession of interlocked defenses in depth on mountain ridges, without any single point which, if captured, could be the key to break the entire system.

In the Eighth Army zone, the German Command rested its defenses on the main fortifications of the Gustav Line. The Sangro River, from its mountain headwaters to the Adriatic, served as a natural barrier in front of this system.

German engineers made very skillful use of terrain and fortifications. Mines were laid on the roads and trails, at the heads of gorges, and across other possible routes of advance. Bridges and culverts were destroyed. All approaches were covered by machine gun and artillery fire. Because of the rugged terrain and careful organization relatively small forces were needed to man the positions.

From the Allied point of view it was imperative to break through the German line, capture Rome, and reach the Pisa-Rimini line by the spring of 1944. The over all strategic plan of the 15th Army Group described in the operational directive issued on 8 November was divided into three phases. In the first, the Eighth Army would advance up the Adriatic coast to Chieti and Pescara and then turn west toward Rome, thus threatening German lines of communication through Avezzano and envelopment from the east. In the second phase, the Fifth Army would advance up the Liri and Sacco Valleys and capture Frosinone. In the third phase, when the Fifth Army reached the line Priverno-Ferentino-Capistrello, it would launch an amphibious operation south of Rome directed at the Alban Hills. After the successful accomplishment of the three phases, both armies would converge on Rome, the Eighth from the east and the Fifth from the south.

Allied intelligence estimated that by mid-November in southern Italy a total of 11 German divisions were in contact with Allied armies or

in immediate reserve. In northern Italy there was an additional force of 12 divisions, of which six were fully effective combat organizations. The ground forces were supported by the Second Air Force (Luftflotte 2), composed of II and IX Air Corps with about 300 planes.

To oppose the Germans, the Allies had in southern Italy at the end of November the equivalent of 14 divisions. Two more were expected to arrive by the end of 1943. These forces, with divisions at or close to full strength, and with combat and noncombat support troops, totalled about 243,000 men. In addition, the Allies had over 1,250 combat aircraft in southern Italy.

The Fifth Army at the Winter Line in mid-November 1943 was composed of three corps, the British X, US II, and US VI. Early in January 1944 the French Expeditionary Corps, consisting of three infantry divisions, would also come under the Fifth Army Command. In addition, directly under the Army's GHQ were the Italian 1st Motorized Group (67th Infantry Regiment, 1st Bersagliere Battalion, and 11th Field Artillery Regiment) and the 504th Paratroop Regiment. The British X Corps, with its 46th and 56th Infantry Divisions, was deployed along the high ground on the east bank of the Garigliano River, from its mouth to Mount Camino. There the British line left the Garigliano Valley and skirted the eastern edge of the Camino Hill mass, meeting the US II Corps sector south of Mignano. The US II Corps was composed of the 3d and 36th Infantry Divisions, with the Italian 1st Motorized Group attached, and the 1st Special Service Force (three special service force regiments, a service battalion, and a parachute field artillery battalion) attached to the 36th Division on 23 November. The II Corps held an eight-kilometer sector between Mounts Cesima and Caspoli, across Highway 6, which runs toward Cassino. North from Mount Caspoli the corps positions skirted the foot of Mount Lungo then crossed the highway and continued northeast to include Mount Rotondo and Cannavinelle Hill. Beyond the II, the US VI Corps, with the 45th and 34th Infantry Divisions, covered nearly a 25-kilometer sector. Starting at the low saddle-shaped ridge connecting Cannavinelle Hill with Mount Sammucro, the corps line ran along the eastern slopes of Sammucro and on high ground above Venafro, following the Pozzilli Road and turning north to the army boundary near Castel San Vincenzo.

Opposing the US Fifth Army was the German XIV Panzer Corps of the Tenth Army, composed of five divisions. The 94th Infantry Division was deployed on the German right flank, facing the British X Corps, along the Garigliano River from the coast to about three kilometers east of Castelforte. To its left was the 15th Panzer Grenadier Division, holding the sector to within less than two kilometers of Mignano. The sector between Mignano and Venafro was defended by the 29th Panzer Grenadier Division. From Venafro to Filignano the line was held by the 44th Grenadier Division. The German left flank, from Filignano on into the Eighth Army zone, was defended by the 305th Grenadier Division.

After the renewed Fifth Army offensive began early in December, the Germans reinforced their lines, first with the Hermann Goering Panzer Division at the Mignano Gap and then, in the middle of the month, with elements of the 5th Mountain Division west of Filignano. Early in January, after shifting their units back and forth, the Germans had four divisions in the first echelon (94th Grenadier, 15th Panzer Grenadier, 44th Grenadier and 5th Mountain), and one panzer division and two panzer grenadier divisions in the second echelon available for quick reinforcement

The weather during the last two weeks in November gave a foretaste of the conditions under which the troops would have to fight in the coming months. As autumn turned to winter, heavy rainstorms swept over the countryside to begin a period of miserable wet and cold weather. Rain, and later snow mixed with rain, turned every dirt road into a quagmire. Fog hung for long periods over mountains and valley. Slippery mountain trails became too dangerous not only for men, but even for pack mules.

After a two week lull in operations, which lasted until the end of November, the Fifth Army was ready to assault the Winter Line. The Army's plan was to break through the difficult terrain to its front, reach and cross the Rapido River, and subsequently thrust through the center of the Liri Valley, the gateway to Rome. The head of the Liri Valley, the objective of the coming attack, lay less than 15 kilometers in front of the center of the Fifth Army, where the US II Corps was deployed

The first attack in the Winter Line campaign (" Operation Raincoat") was delivered during the first ten days of December by the British X and US II Corps. The objective was to seize the formidable group of peaks known as the Camino hill mass, which forms the gatepost at the entrance into the Liri Valley from the Mignano Gap. The assault itself was carried out by the 46th and 56th British Divisions from the southeast, and the 1st Special Service Force and the US 36th Division from the northeast, and lasted from 2 December to 10 December. Despite desperate counterattacks by the 15th Panzer Grenadier Division, the Fifth Army drove the Germans from practically the entire Camino feature, gaining control of the heights on the western side of the corridor which give access to the Liri Valley. The success owed much to diversionary attacks on the army's left and right flanks, which prevented the Germans from concentrating their forces against the center where the main blow was delivered.

The success of Operation Raincoat seriously weakened the Winter Line in a vital area, but did

not assure access from the Mignano corridor to the plain of the Liri Valley. The Germans still held the northern side above the exit from the corridor. From dominating positions on Mount Sammucro and its slopes they could flank any Allied move through the exits and support their own positions on Mount Lungo, barring the mouth of the corridor. In the narrow valley between Mount Sammucro and Mount Lungo, the Germans had transformed the village of San Pietro into a formidable stronghold, which became the key in their defenses in this area. Before this strongpoint could be taken, however, both Mount Lungo and Mount Sammucro had to be captured.

On 7 December, the US II Corps, striking northwest along the axis of Highway 6, began its main assault against German positions on both sides of San Pietro. The II Corps plan for the capture of San Pietro provided for double envelopment. The Italian 1st Motorized Group was to capture Mount Lungo and envelop the village from the south, while units of the US 36th Division enveloped it from the north by taking Mount Sammucro.

The 36th Division's assault on Mount Sammucro was successful, but determined counterattacks by the 29th Panzer Grenadier Division stopped any further advance. The attack of the Italian 1st Motorized Group on Mount Lungo failed. A fresh attack on Mount Lungo was mounted on 15 December by elements of the 142d Infantry of the US 36th Division and succeeded in capturing the mountain in the morning hours of 16 December.

The first American efforts to capture San Pietro, 8-16 December, were beaten off. Now, when the dominating ground on both flanks, Mount Lungo and the Sammucro peaks, was in II Corps's hands, the Germans, afraid of being cut off, decided to abandon San Pietro. By 19 December the Germans had withdrawn to their next defensive line, based on Cedro Hill, Mount Porchia, San Vittore, and western spurs of Sammucro, all of which would have to be taken before Highway 6 could be used.

The drive by the II Corps in the San Pietro area was accompanied by an assault by the US VI Corps in the mountains to the north. The corps gained some ground, but was unable to make much progress prior to the German withdrawal in the II Corps sector. The advance was greatest in the center, south of Mount Monna Casale along the Sant' Elia road, where about five kilometers were gained. The flanks of VI Corps remained anchored on Mount Corno and northwest of Castel San Vincenzo.

On the whole, the Fifth Army made some substantial gains during the period from 2 to 19 December. However progress had been slow, and the advance was gradually slackening. For the moment, at least, the Germans had succeeded in stabilizing the front for the winter. Both Allied armies were exhausted. Losses were mounting, and gains made by the Fifth Army were falling to several hundred meters per day. The push along the east coast by the Eighth Army had stopped almost entirely. Fresh reserves to follow up initial successes were lacking. Supply and evacuation became more and more of a problem, and increasing efforts were needed in the struggle with snow, mud, and rain in the mountains and valleys.

As fighting turned to small-scale operations, the Fifth Army mustered its strength for the next push against the Winter Line. Before new attacks could be made, however, it was necessary to regroup, bring up fresh troops, and obtain replacements for the depleted units. The 34th Division came from reserve to relieve the 36th Division. On Mount Lungo, elements of the 1st Armored Division (6th Armored Infantry) replaced the 15th Infantry of the 3d Division and the division was transferred to the VI Corps. The entire US VI Corps went out of combat to prepare for the Anzio landing (Operation "Shingle"). Its sector on the right flank of the army was taken over by the French Expeditionary Corps.

The final assault of the Winter Line campaign started on 5 January. The Fifth Army was to defeat the German XIV Panzer Corps east of the Rapido River and advance into the Gustav Line, the German's principal defense system, capture the high ground north of Cassino, and push up the Liri Valley. The axis of advance remained unchanged, with the II Corps along Highway 6, making the main effort toward Cassino. To the right, the French Expeditionary Corps would resume the offensive toward the upper Rapido Valley and the high ground north of Cassino. To the left, the British X Corps would advance in coordination with the II Corps toward the Liri Valley, clearing up German resistance between the Peccia and Rapido Rivers south of the railroad.

Only a few kilometers separated the Fifth Army lines from the Rapido River, but the terrain was very difficult and gave the Germans excellent opportunity for defensive action. As the Allied advance debouched from the Mignano corridor it faced three isolated, prominent hills, in a row almost south to north across the route toward Cassino, Cedro Hill, Mount Porchia, and Mount la Chiaia. Behind them rose a last isolated ridge, Mount Trocchio, keystone of the German defenses forward of Cassino. It was the final objective in the II Corps's drive to reach the Rapido.

By 8 January the Germans had lost their best positions for defending the approaches to the Gustav Line. The la Chiaia-Porchia-Cedro Hill barrier had fallen; farther north, the Germans were forced out from the higher mountain ground above Cervaro. However, Mount Trocchio and the rough hills at the edge of the mountains near Cervaro were still in German hands, and there was every indication that the Germans would continue their stubborn resistance and delaying action.

The hard fighting continued until 15 January, when the II Corps finally captured Mount Trocchio, forcing the Germans to withdraw their forces across the Rapido.

North of the II Corps, the French Expeditionary Corps (FEC) was fighting bitterly against stiff German resistance. But as the Germans were slowly retreating in front of the II Corps, they subsequently were forced to withdraw in front of the French. Thus, the FEC took the high peaks as far north as Mount Acquafondata, and toward 16 January carried its advance to Sant' Elia.

The Winter Line campaign which ended in mid-January was both slow and extremely costly. Although the Allies gained ground on both sides of the Apennines, the gain measured in kilometers of advance was small for two and half months of combat. The Fifth Army moved forward only eight to eleven kilometers. During this period only half time was spent in intensive fighting, the rest on regrouping and mustering strength. Total Fifth Army combat losses were 15,802 men, of whom 2,359 were killed, 11,649 wounded, and 1,798 missing. Non-combat casualties reached almost 50,000 men. However, in spite of the losses, the effective strength of the army had risen from 243,827 on 15 November 1943 to 326,857 on 15 January 1944, an increase of 83,030 effectives.

The Attack on the Gustav Line

As the Fifth Army broke through the Winter Line during the first two weeks of January and reached the main German defensive position at the Gustav Line, General Sir Harold Alexander, Commander of the 15th Army Group, decided that there would be no lull in the operations and that the assault on the Gustav Line would start at once.

At that time the Allied Command was still facing a strong and determined German Force. Field Marshal Albert Kesselring, Commander of Southwest Command (OB Sued), comprising all German forces in Italy, had under him a total of 21 combat divisions with an estimated additional three divisions being formed. Kesselring's combat divisions were organized in two armies: the Fourteenth Army with eight divisions was deployed in northern Italy serving as an occupation force and strategic reserve, and the Tenth Army with 13 divisions directly opposed the Allied troops.

The Tenth Army was composed of two corps. The LXXVI Panzer Corps held the line in front of the British Eighth Army with four divisions (from the coast inland: 1st Parachute, 26th Panzer, 334th and 305th Grenadier) and one division in reserve (904th Panzer Grenadier). The XIV Panzer Corps, numbering about 90,000 men, was facing the Fifth US Army from the mouth of the Garigliano River north to the Apennines, also with four divisions.

The deployment of the XIV Panzer Corps was as follows: the 94th Grenadier Division occupied a 20-kilometer front from the Gaeta area on the coast of the Tyrrhenian Sea along the lower Garigliano River. Next in line, holding a 13-kilometer sector, on the upper Garigliano River to its confluence with the Liri River, was the 15th Panzer Grenadier Division reinforced by elements of the Hermann Goering Panzer Division. Then, from Highway 6 to the village of Cairo in about a six-kilometer sector was the 44th Grenadier Division, strengthened by two battalions of the 29th Panzer Grenadier Division. Northeast of Cairo, on the left flank of the XIV Panzer Corps, was the 5th Mountain Division, reinforced with three battalions, holding an 18-kilometer line.

In reserve, the XIV Panzer Corps had all or parts of four divisions, the Hermann Goering Panzer Division, the 3d Panzer Grenadier Division, the 29th Panzer Grenadier Division, and in the Rome area the 4th Parachute Division, which was in the last stage of organization.

All together the Tenth and Fourteenth Armies had about 220,000 men, of which 150,000 were under the Tenth Army, and the rest (70,000) under the Fourteenth Army. In addition some 25,000 men were assigned to other units scattered all around Italy, and another 25,000 men were in the OB Sued reserve.

The main line of German resistance at the Gustav Line was rooted in the high ground backing the Garigliano and Rapido Rivers. Extremely heavy rains and melting snow in the mountains had turned the rivers into torrents which had overflowed their banks, inundating much of the lowland. In the hills behind the Garigliano River in the Sant' Ambrogio area, on the steep and barren slopes of Mount Cassino, and among the many mountain peaks near the source of the Rapido, the Germans had blasted and dug weapons emplacements, built concrete bunkers and steel-turreted machine gun emplacements, strung bands of barbed wire, and planted minefields. Mortars were placed on the reverse slopes, and automatic weapons were sited to cover the forward slopes. In the town of Cassino and in other villages walls of the stone buildings were strengthened with sandbags, turning them into strongpoints. The focal point of the German defense was the Cassino massif. The heights above Cassino gave the defenders excellent observation of approaching Allied forces.

With the Fifth Army firmly up against the main defenses of the Gustav Line, with a front running along the Garigliano and Rapido Rivers, the 15th Army Group planned a frontal attack on the Cassino position, assisted by an amphibious landing at Anzio, some 100 kilometers from the main front. After establishing a beachhead, the Anzio force would advance inland to cut the German communication lines. Although the two operations were beyond mutual support capabilities, it was believed

that the dual operation would force evacuation of the Gustav Line, and possibly inflict a disastrous defeat on the German Tenth Army. The Eighth Army, meanwhile, would continue to advance on Pescara on the Adriatic coast.

Along its about 60-kilometer front from the Tyrrhenian Sea to the Abruzzi National Park the Fifth Army deployed three corps. On its left flank was the British X Corps, in the center the US II Corps, and on the right flank the French Expeditionary Corps.

The X Corps sector from the mouth of the Garigliano River north to the area above the junction of the Liri and Gari Rivers had (from the coast inland) the 5th and 56th Divisions, the 23d Armored Brigade, and the 46th Division.

To its right the US II Corps stood along the Rapido River to the Sant' Elia area, with the 36th Division on the left, south of Highway 6, and the 34th Division on the right, north of Highway 6.

Next to the right was the FEC, defending about a 20-kilometer sector from Sant' Elia to the boundary with the Eighth Army, with its 3d Algerian Infantry Division on the right and 2d Moroccan Infantry Division on the left.

The Fifth Army advance started on 17 January with the British X Corps attack on the army's left flank. The initial assault units had little difficulty crossing the Garigliano River and establishing a bridgehead. The German 94th Division was taken by surprise. During the day of 18 January the corps expanded its bridgehead. By evening its 5th Division, on the seaward flank, was firmly established on the Minturno ridge, some five kilometers beyond the river, and the 56th Division, on the right, was on the high ground on either side of Castelforte, but it had not taken the town itself. On the corps right flank, on 19 and 20 January, the 46th Division, operating near the junction of the Liri and Gari Rivers, failed to seize a bridgehead near Sant' Angelo. This was of critical importance, because the left flank of the US II Corps would be exposed during its forthcoming attack across the Rapido.

The main effort of the Fifth Army's attack was an assault crossing of the Rapido River by the II Corps to capture the area around Cassino. The area was easy to defend and difficult to take. Immediately above the town of Cassino, Monastery Hill rises to a height of nearly 600 meters, and within three to five kilometers to the north and west lie numerous other peaks 700 to 800 meters high. On the west bank of the Rapido, in the zone of attack of the 36th Division, the village of Sant' Angelo was a major strongpoint in a carefully prepared defense system. Manning the German defenses were units of the German 15th Panzer Grenadier Division.

The II Corps attacked on 20 January despite the fact that the British X Corps had not cleared the area south of the Liri River on the II Corps left flank. The crossing was extremely difficult. Rainy weather made the approaches to the river muddy and slippery. River mist made it almost impossible to recognize landmarks and find the correct routes. Uncleared anti-personnel mines took a heavy toll. After two days of heavy fighting the 36th Division had established a tenuous bridgehead three kilometers south of Cassino, but by 22 January the division was forced to give it up and withdraw with heavy casualties to the east bank of the Rapido. The German defenses were too strong, and supply of the bridgehead was frustrated by bad weather and German fire. The 36th Division had been badly hurt. Two of its regiments were almost wrecked on the west bank of the Rapido. The cost was about 2,000 men killed, wounded, or missing.

Although the failure of the US II Corps left the Fifth Army with only local gains in the British X Corps sector, the threat of the renewed major Allied offensive was so grave that the Germans decided to move their reserves to the front line. Thus a major Allied objective, to attract German reserve divisions that otherwise would be available for use against the landing forces at Anzio, was accomplished. When the US VI Corps landed on the beaches of Anzio on 22 January 1944, it met only negligible German resistance. By 30 January the beachhead had been expanded to 30 kilometers at its base and 15 kilometers in depth. A narrow salient extended to Campoleone.

The Fifth Army continued its pressure on the Rapido defenses near Cassino. Since the II Corps was unsuccessful in its frontal attack across the Rapido, Lieutenant General Mark Clark, the army commander, decided to outflank the Germans from south and north. In the south, however, the British X Corps was too weak to take up the offensive. Its Garigliano bridgehead had received strong counterattacks on 21 and 22 January, and the troops had barely held. Both sides settled into temporary stalemate.

In the north, on the right flank of the army, the French Expeditionary Corps concentrated the bulk of its forces in the southern part of its zone. On 24 January the corps attacked toward the southwest, taking two important hills, Abati and Belvedere, about eight kilometers north of Cassino. Abati was subsequently retaken by the Germans, but Belvedere was held by the French.

In the center, the 34th Division of the II Corps launched an attack across the Rapido River north of Cassino with a two-pronged drive, one toward the town of Cassino, the other directly across the Cassino massif. It took two days of bitter fighting to establish a firm, although shallow, bridgehead on the west bank of the Rapido. Heavy fighting

raged for the next week, as the Germans tried desperately to hold commanding ground northwest of Cassino that barred the advance into the Liri Valley. At the end of January the village of Cairo was taken by the 34th Division, and, to the north of it, the 3d Algerian Division of the FEC expanded the bridgehead into the foothills north of Cairo. Otherwise progress was slow, costly, and extremely difficult. The II Corps made no decisive thrust. The 34th Division was unable to take the key objective. The advance across the Cassino massif had hardly gotten under way.

By the end of January combat in the Eighth Army zone had come to a standstill. The Fifth Army did not have enough strength to break through into the Liri Valley and join with the VI Corps at Anzio. At the beachhead, the VI Corps had assumed defensive posture as German reserves concentrated there. It was obvious that the offensive actions of the Allies had not succeeded, and that the battle had turned into an operational stalemate. Nevertheless, it was essential that the Fifth Army continue its assaults against the strongly held sector around Cassino. Otherwise the Germans would withdraw some forces and send them to Anzio.

At the beginning of February the Germans had a dual task--to eliminate the Anzio beachhead and to hold the Gustav Line. The Allied attacks against the Gustav Line required that more strength be concentrated along the Rapido-Garigliano line than had been committed before against the Fifth Army. Field Marshal Kesselring was of the opinion that, if the Gustav Line could be held until enough units were gathered at Anzio to eliminate the beachhead, the Allied force would suffer a crushing defeat and would still be a considerable distance from Rome. Thus, at the beginning of February, the Germans increased their forces deployed along the Gustav Line to the equivalent of six divisions (from four early in January). Opposite the X Corps, the 94th Division occupied the coastal area, its eastern flank bolstered by elements of the 29th Panzer Grenadier Division. Against the II Corps were parts of the 15th Panzer Grenadier, 71st Infantry, and 3d Panzer Grenadier Divisions (all of which also had some units at Anzio), and the entire 44th Division. Facing the FEC were part of the 3d Panzer Grenadier Division and the entire 5th Mountain Division. Around 7 February, the 90th Panzer Grenadier Division and the 1st Parachute Division from the Adriatic coast were transferred to the area around Cassino.

The Allies also augmented their strength in the decisive front of the Apennines. Early in February, the New Zealand Corps, consisting of the Indian 4th Division and the NZ 2d Division, was assigned to the Fifth Army.

During the first part of February the II Corps continued its attacks through the hills northeast of Cassino. The 34th Division, and elements of the 36th Division, fought desperately and on 3 February advanced a few kilometers into the mountains north of Cassino. They took the two large features of Mount Maiola and Mount Castellone, but at this point the attack bogged down. The situation of the attacking forces became very difficult. German defenses on each high point could support several others with cross-fire, and cover every inch of the territory. In addition German positions had been stocked with all the necessary supplies long before the attack started, but the American troops had to haul everything they needed during the battle.

The troops of the II Corps fought viciously to break through the last several hundred meters to the monastery and to cut Highway 6 beyond Cassino. German defenses, the stubborn resistance, the ground, the weather, and the constant attrition of the 34th and 36th Divisions brought all attempts to nothing. Violent rains and heavy snowstorms reduced visibility and aggravated the situation. During the second week of February the infantry was too exhausted and too demoralized by German fire to do more than await relief.

Shortly before mid-February the New Zealand Corps replaced the battered II Corps. The fresh troops were ready to attempt to advance on Cassino. The plan of the attack called for the Indian 4th Division, which relieved the US 34th Division on 13 February, to assault Monastery Hill and after its capture advance south and cut Highway 6, then take the town of Cassino. The New Zealand 2d Division was deployed directly in front of the Liri Valley entrance on the flat land east of the river and of Cassino. It was to cross the Rapido north of Sant' Angelo, and together with the 4th Division take Cassino and open up the Liri Valley. Then Combat Command B of the 1st Armored Division would push through the Liri Valley toward Pignataro.

In order to soften up the German positions, the plan of the assault provided for air attack on the Benedictine monastery atop Mount Cassino, mistakenly believed to be a vital part of the German defenses. On 15 February, after the New Zealand Corps was ready to take advantage of bombing, the Air Force dropped over 576 tons of bombs, reducing the monastery to a pile of rubble. However, the walls of the monastery were not totally breached; the German 90th Panzer Grenadier Division promptly occupied the ruin, and it became a formidable defensive position. Additional air attacks were made on 17 and 18 February.

The New Zealand Corps's attack started at midnight on 17/18 February. The Indian 4th Division assaulted Mount Cassino from Snake's Head Ridge. It took Hill 593 after a bitter fight, but its further drive along the ridge toward the monastery was blocked by deep German defenses which it could not overcome. Not being able to continue its

attack, the Indian 4th Division gave up the crest of 593 and withdrew to the reverse slopes.

While these attacks were under way the New Zealand 2d Division, which had advanced on the railway below, during the night took the Cassino railway station near Highway 6 at the base of Mount Cassino. However, by mid-afternoon of 18 February, not being able to withstand a concentrated German counterattack, the division had to fall back, and the Germans regained the station.

When the battle was over, the positions in the Cassino area remained unchanged. The only Allied gain was a new Bailey bridge over the Rapido, which could not be used, however, because of German fire, and a few hundred square meters of hillside. The closely packed fortifications of Cassino and Monastery Hill had withstood every attack.

As the weather deteriorated, continued offensive operations became virtually impossible. Freezing rain, snow, and high winds forced a lull in all activities, and the front became static all along the Gustav Line. The rest of the month and the first half of March were spent on exchanging artillery fire, patrolling, and improving positions. The relatively quiet period also permitted sides to regroup their forces and make the necessary adjustments in operational planning.

With the approach of spring early in March, the Allies decided to continue the assault against the Germans in the Cassino area. The New Zealand Corps was again to spearhead the attack. The plan was to combine heavy bombing of a limited area at Cassino with a strong attack on the ground. The New Zealand 2d Division, closely following air and artillery bombardment, was to take Cassino, and open the road through the town to Highway 6. The Indian 4th Division was to capture Mount Cassino and the monastery from the town, attacking up the face of the mountain. The British 78th Division and elements of the US 1st Armored Division were in the second echelon, ready to enter the Liri Valley once a way was open for them, and advance toward Valmontone.

In the morning of 15 March, a force of 338 heavy and 176 medium bombers dropped about 1,100 tons of bombs on the town, and 300 fighter-bombers attacked targets in the immediate vicinity. Although only some 300 tons fell on Cassino (the remainder landed on the slopes of Mount Cassino and elsewhere), they demolished the town, toppling walls, crushing buildings, and covering the street with debris. At midday the artillery barrage started as planned. Nearly 900 guns and howitzers fired almost 200,000 rounds, delivering 2,500 tons of high explosives immediately ahead of advancing troops, and 1,500 tons hit German batteries and other selected targets in the rear.

In spite of heavy bombardment, elements of the New Zealand 2d Division, advancing behind the rolling barrage, met stiff resistance from the German 1st Parachute Division, deployed in the town and on the hillsides. The New Zealand troops fought a bitter battle in Cassino and came close to reaching Highway 6 along the base of Mount Cassino. But they were unable to break through to the Liri Valley. Another New Zealand Task Force took parts of Castle Hill, close to the abbey of Mount Cassino, but could not clear the entire hill. The Indian troops (7th Brigade) covered the assault from the north, but made little progress.

On the second day of the battle, 16 March, there was no substantial advance. The fighting in the town continued, the infantry having to fight house to house in the great jumble of mud and rubble. The Indian troops moved forward a little, but were stopped one kilometer short of the monastery. The situation was much the same on 17 March. The New Zealanders, painfully edging forward, sought to clear the southwestern corner of Cassino; the Indians were trying to gain the slope of Mount Cassino; Germans were attempting to retake Castle Hill. None achieved what they wanted.

During the next several days desperate attacks and counterattacks continued, but the opposing forces remained deadlocked. The Germans held out in the northwest and the southwest corners of Cassino, grinding down the New Zealand units. The Germans also held the principal ridges protecting their approaches to Mount Cassino. The battle was becoming a test of endurance. On 23 March it became evident that in spite of impressive superiority in air, armor, artillery and infantry the latest attempt to break the Gustav Line and gain entrance to the Liri Valley had failed. Between 15 and 26 March the New Zealand and Indian troops had suffered over 2,106 casualties, of which 287 were killed, 1,582 wounded, and 237 missing.

From the end of March until 11 May stalemate prevailed along the entire front. Both the Allied 15th Army Group and the German Tenth Army were engaged for six weeks in another extensive regrouping, building up their forces, and improving their positions. Combat activities were confined to patrolling and intermittent artillery fire. In the air, however, the Allied air force was very active, successfully attacking German lines of communication, ammunition dumps, motor parks, repair installations, railroad stations, ships, troop concentrations and other military targets, and significantly reducing the Germans' ability to supply their troops. With the successful breaching of the Gustav Line in May the Winter-Gustav Line stalemate ended, and the Allied forces were able to start the spring-summer offensive, which resulted in the liberation of Rome and the retreat of the Germans to the Gothic Line in northern Italy.

KOREAN STALEMATE
January 1951-June 1953

Background

The North Korean blitzkrieg which started on 25 June 1950 brought the North Korean Peoples Army (NKPA) almost to the verge of victory, when its troops pushed the forces of the Republic of Korea (ROK) and the United Nations (UN) to the Pusan area. There the beleaguered forces made a successful stand throughout the later part of the summer of 1950.

Then, on 15 September the situation at the front changed radically as the UN made a successful landing at Inchon, some 250 kilometers behind the front line. The initiative in the Korean campaign changed hands abruptly, and the UN troops, meeting only weak or moderate resistance, advanced northward, crossed the 38th Parallel, captured Pyongyang, capital of North Korea, and early in November came close to the Manchurian border.

At this point the tide of war changed once again when units of the Chinese Peoples Liberation Army (CPLA), usually called Chinese Peoples Volunteers, although they were regular Chinese troops, crossed from Manchuria into Korea, attacked the UN forces, and by mid-December pushed them back to the 38th Parallel.

There the Chinese and North Koreans paused long enough to concentrate their forces. On 1 January they resumed their drive toward Seoul in the west and Wonju in the center. Three days later the Chinese took Seoul. The UN forces under constant pressure continued to pull back until about 15 January, when the front stabilized along the general line Pyongtaek - Wonju - Chechon. This marked the high tide of the second invasion of South Korea.

On 25 January Lieutenant General Matthew Ridgway, Commander of the US Eighth Army, launched another offensive. In a series of limited attacks the UN forces moved slowly but steadily northward. Seoul was retaken on 14 March, and early in April the UN forces crossed the 38th Parallel again, heading for commanding ground to the north. By that time, Chinese resistance had grown stronger.

On 22 April, the Chinese and North Koreans struck southward in a counterattack known as the "Fifth Phase Offensive," concentrating their main effort in the western and central sectors. By the end of April the CPLA and the NKPA had advanced on the average 60 kilometers to a line running about eight kilometers north of Seoul and from there generally northeastward to a point north of Yangyang on the east coast.

After a lull of two weeks, during which both sides regrouped their forces, heavy fighting erupted again, as the Chinese and North Koreans renewed their offensive, this time directing their main effort down the Chunchon - Hongchon axis. After six days of heavy fighting, during which the CPLA and the NKPA gained some ground in the central and eastern sectors, the offensive came to a standstill. At that point, the Eighth Army dropped its defensive posture and struck northward.

The United Nations Counterattack
(23 May-24 June 1951)

The objective of the Eighth Army was to deny the Chinese and North Koreans any chance to concentrate forces for another attack, threaten their supply route in the Hwachon Reservoir area, and eventually to capture the important communications and supply center popularly known as the Iron Triangle. This area, with Chorwon, Kumhwa, and Pyonggang at the angles, was a roughly triangular, relatively flat region, sharply peaked mountains rising on all sides. It was a very important defense area of the CPLA.

The US I and IX Corps initiated the counteroffensive on 23 May. The I Corps troops on the left reached the Imjin River north of Munsan and entered Uijongbu and Sinpal, which had been abandoned. Elements of the IX Corps pushed north toward Kapyong, forced the Chinese back across the Hongchon River, and advanced toward the Hwachon Reservoir. Elements of the US 7th Division took Hwachon on 28 May against strong resistance.

The X Corps, on the right of the IX, was ordered to drive across the base of the salient formed by the Chinese in their last offensive, from Hangye through Inje to Hansong, and to trap or destroy the Chinese and North Korean troops. The 1st Marine Division in the Yanggu area pushed the Chinese back against the Hwachon Reservoir, while to the southeast the US 3d Division struck north of Soksa at the farthest point of CPLA penetration. At the same time, the 187th Airborne RCT advanced northeast along the Hongchon - Kansong road, cutting Chinese supply lines.

Although rain, mud, and increasing resistance by the CPLA and NKPA slowed the UN offensive in the X Corps sector, the US 2d Division and the 187th Airborne RCT took Inje on 27 May, and the 1st Marine Division seized high ground east of Yanggu on 31 May. By the end of the month the X Corps was deployed along the Soyang River. Farther to the east, the ROK I Corps pushed northward up the coastal road and, heavily supported by naval gunfire, took Kansong on 30 May.

The counteroffensive in ten days had brought the Eighth Army just about back to the same positions occupied on 22 April, when the Chinese and North Koreans launched their offensive. The army's front line now ran from west to east from Munsan through Yongpyong, Hwachon, and south of Yanggu, dipped southeastward sharply to Sorim, and then swung north to Kansong on the east coast. Except in the west, where the UN forces took tactical advantage of the Imjin River, the front line lay north of the 38th Parallel.

As the pendulum swung the UN forces back to the Kansas Line, the US Joint Chiefs of Staff, following Administration policy, ordered General Ridgway, by then Commander in Chief, United Nations Command, to confine himself to the general vicinity of the Kansas Line, and not to organize any major offensive effort. Thus he was authorized local advances only to gain better ground. In any event, although the Eighth Army could force the Chinese and North Koreans to retreat well north of the 38th Parallel, it was not certain that the UN forces were strong enough to destroy them totally in a large scale offensive. Political and strategic considerations suggested that the front would have to be stabilized along strong defensive lines, and the troops brace themselves for a period of stalemate.

Therefore, on 1 June General Van Fleet ordered his reserve elements to strengthen the Kansas Line by stringing barbed wire, laying mines, clearing fields of fire, constructing bunkers, establishing roadblocks, and plotting artillery concentrations, while the front line troops were to continue their advance toward the bulge north of the Kansas Line that ran from the Imjin River to just south of Chorwon and Kumhwa, thence southeast (the Wyoming Line).

The advance (Operation Piledriver) was carried out by elements of the US I and IX Corps. Despite heavy rains which made movement on roads almost impossible, and which limited direct air support, they fought their way toward the Chorwon-Kumhwa base of the Iron Triangle, where they met staunch Chinese resistance. On 10 June the US 3d Division and the ROK 9th Division gained the high ground south of Chorwon, while the US 25th Division and the Turkish Brigade fought their way to within five kilometers of Kumhwa. Next day, the 3d Division entered Chorwon, and the Turkish Brigade entered Kumhwa, both places abandoned by the Chinese. Pursuing the Chinese, a tank-infantry task force captured Pyonggang on 13 June, but on 17 June the CPLA struck back and reoccupied the town.

On the east-central front, meanwhile, the X Corps captured Yanggu on 2 June. Then, against heavy resistance by the North Korean II and V Corps it pushed through the difficult mountainous terrain to the circular depression about 15 kilometers north of Inje, called the "Punchbowl." The North Koreans, well dug in on the ridge tops and amply supplied with machine guns and mortars with considerable artillery support, fought fanatically. Using the ROK 5th and 7th Divisions and the US 1st Marine Division, the X Corps successfully assaulted bunker-studded ridges, pushed the North Koreans back, and on 16 June reached its sector of the Kansas Line.

On the right of the X Corps, the ROK I Corps advanced against moderate NKPA resistance northward from Kansong toward Kosong. Chodo was taken on 7 June, and by 15 June the Rok Army was only about 15 kilometers south of Kosong.

Thus, by mid-June the UN Command had reached most of its assigned objectives, although the main force of the Chinese and North Koreans was able to withdraw and occupy new defensive positions. Actions until the end of the month were largely confined to patrolling and local fights in the Punchbowl area. However, the US 1st Marine Division fought a series of violent but unproductive engagements.

Against this background, the USSR's representative to the United Nations, Jacob Malik, in a New York radio address hinted that the Sino-North Korean side might be ready to discuss a ceasefire in Korea. After an exchange of messages between General Ridgway, Marshal Kim Il Sung of North Korea, and General Peng Teh-huai, Commander in Chief of Chinese Forces in Korea, the first of the long series of peace talks was convened in Kaesong on 10 July 1951.

There both sides agreed that until a truce was signed the hostilities would continue. However, it became clear that neither side was willing to start a major offensive while the peace talks were in progress. Thus throughout the summer there was continuous, although local, fighting for limited objectives. In general the front line remained stable except in the Iron Triangle and the Punchbowl areas in the east, where the Eighth Army improved its positions a little.

Near the end of August, with the truce negotiations suspended, the UN Command decided to resume a small scale offensive with the objective of driving the Chinese and North Koreans farther back from the Hwachon Reservoir (Seoul's source of water and electric power), and away from the Chorwon - Seoul railroad. At the same time the US X Corps was to put forth a major effort in the Punchbowl area.

The offensive started on 31 August in the Punchbowl area with attacks by the US 1st Marine Division and US 2d Division against the northern portions of the Punchbowl and against Bloody and Heartbreak Ridges. By 5 September the 2d Division succeeded in taking Bloody Ridge and on

18 September captured Heartbreak Ridge. The 1st Marine Division secured its objective on 18 September. By 19 September, the X Corps had stabilized its lines, except in the 2d Division's sector. There the battle raged into the first half of October, when the 2d Division finally took its last ridge and consolidated its gains.

Along the western portion of the front, action in September was characterized by attacks, counterattacks and combat patrols. The most significant development was a five kilometer advance by five divisions of the US I Corps (ROK 1st, British Commonwealth, US 3d, 25th and 1st Cavalry Divisions) on a 65 kilometer front from the Kaesong area to Chorwon, and establishment of a new defensive line (Jamestown). By 12 October Jamestown Line was secured and the Chorwon-Seoul railroad protected.

To the right of the US I Corps, the US IX Corps harassed Chinese troops with aggressive patrolling. Especially intensive activities were conducted by the US 24th Division toward Kumsong. On 21 October the division improved its position considerably by capturing the high ground just south of Kumsong.

Toward the end of October 1951, as the peace negotiations resumed again, this time at Panmunjom, the Eighth Army, having improved its defensive lines, turned to a primarily defensive posture. A period of classic stalemate which lasted until the end of the war followed.

Stalemate Along the Military Demarcation Line (November 1951-July 1953)

Agreement on a military demarcation line was reached by truce negotiators on 27 November 1951, generally following the existing combat lines. But the decision had little effect on the military situation, since the other details of an armistice agreement were not settled. Although there was agreement on a 30-day lull and activity was minimal, both sides instructed their military commanders that there would be no cessation of hostilities until a formal armistice was signed.

Military activity, albeit of a limited nature, continued for almost two years. The front, at the beginning of 1952, stretched for 250 kilometers, from the confluence of the Imjin and Han Rivers near the coast in the west, to Kesong, on the shore of the Sea of Japan in the east. By spring the Chinese had deployed eight armies, approximately 208,000 men, from the Yellow Sea to the Taebaek Mountains,* East of them, to the Sea of Japan, were the II, III, and I Corps of the NKPA, about 83,000 men strong.**

Facing the Sino-North Korean force were the five corps of the US Eighth Army, from west to east the US I, US IX, ROK II, US X, and ROK I. They included four US Army and one US Marine divisions, one British Commonwealth division, and nine ROK divisions, with a total strength of nearly 248,000 men. Whereas at the front line the manpower strength of the two sides was fairly similar (248,000 UN vs. 291,000 Communist), in total deployable strength the Chinese and North Koreans had a considerable advantage. Their average was about 908,000 men, including about 422,000 Chinese, 185,000 North Koreans, and 10,000 Soviet troops--the last mostly antiaircraft and air force--in rear areas. The average strength of UN forces was about 700,000 men.

When it became obvious that there was likely to be a long static period, both sides proceeded to improve their defensive positions. The Eighth Army paid special attention to relocating bunkers below the crests of hills, to resiting automatic weapons to obtain maximum grazing and flanking fires, to strengthening bunkers to withstand artillery and mortar fire, to laying down more wire obstacles, and to improving draining facilities in trenches and bunkers. The Chinese and North Koreans strung more barbed wire, planted mines, and built more strongpoints. In many sectors, the CPLA and the NKPA defense fortifications were extended some 30 kilometers to the rear. The superiority of the UN air and artillery forced the Chinese and North Koreans to dig in deeply. Prime defense positions were commonly placed on the forward slope of a hill, and personnel shelters, artillery emplacements, command posts, and supply centers were dug on the reverse slope. Tunnels or covered trenches connected the prime positions with the shelters.

Since the negotiations at Panmunjom were making some progress in February 1952, the month was unusually quiet. Only to the west of the Mundung area was there action, as the Chinese Sixty-eighth Army attacked positions of the US X Corps several times in up to battalion strength.

Sporadic light ground action continued to mark the fighting in March and April, while at the

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*West to east the Sixty-fifth, Sixty-third, Sixty-fourth, Thirty-ninth, Forty-second, Fifteenth, Twelfth, and Sixty-eighth. Each army normally included three infantry divisions, an artillery regiment, and engineer, transport, communications, security, and reconnaissance battalions. North Korean corps were similarly organized.

**Hermes, Walter G. *Truce Tent and Fighting Front* (Washington, D.C., 1966), p. 283. All figures in this study were taken from this source.

same time spring rains and mist limited US air operations. In May the Chinese increased their probing attacks, aggressively intercepted UN patrols, and intensified their artillery fire. This increased activity was most severe in the western sector where the Chinese Thirty-ninth Army made thirty attempts to penetrate into the defenses of the ROK 1st Division. Three Chinese thrusts against the US 45th Division were all unsuccessful. The 45th countered by sending a small tank unit supported by infantry to raid the town of Agok, about eight kilometers west of Chorwon. Along the entire front line, the Chinese and North Koreans during May 1952 poured an estimated total of 102,000 artillery and mortar shells on the UN positions. This compares with about 8,000 shells in July of 1951.

During June, the tempo of fighting continued to increase. The US Eighth Army strengthened its positions by the seizure and retention of two strategic hills in the US 45th Division sector. Elements of the Chinese Thirty-eighth and Thirty-ninth Armies launched counterattacks along the entire front of the US 45th Division but were repulsed. In June the 45th sustained over 1,000 casualties, while the Chinese lost an estimated 5,000 men.

In the summer and fall of 1952, after the front had been relatively stable since November 1951, stubborn fighting erupted when the Sino-North Korean forces attempted to seize a number of hill outposts and key terrain guarding the approaches to the Eighth Army's main line of defense.

July witnessed two important actions. The first of these took place in the sector of the US 45th Division and centered around Hill 266, popularly called "Old Baldy," seized from the Chinese in June. After several unsuccessful attacks early in July, with forces up to battalion strength, the Chinese stopped their efforts until the night of 17/18 July, when the troops of the 45th Division were being relieved by the US 2d Division. Taking advantage of the preoccupation with relief, the Chinese mounted several assaults and captured the crest of the hill. The US 2d Division immediately counterattacked but was unable to retake Old Baldy. The onset of the rainy season made operations exceedingly difficult during the rest of the month. However, when the rain eased off at the end of July, the 2d Division again sought to secure control of Hill 266. After bitter hand to hand combat, two companies of the 32d Infantry Regiment of the division gained the crest early on 1 August and dug in. Chinese counterattacks failed.

In other major action during July, elements of NK I Corps, deployed in the eastern sector, took Hill 351, defended by the ROK 5th Division. The hill changed hands several times, but finally the ROK 5th recaptured it in mid-July.

Intense fighting for several UN outposts highlighted combat activities during August, except for the periods of heavy rains, especially in the second half of August, which brought the fighting nearly to a halt.

With the end of the typhoon season in September, the Chinese and North Korean forces renewed their assaults on the Eighth Army's outpost lines in the western and central sectors. Toward the end of the month in the east, the NKPA made a stubborn effort to penetrate the positions held by the ROK 8th Division. All the attacks were supported by large amounts of artillery and mortar fire. In one week in September a record high of 185,000 shells fell on the Eighth Army's front. At the same time the Eighth Army's artillery and mortars fired 370,000 rounds at the CPLA and NKPA.

In the west, fighting for the Bunker Hill outpost, which had been captured in August by the 1st US Marine Division, continued, with the Marines successfully repulsing Chinese attacks. The US 3d Division on 18 September lost outpost Kelly to the CPLA 116th Division and was unable to retake it. In the second half of September after prolonged fighting, the US 2d Division lost and then recaptured Hill 266.

In the central sector of the Eighth Army line, the Chinese struck at two key outposts in the front of the ROK II Corps, Capitol Hill and Finger Ridge, which were held by the ROK Capital Division. Both outposts were taken on 6 September. For the rest of the month and well into October, the opposing forces wrestled for the possession of the two hills. By mid-October, they were retaken by ROK infantry.

In the eastern sector of the front, two battalions of the NKPA 45th Division of the III Corps attacked positions held by the ROK 8th Division, took Hills 812 and 854 on September 21, and broke into the main defense line of the division north of Sohwa. However, the next day the South Koreans, supported by elements of the US 45th Division (which had arrived to relieve the ROK 8th Division), counterattacked and restored the situation.

During October, the Chinese and North Koreans began a series of attacks in an effort to seize dominating terrain features. Battles on many sectors of the front produced some of the heaviest fighting in more than a year. Bitter attempts were made by the Chinese to capture Hills 281 and 395, northwest of Chorwon, defended by the French Battalion and the ROK 9th Division. Seizure of these important positions, between which ran the boundary between the US I Corps and US IX Corps, would have given the CPLA control of the lateral

roads behind the corps's lines, and threatened the main supply route to Chorwon. During the height of the drive to capture key terrain features, elements of the Chinese Thirty-eighth Army overran several hill positions, but their main effort was blunted by the US Eighth Army's stiff resistance. As the momentum of the CPLA declined, the Eighth Army countered Chinese aggressiveness by making several attacks during the middle of the month, recaptured many of the lost positions, and seized key high ground which was part of the Chinese defense line.

The intensity of the October battles was striking because of the volume of artillery fire, the largest received by the Eighth Army since the fighting began. On one day, 7 October, some 93,000 rounds landed on UN positions. The Eighth Army estimated that the average Chinese daily expenditure of artillery and mortar shells during October was more than 24,000 rounds. The UN artillery also was very active. The US IX Corps alone during one ten day period in October hurled upon the Chinese about 185,000 shells. During the entire month of October the Eighth Army fired over three million artillery and mortar rounds, compared with 600,000 by the Chinese and North Koreans.

With the coming of winter weather Chinese aggressiveness began to subside. From November 1952 to February 1953, in marked contrast to the bitter fighting during the previous several months, the tempo of combat was generally slow, although action did flare briefly at scattered points along the front. Patrolling and small-scale harassing attacks continued. Taking advantage of the lull, both sides so strengthened their positions that their seizure could be accomplished only at a prohibitive cost. However, the artillery war raged unabated. During November and December the Eighth Army fired nearly 3.1 million and the CPLA and the NKPA nearly half a million artillery and mortar rounds.

As the spring of 1953 approached, the Eighth Army had 21 divisions under its command, including twelve South Korean, seven US Army infantry divisions, one US Marine division, and one British Commonwealth division. With the service and security troops supporting the combat divisions, the total strength of the army was nearly 768,000 men.

The Chinese and North Korean side had seven Chinese armies and two North Korean corps manning the front line, totalling about 270,000 effectives. An estimated 531,000 men were deployed in reserve behind them. With service and security forces, the total Sino-North Korean strength was over one million men. The two North Korean corps were deployed in the extreme eastern sector of the front, from the Suip River to the coast of the Sea of Japan, while the CPLA manned the rest of the entire line, over 80 percent of it.

As March 1953 began, both the UN and the Sino-North Korean troops increased their patrol operations. Toward the end of March action developed on a larger scale and greater intensity. On 23 March a regiment from the 141st Division of the Chinese Forty-seventh Army assaulted three outposts of the US 7th Division. The main Chinese effort was directed against Hill 266, which they took and held despite stubborn American counterattacks. Not far to the east elements of the 67th Division of the Chinese Twenty-third Army assaulted and took Porkchop Hill but were driven off by the troops of the US 7th Division.

Activities along the front line settled again into routine patrolling, which continued through April and the better part of May. Then, in the last week of May a series of bitter outpost engagements erupted. The heaviest fighting developed when the Chinese attacked five outpost positions in the US I Corps sector. The 120th Division of the Chinese Forty-sixth Army succeeded in occupying three of them, but suffered heavy losses, about 2,200 killed and over 1,000 wounded. The Turkish Brigade which defended the outposts had over 100 killed, 325 wounded and 47 missing. The total UN casualties for the month were 7,570 men.

In June, to shorten their line, and probably for political reasons, the Chinese attacked the ROK II Corps, whose line bulged out to form a salient in the Kumsong area. Striking on 10 June down both sides of the Pukhan River, elements of the Chinese Sixtieth and Sixty-eighth Armies succeeded in forcing back the ROK center and the right wing. Measured in terms of ground gained the Chinese attacks were successful. By mid-June they had pushed 15 kilometers of the UN front back four kilometers and taken several strategic hills. During the month the CPLA made 130 attacks on UN positions, ranging in size from a company to a full division. They fired over 320,000 artillery rounds, while the UN forces fired over 2,700,000, the highest monthly total during the Korean War. Both sides suffered very heavy casualties, the UN 23,161, and the CPLA and NKPA over 36,000.

On 18 June, due to strong UN resistance, the Chinese stopped their advance and started to regroup. Action along the front returned to routine patrolling. Then, after a respite, on the night of 13/14 July three Chinese armies (Twenty-fourth, Sixty-seventh and Sixty-eighth) launched a heavy assault against the area southwest of Kumsong defended by the ROK Capital and 6th Divisions. The Chinese broke through their main line of resistance and started to exploit the penetration. However, the US 3d Division was moved into the vacuum created by the retreat of the ROK Capital Division, which slowed the offensive by 17 July, and the UN forces turned to a counterattack. Attacking abreast with three divisions, the South Koreans on 20 July

seized and held the high ground along the Kumsong River and established a new line of resistance. No attempt was made to restore the original line, because the imminence of an armistice made it unnecessary to expend lives for unessential terrain. As the result of their offensive against the ROK II Corps, the Chinese gained approximately ten kilometers in depth, removing the Kumsong salient.

In the other sectors of the front, July witnessed only small scale attacks by units of the CPLA and NKPA, and counterattacks by the UN troops. However, neither side reported substantial gains. The fighting ended when an armistice was signed on 27 July 1953.

While the negotiations had continued to drag on in Panmunjom, both sides suffered considerable battle losses. During the last 15 months of combat, from April 1952 to July 1953, the UN casualties were about 125,000 men, and estimated Chinese and North Korean casualties were nearly 250,000 killed, wounded, and missing. Between April and July 1953, when the armistice agreement was just around the corner, a flare-up of military activity, prompted exclusively by Chinese and North Korean political considerations, cost the UN nearly 67,000 and the CPLA and the NKPA over 135,000 casualties.

FOOTNOTES

1. Trevor Nevitt Dupuy and Grace Person Hayes, *The Military History of World War I*, Vol. V: *The Campaigns on the Turkish Front* (New York: Franklin Watts, Inc., 1967), pp. 6-7.

2. Cyril Falls, "Turkish Campaigns," *A Concise History of World War I*, ed. Brig. Gen. Vincent J. Esposito (New York: Frederick A. Praeger, 1965), p. 200.

3. Col. Girard Lindsley McEntee, *Military History of the World War* (New York: Charles Scribner's Sons, 1937), pp. 249-50.

4. *Ibid.*, pp. 200-201.

5. McEntee, *op. cit.*, p. 438.

6. Falls, *op. cit.*, p. 202.

7. *Ibid.*, p. 203.

8. Falls, *op. cit.*, p. 203.

9. Col. Archibald Wavell, *The Palestine Campaigns* (London: Constable and Co., Ltd., 1929), p. 80.

10. Dupuy, *op. cit.*, p. 71.

11. *Ibid.*, pp. 72-73.

12. Gen. Sir Archibald Wavell, *Allenby: A Study in Greatness* (New York: Oxford University Press, 1941), p. 207.

13. *Ibid.*, p. 191.

14. *Ibid.*, p. 213.

ANNEX B

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Korea, 1951-1953

See listings under North Korean Invasion of South Korea.

ANNEX C

TENTATIVE NATIONAL FORCE EFFECTIVENESS COMPARISONS

An Informal HERO Report
26 September 1975

Results emerging from other research has provided interesting corroboration of HERO's assumptions that the Quantified Judgment Method of Analysis of Historical Combat Data (QJMA) can be used to assess the relative combat effectiveness of forces in historical combat, and that these relationships do not usually change greatly over time.

In a study of "Quick Wins in Modern Warfare" for the Director of Net Assessment, HERO sought to ascertain the reasons why some major offensives have achieved prompt and decisive outcomes, while others have not. Both qualitative and quantitative analytical techniques were employed. The Quick Wins were the following:

Megiddo, 1918 (British vs. Turks)
Flanders, 1940 (Germans vs. Western Allies)
Malaya, 1941-42 (Japanese vs. British)
Manchuria, 1945 (Russians vs. Japanese)
Six-Day War, 1967 (Israelis vs. Egyptians, Jordanians and Syrians)

The Almost Quick Wins were:

Barbarossa, 1941 (Germans vs. Russians)
Normandy Breakout, 1944 (Western Allies vs. Germans)
Invasion of South Korea, 1950 (N. Koreans vs. S. Koreans)

The data was derived from secondary sources, and while reasonably accurate, it varied in completeness and reliability. The QJMA analyses must therefore of necessity be considered as imprecise and indicative only, and are considered to be reliable only within about 20%. Nevertheless, the results were remarkably consistent where direct comparisons were possible. Shown below are the factors for combat effectiveness which are obtained from a comparison of force ratios,* normalized with respect to the lowest combat effectiveness being compared.

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*Where applicable, these force ratios have been corrected for surprise by use of factors developed in earlier HERO studies; the methodology is described in the 1975 "Quick Win" report to the Director of Net Assessment.

Palestine Campaign, 1917-1918

British	1.38		
Turks	1.00		

World War II Campaigns, 1940-1945

Germans	2.12	1.26	1.56*
Western Allies	1.68	1.00	
Russians	1.49		1.00
Japanese	1.00		

Six-Day War, 1967

Two sets of data are available. Using the highly-aggregated data on total force strengths and losses developed for the Quick Win study for the Director of Net Assessment, the following results were obtained:

Israelis	6.44	2.05	2.60
Jordanians	3.14	1.00	
Egyptians	2.48		1.00
Syrians	1.00		

This data reflects the collapse of the inept leadership by Egypt's Field Marshal Amer, and the abysmal leadership, top-to-bottom, of the continuously disrupted Syrian Army prior to 1970.

Preliminary analysis being done in another study, not complete at the time of this report, suggests that the breakthrough forces of the Israelis in the Rafah-Abu Ageila area on June 5-6, 1967, had a tactical CEV of 1.80 with respect to the Egyptians. As will be seen below, this is very close to the tactical CEV superiority of the Israelis over the Egyptians in 1973, calculated on the basis of the engagements of October 14, 1973.

October War, 1973

HERO analyses of the 1973 October War, done in still another study not complete at the time of this report, suggest that the 1973 Arab-Israeli combat power ratios were as follows:

Israelis	2.13	1.87
Egyptians	1.14	1.00
Syrians	1.00	

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*This figure is believed to be low; other HERO data indicates that the German-Russian Combat Effectiveness Ratio was probably higher than 2.35/1.00 as late as 1944.

Previous HERO research indicates that the relative combat effectiveness values (CEVs) of the Germans and Western Allies were almost identical in World Wars I and II. This suggests that, lacking significant historical forces to the contrary, CEVs are not likely to change rapidly across adjacent periods in history. To test this hypothesis, it is believed quite appropriate to combine the data for the Palestine Campaign with that for the World War II Campaigns. Despite the absence of direct supporting data, HERO has also hypothesized that the combat effectiveness of the Israelis in the past two decades is comparable to that demonstrated by the Western Allies in the two World Wars. Reflecting these hypotheses, Figure 1, is a compilation of the relative combat effectiveness of the different national forces under consideration, normalized to the average of the CEVs calculated for 1967 and 1973.*

Figure 2 is a graphical plot of the data shown in Figure 1, showing the ± 20% reliability postulated. This plot, showing a great similarity in CEVs of 1918 Turkish forces and 1967-1973 Arab forces, tends to support the assumption about the comparability of Israeli and Western Allied combat effectiveness.

What, then, is the significance of these figures? Imprecise as they are, and based on a very small data base, they can be only indicative of the relative effectiveness of these national forces. Yet they are indicative, and they show an apparent cultural influence on combat effectiveness. The QJMA procedure for calculating combat effectiveness ratios has given results consistent enough within studies and between studies to warrant pursuing this course both to improve the reliability of the figures presented here and to develop the implications for comparison of potential combat effectiveness of the western Allies, Russians, and Germans, and other national forces that may be allied or opposed to us and our likely allies in war.

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*The Syrian figures also show the spread from that average value to the 1973 estimate. The Egyptian figures are an average of the two 1967 CEVs and the 1973 CEV.

Figure 1. TENTATIVE NATIONAL FORCE EFFECTIVENESS COMPARISONS 1918-1973

Germans (1940-44)	5.41	1.26	1.56[a]						
Western Allies (1918-44)	4.29	1.00	. .	1.68	. .	1.98			
Israelis (1967-73)	4.29	. .	. .	. .	. .	. .	2.05	2.09	
Russians (1941-45)	3.47	. .	1.00	. .	1.49				
Japanese (1941-45)	2.33	. .	. .	1.00	1.00				
Turks (1918)	2.17	. .	. .	. .	. .	1.00			
Jordanians (1967)	2.09	. .	. .	. .	. .	. .	1.00		
Egyptians (1967-73)	2.05	. .	. .	. .	. .	. .	. .	1.00	
Syrians (1967-73)	1.00-2.01[b]								

[a]Figure is low; other data suggests a ratio greater than 2.35/1.00.

[b]Normalized to average, 1967-1973, but showing estimated improvement, 1973.

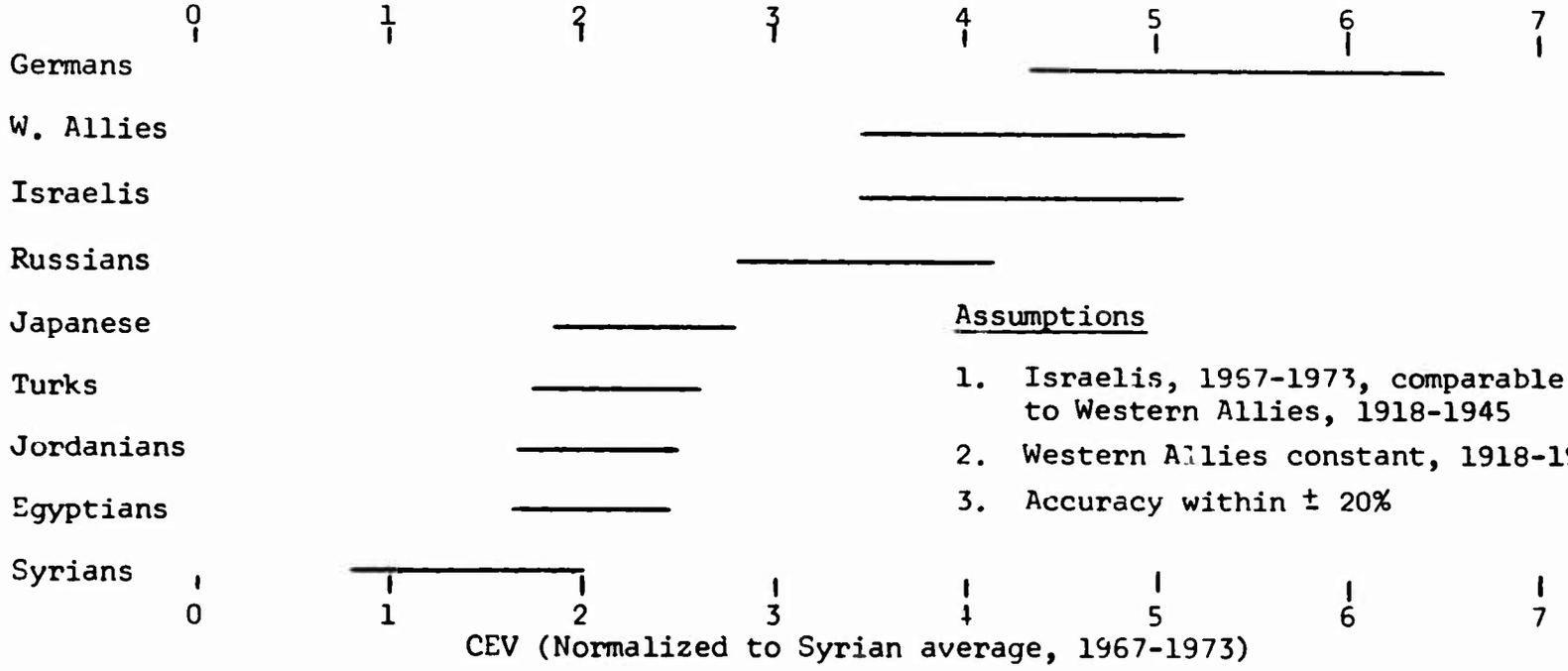

Figure 2. TENTATIVE COMPARISON NATIONAL FORCE EFFECTIVENESS, 1918-1973