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MILITARY INTELLIGENCE
SERVICE
WAR DEPARTMENT
Washington, July 25, 1942

INFORMATION
BULLETIN
NO. 21
MID 461

NOTICE

1. This bulletin has been prepared from reports of United States military observers, from reports and comments of British officers engaged in the action, and from British operation orders. The British orders are given verbatim so that United States troops may become acquainted with their style. This is the report of the action of an infantry division, supported by tanks, executing a carefully prepared plan. Particularly noteworthy is the night attack. This bulletin will serve a dual purpose: (1) to provide all officers with confirmed information, and (2) to serve as material for lectures to troops. However, the application of this information must be in accordance with the tactics, technique, and procedure prescribed in the pertinent manuals of the United States Army.

2. Each command should circulate available copies among its officers. Reproduction within the military service is permitted provided (1) the source is stated, (2) the classification is not changed, and (3) the information is safeguarded. Attention is invited to paragraph 10a, AR 380-5, which is quoted in part as follows: "A document * * * will be classified and * * * marked restricted when information contained therein is for official use only, or when its disclosure should be * * * denied the general public."

3. Suggestions for future bulletins are invited. Any correspondence relating to information Bulletins may be addressed directly to the Evaluation and Dissemination Branch, Military Intelligence Service, War Department, Washington, D. C.

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Section I. INTRODUCTION

Although the recent campaigns in the North African desert have been of an ebb-and-flow type, accounts of the battles fought there show, among other lessons, that success is to be achieved by careful planning, close coordination of all arms, and a correct application of the principles of war. Of particular interest in the battle for the capture of Bardia is the employment of the British infantry and its organic heavy weapons, the examples given in this account proving the soundness of the training doctrine contained in United States field manuals.

The British capture of Bardia, although an isolated action in the Libyan campaign that took place during the period from November 1941 to January 1942, is important because the British there defeated a numerically superior Axis force in a strongly fortified position.

The Axis position at Bardia was well prepared and well defended. The country offered no cover for the attackers. In addition to a strong perimeter, the Axis defenses consisted of some 90 defense areas, cemented in and heavily wired. In many cases these were strengthened by deep antitank ditches protected by large numbers of mines.

Thorough preparations were made by the staff and by reconnaissance units. Constant shelling and machine-gun fire, uninterrupted night patrolling, and the blowing of gaps in the wire around the defended perimeter served to confuse the enemy as to the time and place of attack.

Several coordinated factors contributed to the successful conclusion of a difficult tactical operation:

1. Troops that were carefully and thoroughly rehearsed with engineer troops and tank units;
2. A heavy proportion of available artillery that fired thoroughly coordinated barrages;
3. The use of smoke in Phase 1 of the attack, and the choice of a night attack in Phase 2;
4. The excellently organized and conducted recovery service of the 1st Army Tank Brigade;^[1] and
5. The bold decisions of the Division Commander, quickly transmitted to the troops by a smoothly functioning communications system.

In spite of the fact that Axis strength was underestimated by 60 percent and that the defensive positions were much stronger than was originally believed, the action was successful.

Particular attention is directed to the comments and lessons derived from this action. Also instructive and worthy of note are the British orders for the attacks and two of the special instructions issued to units of the 2d South African Division. These, with a glossary of abbreviations used, are included as appendixes.

The Bardia action is an excellent example of a sound tactical plan carried out unswervingly by a well-qualified and conscientious staff, and correctly organized and well-trained troops.

In this bulletin British unit designations are changed (except in the actual orders) to the United States designation most nearly corresponding to a given unit strength. The following principal changes have usually been made:

<i>British</i>	<i>United States</i>
Infantry brigade _____	Changed to Infantry regiment.
Field battery _____	Changed to Field artillery battalion.
Field troop _____	Changed to Field artillery battery.
Armored squadron ____	Changed to Armored company.
Armored troop _____	Changed to Armored platoon.

This bulletin is based on reports of American official observers and later interviews with them, on British orders used in the battle, and on subsequent publications issued by the British.

For a complete understanding of operations set forth in this bulletin, FM 31-25, on Desert Operations, should be consulted.

^[1] Brigade is equivalent to United States regiment.

Section II. EVENTS LEADING TO THE ATTACK AND CAPTURE OF BARDIA (Map No. 1)

In the second British Libyan Campaign,^[1] which began on November 18, 1941, the XXX Corps made the main attack toward Tobruk and had as its mission the destruction of the Axis armored forces between the fortified frontier area and Tobruk. The XIII

Corps, which made the secondary attack, had as its mission the containing of the Axis forces in the fortified triangle Bardia--Sidi Omar--Halfaya Pass.[2]

The armored units of the XXX Corps finally forced General Rommel's German armored divisions and the Italian infantry across the hump of Cyrenaica to El Agheila on the Gulf of Sirte, but the Axis positions in the fortified triangle held firm, effectively immobilizing one division of British troops.

On November 23-24 the fortified positions in the Omars area [3] were assaulted and reduced by elements of the 4th Indian Division. Salum, Bardia, and Halfaya Pass, however, continued to resist under heavy aerial bombardment.

The 1st New Zealand Division occupied the Fort Capuzzo area, and in addition had detachments between Bardia and Salum and to the west of Bardia. The New Zealand Division Commander assigned his 5th Infantry to contain the Axis forces of Bardia early in the campaign. British Army Headquarters decided that these troops were needed in operations farther to the west with the XXX Corps. Hence the 2d South African Division, which had been on line-of-communication duty along the coast and west to the railhead, was ordered to relieve the Indians and New Zealanders. The mission of the South African Division was to contain and reduce the three Axis positions still holding out.

Although classified as motorized, the South African Division had only enough transport to carry one regiment at a time, and its movement was therefore somewhat slow. However, the Division took over the Omars area on December 3. Leaving a small garrison at the Omars, it sent a two-battalion regiment on December 4 to occupy the Bardia area, and another two-battalion regiment on December 9 to occupy the Fort Capuzzo area.

These regiments were specially assembled as temporary expedients, since one regiment of infantry, one of the Division's infantry battalions, and one regiment of field artillery were still at the railhead southwest of Sidi Barrani (at Bir el Thalatha) awaiting transport. Therefore, on December 9 the composition of the 2d South African Division, then occupying the area between Bardia and Capuzzo, was two infantry regiments (less one battalion) and one regiment of field artillery, with the New Zealand Cavalry (armored cars and four tanks) attached.

No attempt was made to invest Bardia at this time, since the Axis capability of an armored attack from the west was still a constant threat. Instead, six mobile combat teams were organized, each consisting of a platoon of three armored cars, a field-artillery battery of four 25-pounders, a platoon of four 2-pounder antitank guns port, a company of motorized infantry, and a detachment of engineers. [4]

These columns, with the mission of clearing the area of all Axis troops, operated to Gambut (about 40 miles due west of Bardia) and thence north to the coast. Special attention was paid to the wadies [5] running north into the sea. By December 15 the combat teams had accomplished their mission. A total of 38 Axis tanks were destroyed, 34 of these at the armored-force repair depot in the Marsa Lucch area. [6] The destruction of these Axis mechanized units by the mobile columns may explain in part why the British were not attacked from the west during the Bardia engagements. The Division also adopted the policy of burning all disabled Axis vehicles, wherever found.

During this period armored-car patrols were maintained around the Bardia perimeter defense, and between Bardia and Salum. On December 15 the 1st RDLI (Royal Durban

Light Infantry) Battalion of the 3d Regiment and two companies of the Division machine-gun battalion were moved into the Bardia area from the Omars and Fort Capuzzo.

On December 16 the British made a two-way reconnaissance in force on the Bardia perimeter, one battalion ranging along the coast from the north and another from the south. During this reconnaissance a third battalion was in reserve on the escarpment to the west of the perimeter, and two machine-gun companies in the same area supported the action by long-range machine-gun fire. Both the north and south reconnaissance battalions reached the wire, blew gaps, and penetrated a short distance within the perimeter. They immediately met with considerable resistance and were withdrawn to positions about 1,000 yards outside of the perimeter.

The Division was reinforced by an additional battalion of 25-pounders and one of 6-inch guns on December 17. On the same day, commanding high ground about 1,500 yards west of the perimeter in the area 510-397 [7] was captured and held despite numerous counterattacks. The loss of this key position was severe for the defender, as it prevented him from observing the attacker's activities to the west, north, and south. The position was of corresponding importance to the South Africans, for it afforded good observation of the major portion of the Bardia perimeter.

During the period December 17 to 31 the commander of the British troops initiated an intensive program aimed at harassing the defender, gaining information, and concealing the time and the direction of the British attack. Artillery fired counterbattery, as well as on all targets of opportunity during daylight hours. The .303 Vickers machine guns, firing in battery, were used to thicken the fire. Ammunition was what the British call the "streamlined bullet," which has an extreme range of 4,000 yards. Intensive night patrolling, which included blowing gaps in the wire, was carried on all around the perimeter. The New Zealand Cavalry Regiment demonstrated within view of the perimeter, the four tanks of the unit on the escarpment to the west over which the attack had been delivered in 1940, and the armored cars to the south and southwest. Air photographs were made; from these and from available maps, relief maps were constructed to show vital terrain sections within the perimeter.

It is interesting to note that during the period when the machine guns and artillery were firing on the Bardia position, the British had their antitank guns sited in the opposite direction to guard against possible Axis armored-force attacks upon their rear.

[1] So far, four campaigns have been conducted in the tug-of-war for the control of Libya:

1. 1st Axis -- September 1940. This campaign was launched by the Italians under Marshal Graziani, evidently with the intention of marching through Egypt and seizing control of the Suez Canal. Penetration was made into Egypt as far as Sidi Barrani, where the Italian drive finally stalled.
2. 1st British -- December 1940 to February 1941. The British, under the command of General Wavell, launched a campaign to drive the Italians out of Egypt. Their strategy was a series of envelopments of the coastal towns, concluding each envelopment with a mopping-up attack against the enveloped area. Though the British initially has intended to stop at the frontier between Egypt and Libya, their progress was so successful that they continued into Libya as far as El Agheila, where thin communication lines finally forced them to stop. During the campaign the British captured over 100,000 prisoners and a great amount of valuable materiel.
3. 2d Axis -- March-April 1941. Just prior to this action much of the British force was withdrawn from Libya and sent to Greece to support the Allied action there. A German mechanized group under Marshal Rommel arrived at about this time to reinforce the Italians. Realizing the weakened condition of the British, the Axis forces launched an attack. The British, in no condition to oppose them, withdrew by a series of bounds to the Egyptian frontier, where, reinforced, they stopped the Axis advance. It was during this action that Tobruk was first isolated.

4. 2d British -- November 1941 to January 1942. Reinforced through the intervening months, the British Eighth Army under the command of General Ritchie again attacked the Axis, with the intention this time of driving their forces from North Africa. They were again successful, and again reached El Agheila. Lack of supply forced them to stop there to await replenishments.

[2] For general map of area, see map No. 1, p. 10.

[3] This phrase will be used to refer to the region containing Sidi Omar and Libyan Omar.

[4] In this action the composition of the combat teams differed from that used in the Battle of Salum in that armored cars were substituted for anti-aircraft guns. This was probably due to British air superiority in the area, and the desirability of highly mobile, ground-reconnaissance units.

[5] Wadi -- the bed of a watercourse, dry except in the rainy season.

[6] Marsa Lucch is a port about halfway between Bardia and Gambut.

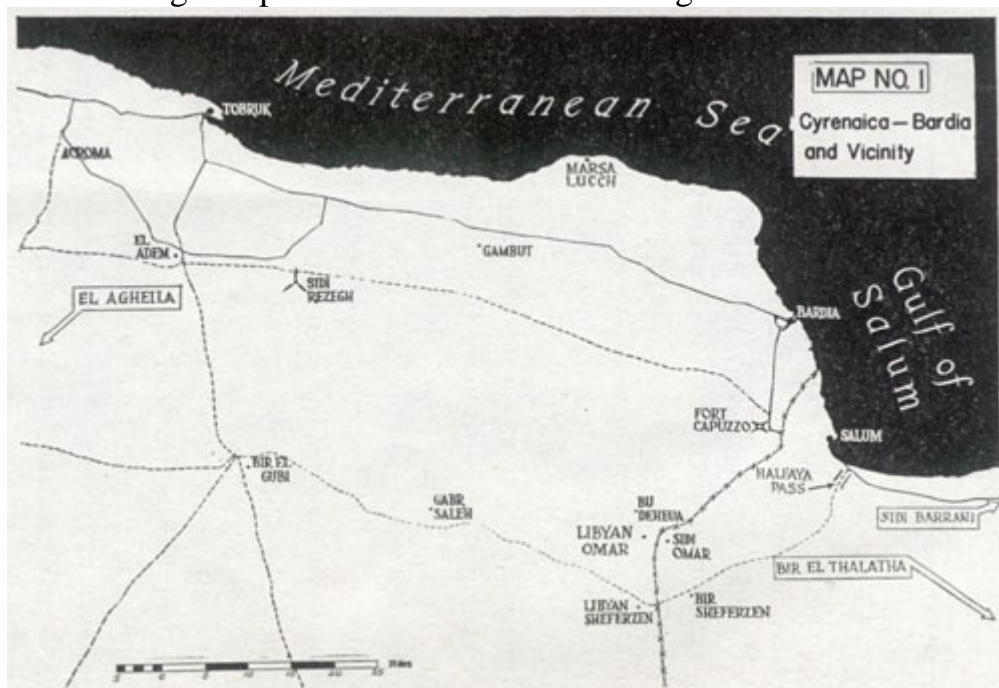
[7] See map No. 2, p. 12.

Section III. PLANS OF ATTACK

The original plan of attack on Bardia contemplated an attack down the coastal plain, following the Tobruk-Bardia road (see map No. 1), with the object of cutting off the northern portion of the perimeter and of continuing the attack to the south. However, when the Division Commander was promised two battalions of infantry tanks instead of two companies, he changed his plan to an attack from the south.

An attack over the ground used the previous year was not contemplated, although this broad flat escarpment leading into Bardia from the west presents the most favorable approach for tanks. However, every effort was made to cause the defender to expect such an attack, and with apparent success, for a large portion of the defending Axis antitank guns were originally sited to cover this avenue of approach.

The new plan of attack, from the south, was completed and in the hands of the subordinate commanders by December 24. Troops were withdrawn from the line by companies and rehearsed in their roles. In particular the infantry-tank and the infantry-engineer teams were given practice to insure close timing and coordination.



As of December 30 the strength of the 2d South African Division, reinforced, in the general area Salum-Omars--Bardia, was as follows:

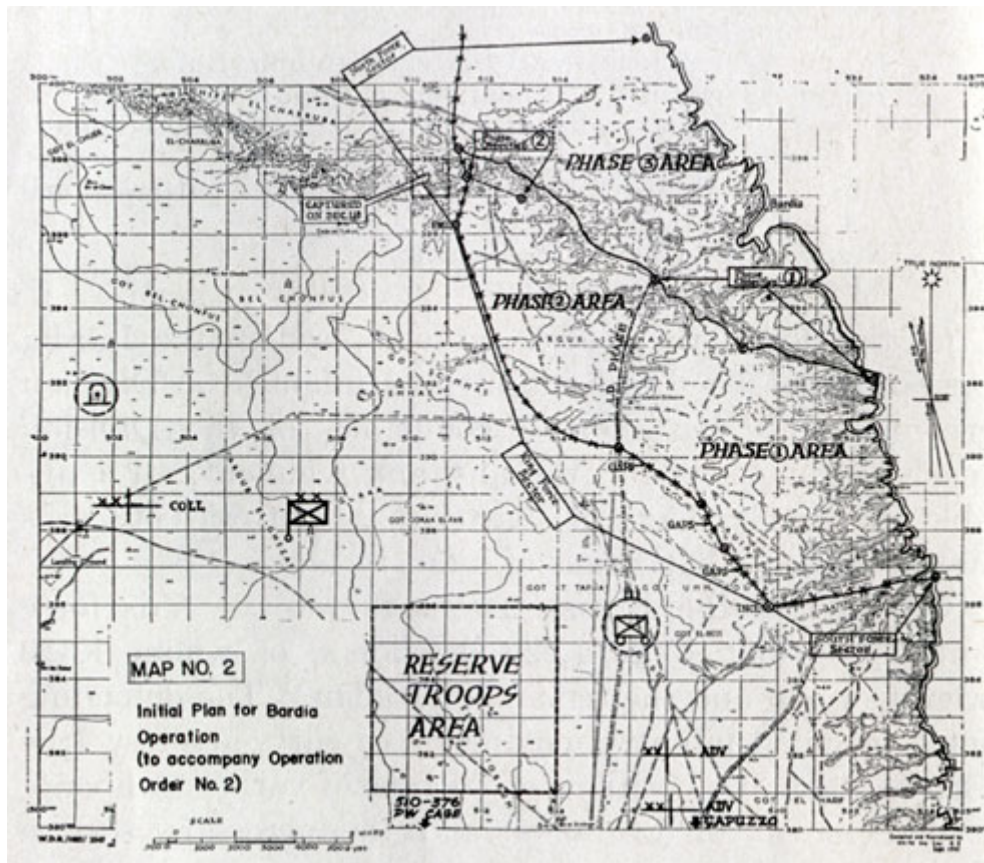
- 3 infantry regiments of 3 battalions each;
- 1 reconnaissance battalion;
- 1 machine-gun battalion;
- 1 light AA regiment less 1 battery -- 40-mm. Bofors;
- 1 light AT regiment -- 2 pounders (40 mm.);
- 3 field artillery regiments, less 1 battery -- 25 pounders (total, 11 batteries);
- 4 batteries of medium artillery (three 6-inch batteries; one 4.5-inch battery);
- New Zealand Cavalry Regiment;
- 2 battalions of infantry tanks (114 tanks).

Of this force, the troops actually used in the Bardia operation consisted of 5 infantry battalions, the Division reconnaissance battalion, 2 companies of the Division machine-gun battalion, the antitank regiment, all available Division Artillery (11 batteries), 4 batteries of Corps Artillery, and 2 battalions of infantry tanks.

Opposed to the British attackers was an Axis force initially estimated at 4,120 defenders, of whom 1,310 were German and the remainder Italian. The defending force included infantry, engineers, cavalry, artillery (the British knew the positions of 86 guns of various calibers), a detachment of 13 tanks, and the necessary service troops. [1]

At the conclusion of the action, however, it was found that this estimate credited the Axis with only about 40 percent of actual strength, for, in addition to unannounced Axis battlefield casualties, the British reported the capture of more than 8,000 prisoners, of whom approximately 1,800 were German.

Two features should be stressed in studying the organization of the British attacking force: first, the large area held by the Division at the time (some 49 miles, from Bardia to the Omars--Salum--Halfaya Pass triangle); and, second, the announced policy of the Division Commander to take each of the Axis positions in turn by utilizing a maximum of fire power and a minimum of personnel.



The plan in detail is given in the 2d South African Division Operation Order No. 2 of December 24, 1941 (appendix B). The information from the operation overlay has been plotted on map No. 2. In general, the plan provided for three holding forces -- one to the north, one to the west, and one to the south -- which were to "hold, demonstrate, and contain." The main attack was to be made by a reinforced regiment which would break through the perimeter defenses in the south. This attack was divided into three phases, and was to be launched at 0500 December 31.

The general instructions contained in O. O. No. 2 were amplified by operation instructions that went out to the troops along with the operation order. For the operation instructions to the attacking troops and to the reserve which was to carry out Phase 2 of the attack, and for the timetable showing coordination of infantry, artillery, engineers, and tanks, see appendixes C, D, and E.

[1] For identification of Axis units in the initial estimate, see 2d South African Division Operation Order No. 2, in appendix B.

Section IV. CONDUCT OF THE ATTACK

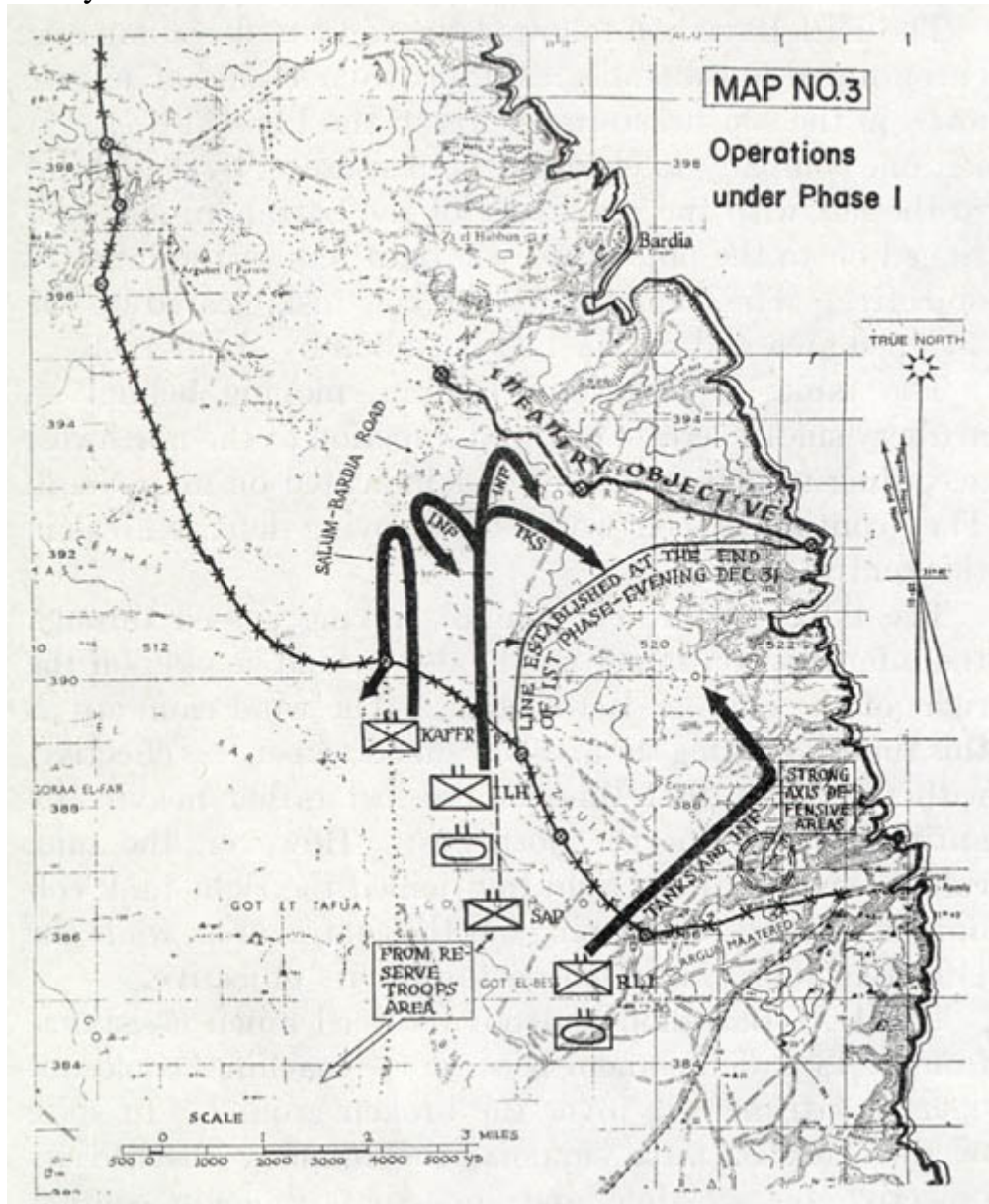
1. PHASE 1 (Map No. 3)

During the night of December 30-31 one tank battalion and the engineers moved to their assembly areas, the tanks about 1,000 yards in rear of the infantry. At H hour [1] - 185 (3 hours and 5 minutes before the hour of attack) the engineers and two infantry battalions, the RLI (Rand Light Infantry) on the right, and the ILH (Imperial Light

Horse) on the left, began their movement forward to the line of departure. This was the road running 300 yards to the south of the wire and almost parallel to it.

Previously designated personnel from the infantry companies assisted in carrying forward bangalore torpedoes and other engineer equipment. The troops arrived at their line of departure without incident. At H - 135, artillery fire was opened in conjunction with a heavy bombardment by the Royal Navy from the Gulf of Salum. At the same time the engineers went forward to blow gaps in the wire. (See appendix E.)

Between H - 110 and H - 70, the engineers blew the gaps; the infantry then passed through and took up a position forming a salient about 400 yards inside the wire. The infantry actually crossed the wire at H - 90.



In the rear of this newly established line and under cover of infantry and artillery fire, the engineers widened the five gaps now opened in the wire, cleared lanes through mine fields, and blew the sides of the tank ditch. The tanks arrived at the ditch 30 seconds before the time fixed for launching the attack and, continuing through the wire and mine fields, passed through their infantry.

The RLI Battalion followed the right tank column and encountered considerable resistance from a series of defense areas in the southeastern section of the Phase 1 area. It left one company to clear up the resistance, bypassed this to the left with the remainder of the battalion, and continued on to the objective -- the right half of the infantry objective. The company left for this task cleared up the assigned area and rejoined its battalion by about 1000.

The tanks of this right column, moving behind an artillery smoke screen, changed direction to the northwest according to plan and moved as indicated on map No. 3. They continued their work of destroying defense areas in this central sector.

The tanks of the left column, having passed through the infantry, continued north, also behind smoke, on the right of the Salum--Bardia road. The wind came up at this time, rendering the artillery smoke screen less effective, with the result that this column lost rather heavily by antitank fire from the northwest. However, the tank column swung to the right and joined the right tank column in the work of cleaning out the central area, while the ILH Battalion continued on toward its objective.

The ILH Battalion had not received much assistance from its tank detachment because the machines could not operate satisfactorily over the broken ground. In spite of this lack of tank support, the infantry reached its objective on schedule and immediately made contact with the RLI Battalion on its right.

Meanwhile, the Kaff R (Kaffarian Rifle) Battalion, following the ILH Battalion and generally on the left flank, with the mission of establishing a flank along the Salum--Bardia road, received heavy fire from the northwest. The Battalion Commander and the majority of his staff became casualties, and the Battalion failed to make contact with the ILH Battalion in position on the escarpment to its front.

At 1100 the Division Commander knew that the RLI and ILH Battalions had reached their objectives and were in contact. He also knew that the interior of the Phase 1 area had been cleared up, but he did not know the location of the Kaff R Battalion. Shortly thereafter he received word that companies of this Battalion were withdrawing individually to the wire. At about the same time information was received that a counterattack was forming to the northwest, in a position to make a definite threat to the left of his left battalion.

The infantry tanks were moved from the central part of the Phase 1 area to the rear of the ILH Battalion to counter this threat. The 1st SAP (South African Police) Battalion was moved forward from Division Reserve to establish the flank, which the Kaff R Battalion had failed to do. The Kaff R Battalion was withdrawn for reorganization and placed in Division reserve.

The 1st SAP Battalion succeeded in establishing a flank about 2,700 yards east of the Salum--Bardia road, but could not reach the ILH Battalion to its front. However, by arrangement between the two battalion commanders, the ILH Battalion refused its left flank and made contact with the SAP Battalion to the south. The establishment of this line was completed in the afternoon of December 31.

The counterattack from the northwest did not materialize and the position was held during the night December 31- January 1.

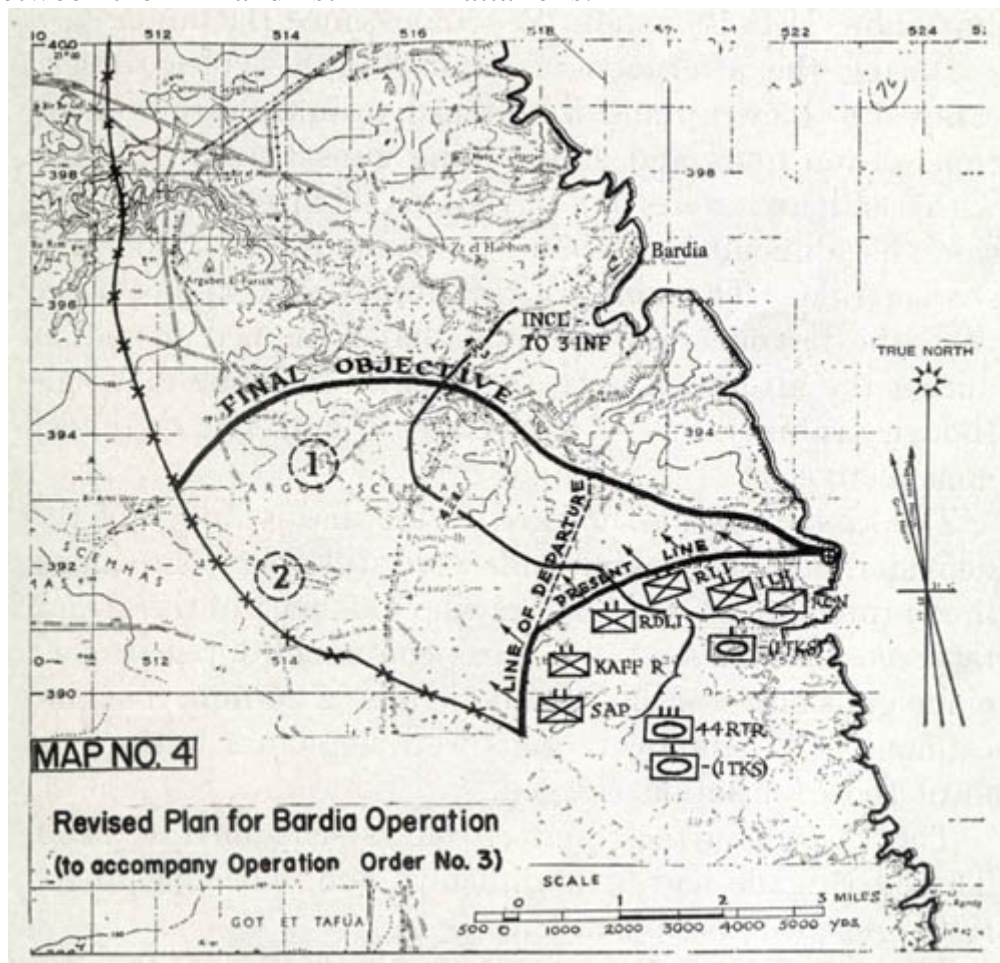
The tank battalion, with 50 tanks engaged, had 20 tank casualties, mostly in the left column during the Phase 1 attack. During the night all but 3 of these were recovered, and all 17 were in condition to continue in the operation by the morning of January 1.

2. PHASE 2 (Map No. 4)

Despite the failure of the Division to reach its Phase 1 objective, the Division Commander considered the situation favorable. Working through the night of December 31-January 1, his staff completed a somewhat revised plan for the second phase of the action. The actual order for carrying this plan into effect is 2d South African Division Operation Order No. 3, January 1, 1942 (appendix F). The accompanying operations overlay is shown on map No. 4.

In effect, the plan consisted of a night attack to the northwest at 2200, January 1, by two regiments supported by tanks. The line of departure was the line of the flank established by the 1st SAP Battalion and the ILH Battalion. The objective of this attack was somewhat short of that originally planned for Phase 2.

To carry this plan into effect, it was necessary to reorganize the composition of the attacking regiments, a practice designed to give flexibility and quite common in British operations. During the morning of January 1 the 1st RDLI (Royal Durban Light Infantry) Battalion, less one company, was withdrawn from the north sector, moved wide around the Bardia perimeter, and put in the line between the 1st SAP Battalion and the ILH Battalion. The Kaff R Battalion was moved up in rear of the line as Division Reserve, but was later assigned to the left attacking regiment and moved into the line. The personnel of the Division Reconnaissance Battalion was dismounted and moved up to relieve the RLI Battalion on the right of the line, which battalion in turn was placed in the line between the ILH and 1st RDLI Battalions.



The arrangement of the battalions on the line from left to right, therefore, as indicated on map No. 4, was as follows: 4th Brigade [2] (1st SAP Battalion, Kaff R Battalion, 1st RDLI Battalion), 3d Brigade [2] (1st RLI Battalion, ILH Battalion, Reconnaissance Battalion). [3]

During the afternoon of January 1 a typical desert sandstorm blew up and threatened to impede the operation. Bren guns and submachine guns became clogged with sand and were out of action all afternoon. Considerable difficulty was had even with the bolt-operated service rifle. The only British infantry weapons other than the bayonet and grenade that remained in action during the afternoon were the Vickers machine guns, although visibility was so reduced as to make these almost noneffective.

The sandstorm also worked to the disadvantage of the defender, but his machine guns were still able to fire along final protective lines. Officers who took part in the attack reported that Axis defense areas contained duplicate machine guns and so-called Baboon guns (a 20-mm. machine cannon). The duplicate guns were kept in a bath of oil until those in action clogged.

The Phase 2 attack jumped off as scheduled at 2200. The 3d Brigade had little difficulty and, wheeling to the right, reached its objective.

The 1st RDLI Battalion, on the right of the 4th Brigade, encountered strong defending fire from positions indicated by circle "1" on map No. 4, but drove through and reached its objective. This attack was delivered by tanks and infantry by moonlight; according to the Division Commander, it was the hardest phase. Night shadows so limited the visibility of the Axis guns as to make them almost useless. The same shadows enabled the British infantry to approach to close quarters, carrying machine guns and grenades to deal effectively with enemy guns.

The anticipated danger that the tanks might lose direction in the night did not materialize to any great extent; even when this did happen, the advantage of getting the tanks to close quarters with the enemy far outweighed the disadvantages occasioned by their straying from their proper course. Moreover, by the use of radio a wandering tank was easily put on its course again.

As this was an attack by tanks accompanied by infantry, each bound had necessarily to be within the powers of the infantry so that even if a tank did lose direction, the deviation was relatively small. Also, all tanks were seeking out enemy defense areas, and the mere fact that the defense area so engaged proved to be somewhat off the tank's true line was not a matter of great moment.

The infantry had been intensively trained with the tanks for this particular type of operation, and the tanks and the infantry had acquired respect for and confidence in each other.

The Kaff R and 1st SAP Battalions were pinned to the ground by fire from a strongly defended position called the triangle (circle "2" on map No. 4). The tanks could not get into this area because it was mined and surrounded by a tank ditch, so they bypassed it and went on. Although the two battalions eventually took the position with grenade and bayonet, they had not reached their objective by daylight, and a gap had developed between the Kaff R Battalion and the 1st RDLI Battalion on its right. The Division Commander ordered his tank commander to send a tank company back to close the gap and assist the two battalions of the 4th Brigade forward.

Before it could be done, the Bardia garrison surrendered.

3. CASUALTIES

Second South African Division casualties:

160 all ranks killed;

250 all ranks wounded.

(Later information indicates that these figures are too low.)

British tank casualties:

Personnel:

3 officers killed;

20 enlisted men killed and wounded.

Tanks (114 engaged):

27 tank casualties;

24 recovered;

3 total loss (burned out).

Prisoners taken: 8,500 German and Italian.

British troops liberated: 1,150, including 650 New Zealanders

[1] "Hour" was 0500.

[2] Equivalent to United States regiment.

[3] This information does not agree with Operation Order No. 3, but the observer states that the battalions went into action in the above formation.

Section V. COMMENTS AND LESSONS

1. INFANTRY

"Fire power is everything," said the British commander at Bardia, "and to attain this no more personnel should be used than is absolutely necessary. In modern warfare, under certain circumstances a man with a bayonet or a hand grenade is of the greatest value, but a man with only a rifle is frequently a hindrance rather than a help. What is required is automatic weapons -- the more the better -- but it should be borne in mind that except in close-up work, personnel should be reduced to the absolute minimum. It is infinitely better to use rifle personnel to provide the attackers with covering fire than to use an unnecessarily large number of men in the attack itself. Men armed with tommy guns and grenades are the backbone of an attack, while the riflemen provide the covering fire."

The British went in at Bardia with two battalions on a broad front in order to engage as many mutually supporting groups at one time as possible. This advance was supported by machine-gun fire initially, and very effectively. Full advantage was taken of their fire power at the beginning of the operation, but the guns did not continue in close support of the infantry as the attack advanced, and this proved to be a mistake. The attackers depended on fire power and not manpower, but, even with all their automatic fire, on two occasions during the attack the individual soldier cleared the position with rifle and bayonet, illustrating the bayonet's value as a final assault weapon. It is seldom used, but when needed, nothing can replace it.

Machine guns with streamlined ammunition were moved forward overnight to provide a machine-gun barrage to cover the advance of tanks and infantry. Heavy machine-gun fire was directed at all enemy positions near the point of entry until the

tanks and infantry broke through, and this fire was particularly effective against Axis antitank guns. Moreover, a tank can go through a friendly machine-gun barrage without danger.

The medium machine gun (.303 Vickers) proved to be still the most effective weapon for supporting the advance of infantry units. However, at Bardia full advantage of its fire power was not always taken. Its use as a harassing weapon at its extreme range of 4,000 yards was most effective.

Gas-operated small-arms weapons, such as the Bren and the Thompson submachine gun, are ineffective in sandstorms unless special precautions are taken. Difficulty was experienced with even the bolt-operated rifle at Bardia. Though the 2-inch infantry mortar was not very effective at Bardia, excellent results were obtained from the heavier infantry mortar. [1] Its effective range of 1,400 yards, however, was considered too short.

2. ARTILLERY

Heavy British artillery concentrations as well as bombardments by the Royal Navy were fired on all the enemy's known defense areas and gun positions, especially just before the attacks, in order to support the advance of the tank columns. During the early part of Phase 1, smoke shells fired in advance of the tank columns provided effective screens. Axis lines of communication were shelled constantly. Counterbattery fires were especially effective.

It was found that the heavier the artillery barrage or concentration immediately before and after the time of attack, the better for the attacker. These concentrations were supplemented by mortar fire on known defense areas. The barrage was not constant, but intermittent.

3. COMMUNICATIONS

Particular attention was given in the Bardia operations to the ever-present problem of adequate communication. Care was taken to insure continuous communication and the immediate repair of broken telephone lines. In the Bardia action over 500 miles of telephone wire were used. To prevent unnecessary breakage, underground conduits were provided in areas through which the tanks had to travel when approaching from their rendezvous. As far as possible, these wires were laid along routes where it was unlikely that tanks and Bren carriers would pass.

Radio was used extensively, and especially satisfactory results were obtained from the pack radio set [2] with its range of 2 miles. Except for artillery use, all radio was kept silent for some time prior to the attacks. Preceding the operation, code was used, but in order to avoid delay after contact had been made, all signals were thereafter in clear.

Realizing, however, that the best-planned communications systems might break down, the British had at least two liaison officers in every battalion, regiment, and company constantly working back and forth to the higher headquarters. Adequate runners were also provided, regardless of the other available forms of communication. Their services were found to be indispensable.

4. ENGINEERS

Engineers were thoroughly trained for the job they had to do in the initial break-through. Ample carrying parties provided from the infantry brought up engineer stores and explosives prior to the attack, while engineers were preparing properly sited lanes of entry through the Axis mine fields within the perimeter defense. Through these, British troops were able to pass with small loss in tanks and tank personnel.

After the break-through, engineers in Bren carriers with suitable equipment accompanied the tanks closely to deal immediately with whatever minefields the tanks might encounter inside the perimeter.

5. PATROLLING

For some time prior to the operation, the British conducted constant patrolling, particularly at night, and made frequent raids on the whole perimeter. During the night, patrols blew gaps in the enemy wire at as many points as possible along the perimeter. Even though the 2d Division had been thoroughly trained in patrolling, it was decided at the conclusion of the operation that constant and additional instruction and training were necessary.

6. TANKS

The Bardia action was one of infantry supported by tanks. The tanks operated in two waves, the second with the infantry. Smoke fired by the artillery was laid down before the advancing tanks; until the wind came up, it worked very well during Phase 1 of the attack. For Phase 2 a limited objective was ordered, since tanks and infantry were working together on a moonlight night.

For tank-infantry communication, a tank with two-way radio was detailed to each infantry battalion headquarters, and a radio set at both regimental and Division headquarters was tuned in on that tank's frequency.

The tank column, in bypassing the strongly defended position during Phase 2 of the attack, placed an unnecessarily heavy burden on the infantry left to clear up the area. It was later concluded that the tanks, since they possess considerable fire power, should have stayed to help take the position and to support the infantry assault with long-range fire, even though they were unable themselves to get into the area.

In the night attack tanks were guided by flashlights. Experience demonstrated that these guiding lights should be of any color except red or yellow, since either of these is particularly hard to distinguish among gun flashes and bursting shells.

7. ANTITANK

In open country like that around Bardia, antitank mines formed a portion of the normal defenses of British infantry, down to companies. Mines were laid even when the unit was only resting for the night after a march. The mines were not very systematically laid, but merely spread around the bivouac area and lifted the next morning.

The British 2-pounder proved a most effective antitank gun for small infantry units. As an illustration, the British were holding a position overlooking a well with one

infantry platoon and a section (two guns) of 2-pounders; they were attacked by one British infantry tank (which the Axis troops had salvaged) and four Italian tanks. The 2-pounders got the infantry tank at 400 yards and then in turn the four Italian tanks, the last within 50 yards of the position.

The Axis antitank guns, in particular the smaller calibers such as the Italian 20-mm. Breda, were extremely well sited and well dug in, so that the muzzles just cleared the ground. The guns were usually located on a reverse slope or across a small depression where they had at least a 400-yard field of fire and could catch tanks coming over the rise to the front.

8. AIR SUPPORT, OBSERVATION, AND PHOTOGRAPHY

In spite of the fact that the British Division Commander was provided with Air Tactical Reconnaissance, he commented that an observation air unit actually attached to his command would have assisted enormously in the Bardia operation, particularly during the early stages. Constant air bombing of Axis positions would also have been helpful.

The air reconnaissance which was available to the Division did help a great deal, however, in that it provided the Commander with air photographs necessary for the preparation of relief maps. From these air photographs and from available maps of the area, accurately scaled models of the terrain were made by the mapping and survey section. These were very carefully prepared in plaster of Paris and were studied by everyone taking part in the operation, down even to section sergeants. They were of the greatest value to the tanks and the infantry, and, in fact, also to the artillery.

In this way the British attained a thorough knowledge of the terrain over which the action was to take place.

[1] Caliber is not specified in the report, but the description answers that of the British 3-inch infantry mortar.

[2] Similar to the United States "Walkie-talkie".

Appendix A. GLOSSARY OF TERMS USED IN THE BRITISH ORDERS

ACK. -- Acknowledge.

A. D. M. S. -- Assistant Director Medical Services.

A. D. S. -- Advanced Dressing Station

Amb. -- Ambulance.

A. P. M. -- Assistant Provost Marshal.

A. R. P. -- Ammunition Refilling Point.

Arty/R. -- Artillery Reconnaissance

Bde. -- Brigade (equivalent to U. S. Regiment).

C. C. S. -- Casualty Clearing Station.

Comd. -- Command, commander.

Comn. -- Communications.

Coy. -- Company.
C. Q. S. C. -- Camp Quarters Staff Captain.
C. R. A. -- Commander Royal Artillery (Division Artillery Commander).

D. A. A. G. -- Deputy Assistant Adjutant General.
D. A. D. T. S. -- Deputy Assistant Director of Transport Services.
D. M. R. - Durban Mounted Rifles.

Fd. -- Field.
Flak -- Fliegerabwehrkanone (German AA).
F. M. C. -- Forward Maintenance Center.
F. S. S. -- Fixed Signal Services.

Gds. -- Guards.
Gp. -- Group.
G. S. O. 3 (W. T.) -- General Staff Officer in charge of weapon training.

I -- Infantry.
I. L. H. -- Imperial Light Horse.
Inter comn. -- Inter communications.

Kaff. R. -- Kaffarian Rifle Battalion.

LO -- Liaison Officer.
L/T -- Line Telegraphy.

M. C. -- Military Cross.
M. D. S. -- Main Dressing Station.
M. T. -- Motor transport.

N. Z. -- New Zealand.

O. C. Pro. Sec. -- Officer Commanding Provost Section.
O. of B. -- Order of Battle.
O. O. -- Operations Order.

Para. -- Paragraph.
Pl. -- Platoon.
P. O. L. -- Petrol, oil and lubricants.
Posns. -- Positions.
P. o. W. -- Prisoners of war.
Pro. -- Provost.

Q. -- Maintenance Section, Quarter Master Service.

R. A. -- Royal Artillery.
R. D. L. 1. -- Royal Durban Light Infantry.

Recce. -- Reconnaissance.
 R. L. I. -- Rand Light Infantry.
 R/T -- Radio Telephone.
 RTR -- Royal Tank Regiment (when used with a number indicates a battalion).
 R/V -- Rendezvous.

S.A. -- South African.
 S. A. P. -- South African Police.
 Start line -- Line of departure.
 Start time -- Time of attack.

Tac/R -- Tactical Air Reconnaissance.
 T. C. -- Troop Carriers.
 T. C. P. -- Traffic Control Point.
 Tps. -- Troops.
 Tracing -- Overlay.

U. D. F. -- Union Defense Force.
 Under Com. -- Attached.

V. D. -- Victoria Decoration.

W. E. T. -- War Equipment Table.
 W.T. -- Wireless Telegraphy.

Appendix B. 2D SOUTH AFRICAN DIVISION OPERATION ORDER NO. 2 [1]

General Order

24 Dec. 1941.

2 S.A. Div. O. O. NO. 2

REF MAPS: RAS EL MENASTIR -- BARDIA -- BIR GHIRDA -- SALUM --	-----	[2] 1/50,000
SIDI OMAR -- SIDI SULEIMAN -- EL ARAQIB	-----	
SALUM -- TOBRUK	-----	1/250,000

INFORMATION.

1. *Enemy.* BARDIA is a well prepared and strongly defended locality, containing many strong pts with automatic weapons. It is surrounded by minefields and A/Tk defences. The defences of the area have been sited with particular regard to the nature of the ground. The perimeter is defined by deep wadis along the coast, and by wide wire fences and an A/Tk ditch on the land side where no natural obstacles exist. The posns are well concealed and dug in, and are probably prepared for all-round defence. At many pts outside the perimeter the enemy holds small M. G. posts. BARDIA is in the main

occupied by Italians with a stiffening of GERMAN Tps, principally M. Gs and Arty. The estimated order of battle is as follows:

Unit		Strength	Guns
GERMAN:	10 Oasis Coy	160	6-75 mm.
			3-37 mm.
			3-47 mm.
	200 Pioneer Eng Bn	500	
	Admin Ser (Plus ITALIAN)	500	
	Sec 20-mm A/A		4-20 mm.
	Tp 33 FLAK	100	3-88 mm.
	5 Tp Lt. FLAK	150	16-20 mm.
ITALIAN:	3 Bn 40 I. R. BOLOGNA	600	4-65 mm.
	2 Bn 15 I. R. SAVONA	600	4-65 mm.
	4 GENOA Cav GP	870	48 M. Gs.
	1 Coy 5 Lt. Tk Bn	40	13 Tanks
	175/27 GAT Arty Bty	150	8-75/27
	1 A/Tk Coy	100	8-47/32
	Hy Bty Coast Guns	100	4-105 mm.
	Ex SANTA MARIA Coln	120	8-77/28
	6 GAF Arty	120	8-65/17
	266 Close Sup 15 I. R.	70	7-65/17

The Arty strength may be underestimated owing to the large number of guns which were abandoned in the area during our previous withdrawal. These additional guns may now be manned by other arms.

BARDIA is now isolated, but sups and water are still fairly plentiful, and the morale of the tps is consequently good.

2. (a) *Own Tps.* Our forces are pressing WEST of DERNA and SOUTH of BENGHAZI, and in order to facilitate further operations, it is essential that L of C be cleared of enemy forces. 2 S. A. Div is holding the line MENASTIR--SIDI OMAR, with 6 S. A. Inf Bde, less 1 S. A. P. in area CAPUZZO, and 4 S. A. Inf Bde, less Karr R. from June of 6 S. A. Inf Bde area to top of escarpment SOUTH of HALFAYA. 2 S. A. Inf Bde holds the Sector below the escarpment from this pt to the coast.

(b) *Royal Navy.* It is contemplated that co-operation in reducing the fortress will be given by the Royal Navy.

(c) *Air.* TAC/R and Arty/R is being provided for the operation through 30 Corps. Bombing of enemy posns inside BARDIA perimeter is being arranged prior to ZERO.

(d) Further information, as it becomes available, will be issued in the form of summaries and tracings.

3. *Additional Tps.* The following additional tps have been placed under comd of 2 S. A. Div:

1 Army Tank Bde, less one Regt.
N. Z. Div Cav Regt.
234 Bty 64 Med Regt R. A.

67 Med Regt R. A.
68 Med Regt R. A.
two tps 41 Survey Regt R. A.

INTENTION.

4. 2 S. A. Div will attack and capture BARDIA.

METHOD.

5. A portion of 2 S. A. Div tps will contain enemy forces in area HALFAYA--SALUM and Pt 207, while the remainder of the Div, as set out below, will attack BARDIA.

6. *Phases.* The operation will be carried out in three phases:

(a) *Phase 1.* will consist of an entry of the enemy defences at two places, namely, (1) between Pts 51803887--51573903 and (2) between Pts 51973860--51843878.

The attack will be coordinated by comd 3 Inf Bde as detailed in Operation Instruction No. 21 (Appx 'A'). [3] The objective for phase 1 will be the gen line 52263920--51673947.

(b) *Phase 2.* will consist of an adv on the enemy area between the gen lines high ground pts 51673947--51123983 and SOUTH WESTERN perimeter with objective the line 51303970--51133973.

The adv will be carried out by one bn Army Tank Bde, 1 S. A. P. and Kaff R. The gen res will be used for this purpose with Kaff R. forming up to join the adv on starting line - - gen line of rd 51673947--51573903. This Phase will be coordinated by O. C. 1 S. A. P. as detailed in Operation Instruction No. 25 (Appx 'B'). [4]

(c) *Phase 3.* Mopping up of remainder of enemy posns by Inf as detailed in separate Operation Instruction.

7. *Groupings and Tasks in General.*

(a) 3 S. A. Inf Bde.

Comd. Brig. C. E. BORAIN, M. C., V. D.

Tps. 1 I.L.H.

1 R.L.I

1 KAFF R. (under comd from 1000 hrs 25 Dec. 41)

B & C Coys D. M. R.

2 S. A. Fd Coy less one sec. } Under comd from 1000 hrs 26 Dec.
One Sec 10 S. A. Fd Coy. }

One Pl 4 Bde Sig Coy.

5 Bde Sig Coy less one pl.

3 S. A. Bde 'Q' Services Coy.

Three dets 14 S. A. Fd Amb. (Under comd from D.-1)

with in support:

One Regt 1 Army Tank Bde.

Arty as arranged by C. R. A.

Task. To attack BARDIA through perimeter defences as described in Para 6 (a) and in Operation Instruction No. 21 (Appx 'A').

(b) *NORTHFORCE.*

Comd. Lt. Col. J. BUTLER-PORTER, V. D., 1 R. D. L. I.

Tps. 1 R. D. L. I.

Sec 2 S. A. Fd Coy. }
Pl 5 Bde Sig. Coy. } Under comd from 1000 hrs 26 Dec.
Det 16 Fd Amb. }

with in support:

N. Z. Div Cav Regt, less one sqn.

Tasks. To contain and demonstrate against enemy forces within the perimeter along the gen line of enemy defences from incl 51143960--incl 51554030, in accordance with Operation Instruction No. 22 (Appx 'C'). [5]

(c) *KINGFORCE.*

Comd. Lt. Col. W. KINGWELL, M. C., D. M. R.

Tps. D.M.R. less B. C. & D. Coys and one pl A. Coy.

Two Pls 7 S. A. Armd Recce Bn.

Det 4 S. A. Fd Coy (Under comd from 1000 hrs 26 Dec.).

with in support:

One Sqn N. Z. Div Car Regt.

Task. To contain and demonstrate against enemy forces along the gen line of the perimeter defences from incl 51973860--excl 51143960, in accordance with Operation Instruction No. 23 (Appx 'D'). [5]

(d) *SOUTHFORCE.*

Comd. Maj. P. J. JACOBS, 7 S. A. Armd Recce Bn.

Tps. 7 S. A. Armd Recce Bn, less one Coy and two pls.

Det 4 S. A. Fd Coy }
Det 14 S. A. Fd Amb. } (Under comd from 1000 hrs 26 Dec.)

Task. To contain and demonstrate against enemy forces along the gen line of perimeter defences from incl MARSA ER RAMLA 52423868-- excl 51973860, in accordance with Operation Instruction No. 24 (Appx. 'E'). [5]

(e) *RESERVES.*

Comd. Lt. Col. R. J. PALMER, 1 S. A. P.

Tps. One Regt 1 Army Tank Bde.

1 S.A.P.

Sec 4 S. A. Fd Coy.

Det 14 S. A. Fd. Amb.

will R/V by ZERO and remain in area to be selected by Comd, but not more than 5,000 yards from perimeter defences, and will be prepared to carry out Phase 2 in accordance with Operation Instruction No. 25 (Appx 'D') [6] on receipt of orders from the Div Comd.

8. *Arty Tasks.*

Arty tasks will be coordinated by C. R. A.

Instructions will be issued later.

9. *F. S. S.* Det F. S. S. as detailed will move to area of Res Tps on D-1, and will be prepared to move with occupying tps when directed to carry out security measures.

10. *Zero.* D.1 and ZERO hr will be communicated by sigs and/or L.Os under code-

word 'SMASH'.

ADMINISTRATION.

11. *Supplies* } Under Bde arrangements. C.Q.S.C. will arrange necessary redistribution of second
 P. O. L. } line to meet
 Water } above regrouping of units.

12. *Amn.*

Full first and second line W. E. T. for all units.

A. R. P. for Arty only at 501391.

Replenishment other than Arty direct from F. M. C. 51.

13. *Salvage.*

(a) All ranks will be warned against looting, any cases of which will be severely dealt with by units concerned.

(b) D. A. D. T. S. and G. S. O. 3 (W. T.), together with one sec 3 Fd Pro Coy under an offr to be detailed by A. P. M., will move to area res tps, and will be prepared to follow the attacking tps with det F. S. S., to take charge of all warlike stores in area occupied by our tps. Pro personnel will be used to gd all dumps or such stores until these duties can be taken over by Inf Units. Locations of dumps will be indicated to this H. Q. and to unit comds in the vicinity, who will be responsible for placing gds over them as soon as the tactical situation permits. Similar action will be taken by unit comds in respect of Supplies, P. O. L., Water, Ord., etc., dumps in their vicinity.

14. *P.O.W.*

(a) The P. O. W. cage (transit only) at 510376.

(b) Units will ensure that all empty vehicles returning from BARDIA towards SIDI OMAR pass along the barrel track [7] leading from CAPUZZO to Div P. O. W. cage, where they will report to O. C. Pro Sec for use in transporting prisoners to SIDI OMAR if necessary.

(c) P. O. W. escorts provided by units will be responsible for escort duties as far as cage at 51 F. M. C.

(d) C. Q. S. C. will arrange to hold 2,000 P. O. W. rations at BIR HAFID whence O. C. Pro Sec at Div cage will draw as required.

15. *Traffic control and stragglers.*

(a) T. C. Ps will be located at SIDI AZEIZ and at main rd junction BARDIA--CAPUZZO--SALUM.

(b) Det 3 Fd Pro Coy will patrol TRIGH CAPUZZO between T. C. Ps.

16. *Medical.*

(a) 16 S. A. Fd Amb will provide:

(i) M. D. S. at SIDI AZEIZ

(ii) A. D. S. in area 515382 on D.-1.

(iii) Det with 1 R. D. L. I.

(iv) Det with 3 Bde H. Q.

(v) Det to take over enemy hospitals in BARDIA

(Comd Maj WELSH).

(b) 14 S. A. Fd Amb will provide:

(i) A. D. S. at CAPUZZO

(ii) Car post for walking wounded at 516385.

(iii) Det with 1 R. L. I.

(iv) Det with 1 I. L. H.

(v) Det with Kaff. R.

(vi) Det with 1 S. A. P.

(vii) Det with 7 S. A. Armd Recce Bn.

These dets will include four amb cars each, and will also serve the tank sqns operating with the above bns. Det R/V at A. D. S. in area 517382 on D.-1.

(c) 7 S.A. C. C. S. is established in area SIDI AZEIZ.

(d) Enemy amb units and hospitals in BARDIA will NOT be interfered with in any way and the personnel will be allowed to carry on with the treatment of their own casualties.

(e) Enemy stores will not be disturbed, and if considered necessary will be placed under gd by nearest unit. Pro personnel referred to in Salvage para will assist where possible.

INTERCOMN.

17. *Battle H. Q.* opens at 50683875 at 1000 hrs on D.-1.

18. *Adv and Rear H. Q.* remain present locations.

19. *Sig layout.* As per diagram att. (Appx. 'G', 'H', 'J'). [8]

20. *Wireless Silence* will be observed until ZERO.

21. *Codes.*

(a) R/T code, Map Ref Code, Time and Map Adders will NOT be used after ZERO.

(b) Code names for formations and units as set forth in att list (Appx 'T'). [8]

22. *Synchronisation.* Watches will be synchronised with sigs at ZERO minus twelve hrs, and at ZERO minus six hrs.

23. ACK.

(Sgd) H.B. KLOPPER,
Colonel,
General Staff.

Issued through Sigs and L. Os.

Time of signature 2300 hrs.

[1] This order and the following orders are given as issued, and all British designations and terminology have been retained.

[2] Operation overlay projected on map No. 2.

[3] See appendix C, this bulletin.

[4] See appendix D, this bulletin.

[5] Not included in this bulletin.

[6] See appendix D of this bulletin.

[7] Observers report that empty gasoline containers or barrels are used to mark routes in the desert where no roads are

available, hence "barrel track."
[8] Not included in this bulletin.

Appendix C. 2D SOUTH AFRICAN DIVISION OPERATION INSTRUCTION NO. 21

APPX A'A'

24 Dec. 41.

2 S. A. Div. Operation Instruction No. 21
(Issued in conjunction with 2 S.A. Div. O. O. No. 2 dated 24 Dec. 41)

Map Ref: As per O. O. No. 2.

To: Brig. C. E. BORAIN, M. C., V. D., 3 S.A. INF BDE.

1. You will comd the force as detailed in para 7 (a) of O. O. No. 2.
2. One regt 1 Army Tk Bde will be in support.
3. You will be responsible for carrying out the operation described below on a date and at a time to be notified in accordance with para 10, O. O. No. 2.
4. During the night D-1/D1, you will detail two Inf Bns with Eng dets to prepare gaps in the wire and establish a bridgehead [1] between 51973860 and 51573903.
The making of the gaps will include cutting of wire, filling of tank ditch, and clearing minefields so as to allow free passage for "I" Tks.
You will ensure that this bridgehead is established, and the passages are prepared at least 30 mins before first Lt on D. 1.
5. At zero hr on D1, tks will move through the prepared gaps "one sqn" front:
 - (a) Right flank: 51973860 -- 51843878.
 - (b) Left flank: 51803887 -- 51573903.
6. The sqn of "I" Tks on the right will be followed by the Inf Bn forming the bridgehead on that flank, and will cooperate in mopping up the area covered.
7. The "I" Tks on the left will NOT be followed by Inf, but will move into the direction of the general objective and then work round to the right so as to eventually meet the force that has moved in from the right flank.
8. When the "I" Tks on the left have passed through, the bn holding the bridgehead on that flank will move fwd to the general objective preceded by a det of "I" Tks.
9. The Kaff. R. will be brought into a convenient area before ZERO, and will move in immediately after the left flank bn has advanced from bridgehead posn so as to establish a flank facing WEST, to link up with the adv of the left flank bn. The Kaff R. will be supported in this task by three typs 2 A/Tk Regt and two pls D. M. R.
10. On conclusion of the mopping up of the area covered by the tks, the Inf will establish a line as follows: 52263920 along high ground to pt 51673947, thence to 51573903.
11. On conclusion of phase 1, tks will rally at pt selected by the Tk Comdr, and will become counter-attack reserves.
12. Arty support is being arranged in accordance with special Arty instructions, aim it

is essential that you prepare, in consultation with Brig. WATKINS and C. R. A. detailed plans regarding timing and planning of preparation fire, barrage and subsequent targets.

13. If the original objective is not reached at the end of the day's operations, you will consolidate and hold the line reached by your tps.

14. Kaff R. will be so disposed at the conclusion of Phase 1, that it can join the adv of tks in phase 2.

15. You will ensure that captured dumps and equipment are secured immediately, and that no tampering with such dumps or equipment takes place.

16. THE UTMOST SPEED IS TO BE AIMED AT IN PRESSING HOME THE ATTACK.

17. You will keep this H. Q. continuously informed as to the progress of the adv.

18. Ack.

(Sgd) I. P. DE VILLIERS,
Major-General,
G. O. C. 2 S.A. Div. (U. D. F.).

Time of signature 2305 hrs.

Issued through Sigs and L. Os.

Distribution: As shown in O. O. No. 2.

[1] In desert operations, the establishment of a salient, particularly when gaps are blown in wire, and tank ditches and traps are neutralized, is called "establishing a bridgehead."

Appendix D. 2D SOUTH AFRICAN DIVISION OPERATION INSTRUCTION NO. 25

24 Dec. 1941

APPXB

Special Instructions to

Reserve and Phase 2 Tps.

2 S. A. Div. Operation Instruction No. 25
(Issued in conjunction with 2 S. A. Div. O. O. No. 2 dated 24 Dec. 41)

Ref Map: As per O. O.

To: Lt. Col. R. J. PALMER - 1 S. A. P.

1. You will remain in general reserve until phase 2 is to be carried out.

2. You will commence with phase 2 as detailed in O. O. No. 2 on receipt of instructions from this H. Q.

3. The adv on the enemy posns as detailed in O. O. No. 2 -- phase 2 -- will be carried out on a two sqn/bn front; 1 S. A. P. and Kaff R. each following a sqn of "I" Tks in the adv.

4. You will establish a line on the high ground 51673947--51303970--51133973, and establish contact with I. L. H. on your right flank.

5. On reaching the objective, tks will rally at a pt previously selected by the Tk Comdr and remain as counterattack reserve.

6. With a view to continuity of operations, you will be prepared to carry out this operation by night.

7. You will ensure that posns taken are immediately consolidated against counter-attack.

8. You will keep this H. Q. continuously informed as to the progress of the adv.

9. Ack.

(sgd) I. P. DE VILLIERS.

Major-General,

G. O. C. 2 S.A. Div. (U. D. F.).

Time of signature 0730/25 hrs.

Issued through Sigs and L. Os.

DISTRIBUTION: As per O. O.

Appendix E. ARTILLERY PROGRAM

ARTILLERY			INFANTRY & ROYAL ENGINEERS			
Times	Targets		Times	Action		
-135 -125 -120 -110 -105 -100	}	On Wire -----	{	say	}	Approach march down to road // wire.
-200						
to						
-105						
-100 to -70	}	Lift onto 1st Objective (road inside wire).	{	-105 to -90	}	Sorting out parties and stores ready for wire cutting.
				-90 to -75		}
				-75 to -70	}	
-70 ZERO -20	}	Further lift onto known strong positions. Also after Zero, Smoke.	{	-70 to ZERO	}	Ditch prepared for Tanks. Mines removed for 100 yards inside wire.

			ZERO	Tanks arrive at ditch.
--	--	--	------	------------------------

Appendix F. 2D SOUTH AFRICAN DIVISION OPERATION ORDER NO. 3

1 Jan. 42

2 S. A. Div. O. O. No. 3
 Ref Maps: RAS EL MENASTIR--BARDIA----- 1/50,000
 (overprints)

INFORMATION.

1. *Enemy.* Is in occupation of BARDIA Defences, less the Sector taken by us in Phase 1. Our tps have consolidated on gen line as shown on trace (Appx. 'A'). [1]
 With the addition of 2 Bn 16 I. R. SAVONA and some arty, enemy O. of B. is approx as in 2 S. A. Div. O. O. No. 2 dated 24 Dec. 41, less some 1,000 P. Ws.

INTENTION.

2. 2 S. A. Div. will adv to, occupy, and hold, gen line 52253920-51903930-51843935-51733938-51643946-- 51403945 -51303935--51213930. (See trace att--Appx. 'A.') [1]

METHOD.

3. (a) *Right. 3 S. A. Inf Bde.*

Comd: Brig. C. E. BORAIN, M. G., V. D.

Tps: 1 ILH

1 R. D. L. I.

Composite Coy 7 S. Armd Recce Bn.

'B' Coy D. M. R.

In support: 1 Sqn 'T' Tanks, less two tps.

(b) *Left 4 S. A. Inf. Bde.*

Comd: Brig. A. A. HAYTON, V. D.

Tps: Kaff. R.

1 R. L. I.

1 S. A. P.

'C' Coy D. M. R.

In support:

44 R. T. R.

Sqn 'T' Tanks, less two tps.

4. *Start Line.*

5. *Inter-Bde Boundary.*

6. *Start Time.* See Trace (Appx. 'A'). [2] (Under code-word "GREETINGS")

7. *Final Objective.*

8. *Arty Tasks:* Will be coordinated by C. R. A., and will be issued as an Appx. to this O. O. [3]

ADMINISTRATION.

9. *Sup. P. O. L., Water and Amn:* As per 2 S. A. Div. O. O. No. 2.

10. *P. O. W. D. A. A. G.* will establish adv collecting post SOUTH of No. 5 Gap 516389, where, as far as possible, Unit escort will be relieved and returned to Units, Capt. LEECH and 40 T. C. of 5/6 Res M. T. Coy at present att KAFF. R. Come under comd D. A. A. G. 1800 hrs 1 Jan. at collecting post for conveyance of P. W.s to Div. Cage 510376.

11. *Traffic.* A. P. M. will detail necessary Pro. personnel to control traffic through No. 2 Gap as from 1700 hrs 1 Jan., and thereafter through No. 5 and subsequent Gaps when created.

12. *Straggler's Post.* SOUTH of No. 5 Gap 516389.

13. *Medical.* Under A. D. M. S. arrangements.

INTERCOMN.

(a) Battle H. Q. remains present location.

(b) Codes will NOT be used.

(c) Code Names as at present.

(d) L/T and W/T to all Gps.

15. *Synchronisation.* Watches will be synchronised with Sigs at Zero minus three hrs.

16. *Ack.*

(sgd.) H. B. KLOPPER, Col.,
General Staff.

Time of Signature 1640 hrs.

Issued through Sigs and L. Os.

DISTRIBUTION: (As per 2 S. A. Div. O. O. No. 2).

Copy/DVM.

[1] Map No. 4.

[2] Map No. 4.

[3] Not included in this bulletin.