

Breakthrough: Cambrai





BREAKTHROUGH: CAMBRAI

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18.0 THE SCENARIOS

Up to this point the game has been presented so as to create the most competitive format possible. Those wishing to play a shorter game or wishing to continue play beyond the November 26th victory check may agree beforehand to play one of the following scenarios.

Note: Units whose names are in red begin that scenario exhausted.



18.1 "To the Green Fields Beyond" — the British Attack

Set up: Setup is the same as found in the rulesbook at 3.1, 3.2, and 3.3.

Duration: Play begins on the November 20 turn and ends after the November 23 turn.

Advantage: The advantage is with the British player.

Victory Conditions: The British player wins by achieving a *Breakthrough* (see 13.1.1) or having 21 or more victory points at the end of the November 23 turn.

18.2 High Water Mark

Set Up: Each player places his initial units as indicated:

British

IV Corps

- Area 1: 56th Division (all units); 36/108
- Area 3: 36/107; 36/109
- Area 7: 62nd Division (all units); Tank "G" [4-2-5]
- Area 13: 51/152; 51/153; Tank "D" [4-2-5]
- Area 14: 51/154; Tank "E" [4-2-5]
- Zone J: 1/1; 1/9

III Corps

- Area 17: 6/71; 1/2
- Area 18: 6/16; 6/18; Tank "B" [6-3-5] and "H" [4-2-5]

- Area 19: 29/87; 29/88
- Area 20: 20th Division (all units); Tank "I" [4-2-5]
- Area 21: 29/86
- Zone H: 12th Division (all units); Tank "F" [4-2-5]
- Zone I: 2nd Cavalry (all units); 5th Cavalry (all units)

Control Markers: Areas 2, 3, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, Zones H, I, J, K, L

British Victory Points: 20

Artillery Markers: 12

Ammunition Points: 0

German

Arras Group

- Zone A: Garrison "I"
- Area 1: 20th Division (all units); Garrison "A"
- Area 4: 20L/386; Garrison "B"
- Area 5: 214/58; 214/368; Garrison "C"
- Area 6: 214/50; Garrison "D"

Caudry Group

- Area 15: 107/52; Garrison "E"
- Area 22: 107/227; Garrison "F"
- Area 23: 107/232; Garrison "G"
- Area 24: Garrison "H"
- Zone F: 30th Division (all units)
- Zone G: **9R Division** (all units); Garrison "J"

Artillery Markers: 6

Ammunition Points: 0

The following German units are eliminated at the start of the game:

20L/384; 20L/387; 54/27; 54/84; 54/90.

Advantage: The advantage is with the British player.

Duration: Play begins on the November 22 turn and ends after the November 26 turn.

Note: Two German divisions will be set up in the first Dawn Phase.

Special Rules: Both British Hurricane Barrage markers are *used* side up at the start of the scenario; the German player receives one (fresh) marker in the first Reinforcement Phase. His other marker is *used* side up.



Place a destroyed bridge marker on the bridge between area 20 and 21.

There are *no* Haig Decision die rolls in this scenario.

Victory Conditions: The British player wins by achieving a *Breakthrough* (see 13.1.1) or having 20 or more victory points at the end of the November 26 turn.

18.3 Prince Rupprecht's Revenge — The German Counter-Attack

Setup: Each player places his initial units as indicated:

British

IV Corps

Area 1: 56th Division (all units)
 Area 3: 2nd Division (all units)
 Area 6: 47/140; 47/141
 Area 7: 59/176
 Area 8: 47/142
 Area 10: 59/178
 Area 11: 59/177

III Corps

Area 19: 6th Division (all units)
 Area 20: 29/87; 29/88
 Area 21: 29/86
 Zone H: 12th Division (all units); 20th Division (all units)
 Zone I: AEF/11
 Zone J: Tank "F" [4-2-5]
 Zone K: 62nd Division (all units)
 Zone L: 51st Division (all units)

Control Markers: Areas 2, 3, 6, 7, 8, 9, 10, 11, 12, 18, 19, 20, 21, Zones H, I, J, K, L

British Victory Points: 18

Artillery Markers: 6

Ammunition Points: 0

German

Arras Group

Area 1: 49R Division (all units); 20th Division (all units); Garrison "A"
 Area 4: 21R Division (all units); 214th Division (all units); Garrison "B"
 Area 5: 221st Division (all units); Garrison "C"
 Area 14: 3G Division (all units); Garrison "D"
 Area 16: 119th Division (all units); Garrison "E"

Caudry Group

Area 22: 107th Division (all units); Garrison "F"
 Zone F: 30th Division (all units); 9R Division (all units)
 Zone G: 220th Division (all units); 28th Division (all units); Garrison "G"

Artillery Markers: 12

Ammunition Points: 5

Advantage: The advantage is with the German player.

Duration: Play begins on the November 30 turn and ends after the December 3 turn.

Special Rules: The German player starts with Impulse "0". Here he conducts a Hurricane Barrage against Areas 3, 6, 20, 21, and Zone H. These are resolved normally (see 9.2) and then both German Hurricane Barrage markers are flipped to their *used* sides. The British player has no fresh Hurricane Barrage marker available.

Any German assault receives an *additional +2* to the AV during the November 30 turn.

Any German assault receives an *additional +1* to the AV during the December 1 turn.

The German player receives a +3 modifier to his Ammunition die roll on the November 30 and December 1 turns.

There are *no* Haig Decision die rolls in this scenario.

Place a destroyed bridge marker on the bridge between area 20 and 21.

Victory Conditions: The German player wins if the British player has 12 or less VPs at the end of the December 3 turn.

18.4 "Operation 'GY'" — The Cambrai Campaign

Set up: Setup is the same as found in the rulesbook at 3.1, 3.2, and 3.3.

Advantage: The advantage is with the British player.

Duration: Play begins on the November 20 turn and ends after the December 3 turn.

Special Rule: Beginning November 26 exhausted tank units do not make a Tank refit die roll and are removed from play during the night phase.

Victory Check: The British victory point total is checked at the end of the November 26 turn. If they have < 15 victory points, they lose. If they have 21 > victory points, they win. If they have between 16 and 20 points play continues to the next game turn. Continue to make this victory point



check every end phase until the December 3 turn. If it is the December 3 turn, the game is over. The British player wins by having 15 or more victory points at the end of the December 3 game turn.

19.0 EXAMPLES OF PLAY

19.1 Assault Impulse

The weather is overcast. The British player wishes to capture Bourlon Wood. He chooses Anneux (area 7) as his active area and announces he will be conducting an assault impulse.

Step 1: Artillery Barrage

The British player has a fresh Hurricane Barrage marker available and announces he will begin his impulse with a Hurricane Barrage attack. Bourlon Wood is declared the target area by the British player and he chooses the German 30/99 unit as the primary target. The AV of the Hurricane Barrage will be 9 [7 (attack factor of the Hurricane Barrage marker) +2 (more than 3 enemy units in the target area) = 9] while the Area defends with a DV of 6 [4 (TEM of Bourlon

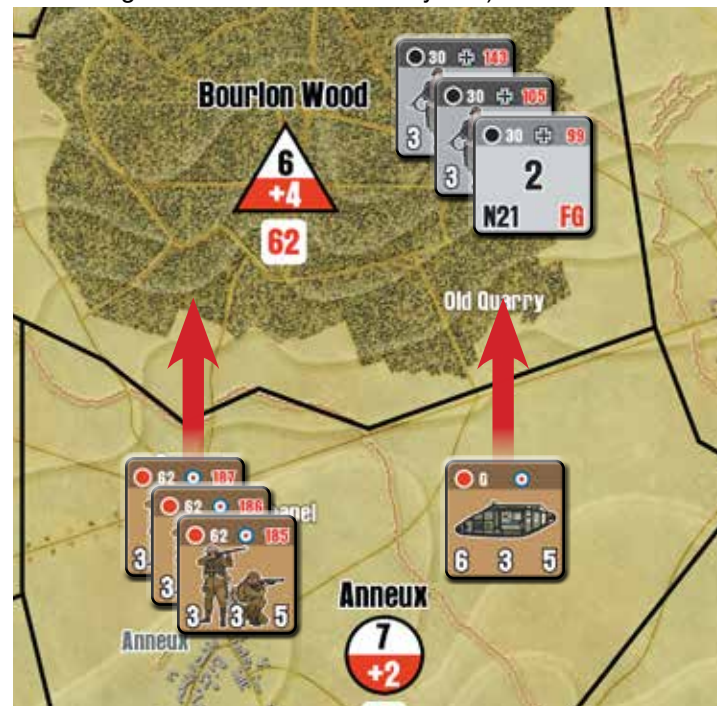
Wood) +2 (overcast weather) = 6]. The possible results of the Barrage depend on the difference between the attack total (AV + dr) and the defense total (DV + dr). If the German dr beats the Allied dr by at least 3, there are no Barrage CPs resulting from this Hurricane Barrage and the 30/99 and the rest of the German units in Bourlon Wood will be unaffected.

The Allied dr is a 5; the German dr is a 3. This creates an attack total of 14 and a defense total of 9. The difference between the two totals yields five CPs. The 30/99, as the primary target, must absorb the first CPs, so it is flipped to its exhausted side for 2 CPs. The remaining three CPs could be absorbed in different ways. For example the 30/105 and 30/143 could both flip to their exhausted side for 2 CPs each. However, the German player elects to eliminate his Garrison unit for 4 CPs.

Having resolved his Hurricane Barrage, the British player removes the Hurricane Barrage marker from the target area and returns it to its holding box on the map, used side up. He may now place Rolling Barrage and/or Direct Support artillery markers prior to moving and resolving combat. He currently has ten such markers at his disposal. Because there are three infantry units in the active area he may place up to three such markers before movement. He decides not to place any Rolling Barrage markers since all his units have enough Movement Factors to enter Bourlon Wood without the aid of a Rolling Barrage. He could place up to three Direct Support markers and decides to do so.

Step 2: Movement

The British player sends all four units (the tank unit is the "point unit") in Anneux to attack the German units remaining in Bourlon Wood after his Hurricane Barrage. The cost to enter Bourlon Wood is 4 MF (friendly units entering an area containing at least one fresh enemy unit).





Step 3: Combat

Since Bourlon Wood (area 6) was uncontested at the start of the impulse any British units entering the area will be making a mandatory assault. The AV is 12 [6 (attack factor of the point unit, Tank Battalion "G") +3 (three additional assaulting units) +3 (three Direct Support markers) = 12]. The German DV is 9 [4 (defense factor of the forward unit, 30/105) + 1 (one additional fresh defending unit) +4 (TEM of Bourlon Wood) = 9]. The possible results of the assault depend on the difference between the attack total (AV + DR) and the defense total (DV + DR). If the German defense total is greater than the British attack total, all four attacking units must retreat to Anneux and are flipped to their exhausted sides. The defenders will not have to absorb any assault CPs, but will still have the option to either retreat or remain in Bourlon Wood.

If the attack total and defense total are tied both the point unit and the forward unit must flip to their exhausted sides and the attacking units have the option of remaining in Bourlon Wood or retreating.

If the British attack total is greater than the German defense total the point unit will be exhausted and the German units will have to absorb the appropriate number of CPs with the forward unit always absorbing the first CP.

The Allied DR is a 6; the German DR is a 9. This creates an attack total of 18 and a defense total of 18. The result is a stalemate. Both the British Tank battalion "G" and the German Regiment 30/105 are exhausted. The British player opts to keep his units in Bourlon Wood rather than retreating back to Anneux.

19.2 Assault with Overrun

The weather is clear. The British player wishes to capture Fontaine-Notre-Dame (area 14). He chooses Cantaing (area 13) as his active area and announces he will be conducting an assault impulse.

Step 1: Artillery Barrage

The British player decides not to make a Hurricane Barrage attack. He may now place Rolling Barrage and/or Direct Support artillery markers prior to moving and resolving combat. He currently has five such markers at his disposal. Because there are three infantry units in the active area he may place up to three such markers before movement. He decides to place a Rolling Barrage marker into Fontaine-Notre-Dame. He could place up to two Direct Support markers but he decides to place only one. Since the weather is clear the British Air Support marker is available. The British player decides to place it in the area he intends to assault as well.



Step 2: Movement

The British player sends all four units in Cantaing to attack the German unit in Fontaine-Notre-Dame. The cost to enter Fontaine-Notre-Dame is 2 MF [4 (friendly units entering an Area containing at least one Fresh enemy unit) – 2 (Rolling Barrage marker) = 2].

Step 3: Combat

Since Fontaine-Notre-Dame was uncontested at the start of the impulse any British units entering it will be making a mandatory assault.

The AV is 9 [4 (attack factor of the point unit, Tank Battalion "D") +3 (three additional assaulting units) +1 (one Direct Support artillery marker) +1 (Air Support marker) = 9]. The German DV is 5 [3 (defense factor of the forward unit 107/227) +2 (TEM of Bourlon Wood) = 5]. The British DR is a 7; the German DR is a 5. This creates an attack total of 16 and a defense total of 10. The AT > DT so the result is a success. Because the British point unit was a Tank there is the potential the success will be an overrun if the German defense cannot absorb all the CPs. The attack total was six more than the defense total so the defense must absorb 6 casualty points to avoid an overrun. The 107/227 is eliminated for 3 CP. There are no more German units remaining in Fontaine-Notre-Dame to absorb the other 3



CP; a British control marker is placed in Fontaine-Notre-Dame and the assault is an overrun.

Because of the overrun the point unit is not immediately exhausted (although it will be once the impulse is over). The British impulse continues, with Fontaine-Notre-Dame being treated as the new active area. The British player has the same options as before. He elects not to conduct a Hurricane Barrage. He then places a Rolling Barrage marker into Neuville (area 15) because he wishes to assault that area before the German player can reinforce it.

Each of the four British units in Fontaine-Notre-Dame expended 2 MF during the Impulse's first assault, leaving each of them with 3 MF. The British player leaves the 51/152 in Fontaine-Notre-Dame. The 51/153 expends 2 MF to move to La Folie Wood (area 16). A British control marker is placed in La Folie Wood. The 51/153 could remain in La Folie Wood or spend its last MF and move again (including the option to return to Fontaine-Notre-Dame). The British player elects to keep the 51/153 in La Folie Wood. Tank Battalion "D" and the 51/154 use 2 MF to assault the German unit in Neuville.



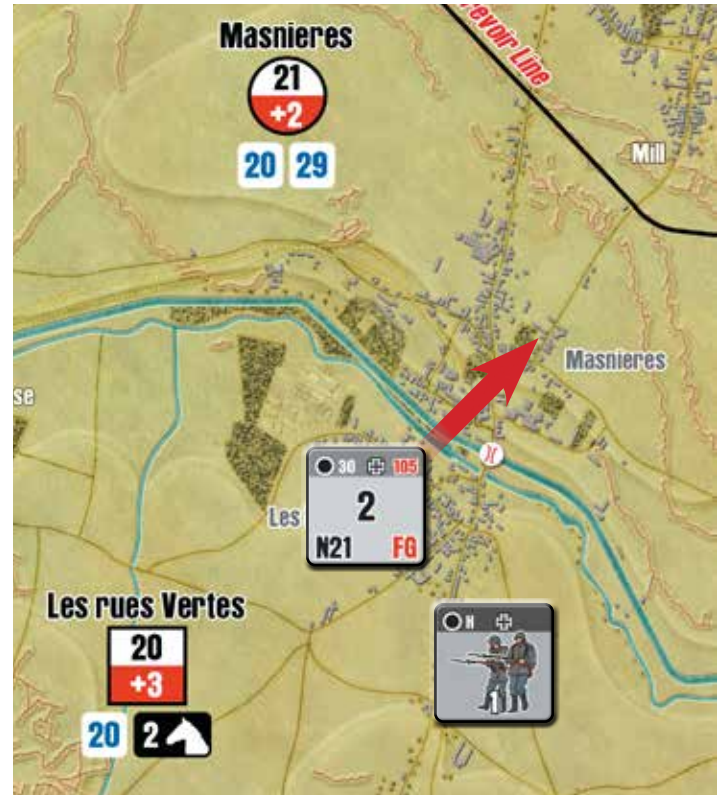
The AV is a 5 [4 (attack factor of the point unit, Tank Battalion "D") + 1 (one additional supporting unit) = 5]. The DV is a 5 [3 (defense factor of the forward unit) + 2 (TEM of Neuville) = 5]. The British DR is an 8; the German DR is a 9. This creates an attack total of 13 and a defense total of 14. The AT < DT so the result is a repulse. Both British units are exhausted and, because they were making a mandatory assault, they must retreat back to Fontaine-Notre-Dame. The British impulse is over.

Note: If the British player possessed the advantage he could spend it to turn the repulse into a stalemate.

19.3 Regroup Impulse

It is the German player's impulse. He decides to redeploy the exhausted 30/105 in les Rues Vertes (area 20) behind the Canal de St. Quentin. He activates les Rues Vertes, declares a regroup impulse and moves the exhausted unit to Masnieres (area 21).

Note that Garrison unit "H" is not eligible to regroup because it does not have a Movement Factor.



19.4 Night Phase

It is the British part of the Night Phase during the November 23 turn.

Both Ammunition Point markers are in the "0" space of the general records track. Each Night Phase consists of the following steps: Hurricane Barrage Refit, Artillery Refit, Tank Refit, and Infantry Refit. The British player may also dismount cavalry.

This example will cover only Orival Wood (area 12).

Step 1: Hurricane Barrage Refit

Both of the British player's Hurricane Barrage markers are currently *used* side up in their holding boxes on the map. The British player makes a dr for each marker to see if the marker will flip to its fresh side and be available during the next game turn. He rolls a "2" and a "5". Since it is the



November 23 turn his Hurricane Barrage markers must roll ≥ 4 to refit. The “I” marker fails to refit and remains *used* side up. The “II” marker successfully refits and is flipped fresh side up.

Step 2: Artillery Refit

The British player makes a dr to determine how many Ammunition points he will receive. He rolls a “5”. He marks the five points on the general records track by moving his Ammunition Point x1 marker from the “0” space to the “5” space.

The British player now purchases artillery markers with his ammunition points. He spends all five to purchase five Artillery markers for the next turn. He places five Rolling Barrage/Direct Support markers in front of himself from the pool of 12 markers available to him. The Ammunition Point x1 marker is moved from the “5” space on the general records track to the “0” space.



Step 3: Tank Refit

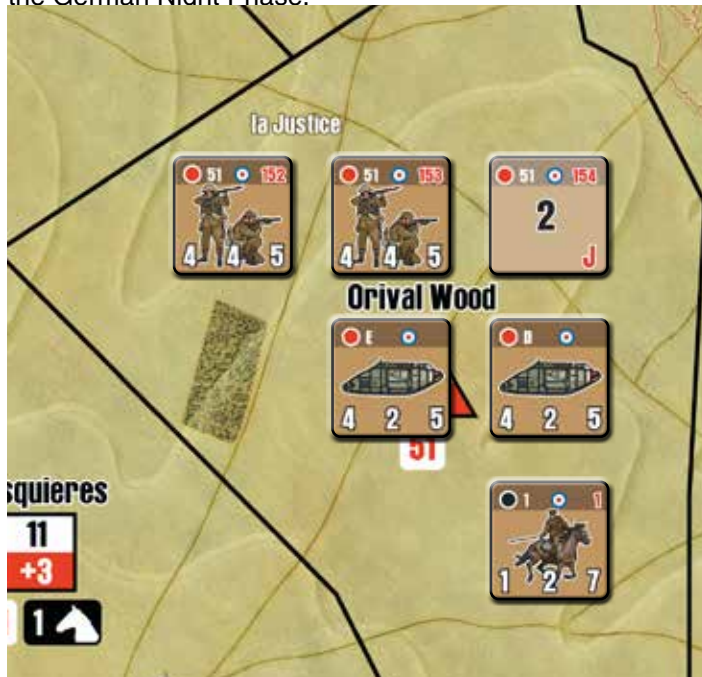
The British player must make a Tank Refit dr for both of his exhausted Tank units. Battalion “D” is an exhausted reduced Tank (4-2-5) and Battalion “E” is an exhausted full-strength Tank (6-3-5). His dr for battalion “D” is a “1”. This is \geq its defense value so the exhausted counter is flipped to its fresh side. His dr for battalion “E” is a “5”. This is $>$ the defense value so the counter currently on the map is removed from play and replaced with a fresh reduced value battalion “E” counter.

Step 4/5: Infantry Refit/Dismounted Cavalry

The exhausted Infantry units in Orival Wood are not eligible to refit “for free”. The British player does have cavalry though, so he may at his option refit them by dismounting his cavalry. He announces that the exhausted 1/2 Cavalry

unit will be dismounted so as to allow the 51/153 to refit. The 1/2 is eliminated and the 51/153 is flipped from its exhausted to its fresh side. The fresh 1/1 Cavalry unit could also be eliminated to refit the 51/154 but the British player decides not to do this.

The British Night Phase is now over and play proceeds to the German Night Phase.



Note: the German Night Phase does not include Tank Refit because the Germans do not have any Tank units. Similarly the German player has no cavalry units so he does not have the option of using dismounted cavalry to refit any of his infantry.

Once the German player has completed his part the Night Phase is over and play proceeds to the November 23 End Phase.

19.5 End Phase

Step 1: Breakthrough Check

The map is checked to determine if the British have achieved a *breakthrough* and won an automatic victory. He must have a fresh *cavalry* unit in one of the following: Palluel (zone B); Pailencourt (zone C); Iwuy; (zone D) or Carnieres (zone E). Since he does not, he has not won an automatic victory.

Step 2: Haig Decision Check

It is the November 23 turn so the British player must check to see if the Cambrai offensive is shut down by the British Army Commander-in-Chief Haig. He must make a dr ≥ 7 for the game to continue. The dr is modified based on his units contesting/controlling certain areas on the map. The total modifier will be +5 [+1 (contesting Moeuvres) +2 (control of Bourlon Wood) +2 (control of Masnieres) = 5]. He rolls a “1”.



The game would be over and a victory check would be made next, but the British player does not have 20 victory points and knows ending the game now will result in a loss. Fortunately he possesses the advantage and uses it to change Haig's mind. The advantage marker is flipped German side face-up and play proceeds to the November 24 turn. Note that had the British player rolled any result other than a "1" play would have proceeded to the next turn without his needing to spend the advantage.

20.0 DESIGNER'S NOTES

Introduction

When it was published in 1991 *Breakout: Normandy* represented a substantial improvement over earlier, similar, titles published by The Avalon Hill Game Company, namely *Storm Over Arnhem*, *Thunder at Cassino*, and *Turning Point: Stalingrad*. The most important characteristics shared by each of these games were a map divided into areas and a turn system based on impulses. A player could make one move each impulse and then his opponent would have the same opportunity. This created a highly interactive and tense gaming atmosphere that many players praise as one of the enduring attractions of the system. In an industry where games frequently disappear from view only a year or two after their release to the public *Breakout: Normandy* remains popular with experienced gamers and continues to attract new players.

Having taken the area-impulse system to another level *Breakout: Normandy* famously asked the question "Dare we claim to have perfected the system?" For over fifteen years a strong case could be made for the answer being yes. Designs released by other game publishers, such as *Bloodiest Day – The Battle of Antietam* (1995), *Royal Tank Corps: The Battle of Cambrai* (2000) and my own *Monty's Gamble: Market-Garden* (2003), were each interpretations and extensions of the *Breakout: Normandy* system. They did not raise the bar so much as they were exercises, more or less successful, in jumping over the same bar.

Breakthrough: Cambrai makes no grandiose claims to perfection but I do believe it represents the next step upward in the evolutionary ladder of the area-impulse system.

The Map

Cambrai is most famous for being the first battle in history featuring the *mass deployment* of tanks. The machines of the Tank Corps were organized in three brigades totaling nine battalions and distributed among two British Corps: the III and the IV. That being the case the mapsheet primarily depicts the region of France where the Tank Corps, in conjunction with these two corps, went into action.

The historical campaign included other British Corps, most importantly the VI Corps operating to the north of IV Corps and the VII Corps operating to the south of III Corps. These corps were not equipped with tanks and each played only a minor role in the British offensive. Their role was confined to "distracting the enemy's attention and weakening his power of resistance" (*History of the Great War*, p. 306). Crown Prince Rupprecht, commander of *Heeresgruppe Kronprinz Rupprecht von Bayern*, attached no special importance to these operations.

Surprisingly these actions on the flanks of the main offensive have received equal billing in other games depicting the Cambrai campaign. Including them requires a noticeably larger map scale and, arguably, destroys much of the "illusion of movement" that even a World War One game ought to possess. It also provides the opportunity for the British player to disregard the parameters of the historical plan. For these reasons the actions on the flanks of the advance by III and IV corps are not depicted in *Breakthrough: Cambrai*.

The most important features of the Cambrai battlefield opposite the British III and IV Corps were the heavily fortified German defenses, various woods and elevated ridges (most notably Bourlon Wood and the Flesquieres ridge), two canals and, of course, the town of Cambrai. Many of the areas on the map are centered around one of these features or one of the small villages or hamlets that were important intermediate objectives of the campaign.

The best defensive terrain was the German fortifications and trenches known as the *Siegfried Stellung* and referred to by the Allies as the Hindenburg Line. The Hindenburg Line was not one but a series of defensive positions: a main line; a support line immediately behind the main line; and several more lines still further to the rear, much of which ran along the length of the St. Quentin Canal. The first two lines of fortifications receive a +4 and +3 terrain effects modifier, respectively, and possess the ability to absorb the first casualty point in both a bombardment or an assault. Areas comprising the rear lines rate a +2 TEM but that increases to +4 if the attacker crosses the St. Quentin Canal. Areas dominated by woods and/or an elevated ridge line rate a +3 TEM as well as a prohibition against overruns. Other areas with a TEM of +2 or +1 represent the "green fields beyond" that were the ultimate goal of the Cambrai offensive.

There are two types of area boundaries: clear and canal. The thick belts of barbed wire, trenches, concrete emplacements, and other aspects of the Hindenburg Line are represented within the TEM because these defenses existed in great depth throughout the particular area, not just on its outer perimeter. The advance of III and IV Corps was funneled by the presence of the two canals depicted on the map, the Canal du Nord on the west half and the St. Quentin Canal on the east half. These canals had steep banks that made crossing difficult and hazardous for infantry, and impossible for tanks unless there was a suitable bridge. The Canal du Nord had no water in it at the time of the battle but was otherwise complete and a formidable obstacle so for game purposes it is treated the same as the St. Quentin Canal.

The Armies

Both sides had worn themselves out fighting the battle of Third Ypres during the summer and early fall of 1917. The Germans considered Cambrai a "quiet sector" where badly battered units could be sent to recover. Only four divisions of General von der Marwitz's *Zweite Armee* guarded the Cambrai sector on November 20, 1917 (20th, 20th Landwehr, 54th and 9th Reserve). The two directly opposite the Tank Corps' line of advance were the 20th Landwehr, a second line formation, and the 54th, a battle-hardened unit that had suffered heavy losses and been withdrawn from Ypres in August. The Bolshevik Revolution had recently knocked Russia out of the war, releasing German divisions



for other theaters. The 107th Division had just arrived from the Eastern front and was intended to replace the 20th Landwehr Division in the Hindenburg Line on November 25th. Additional German divisions from Russia and other sectors of the Western front would arrive during the course of the battle.

The British 3rd Army under Sir Julian Byng had gathered eight infantry divisions (6th, 12th, 20th, 29th, 36th, 51st, 56th, and 62nd), four cavalry divisions (1st, 2nd, 4th and 5th), three tank brigades and over a thousand artillery pieces for the initial attack, along with immense amounts of supplies that included a million artillery shells. In addition to the heavy losses suffered battering themselves against the Hindenburg Line at Ypres the British were now faced with a crisis in Italy. German backed Austrian forces had smashed the Italians at Caporetto in late October and for a brief time in early November appeared on the verge of knocking Italy out of the war. If the situation in Italy continued to worsen the attack against Cambrai might have to be terminated on short notice. The weather was also in decline and the approaching winter would soon shut down large scale operations for months.

Intelligence

The Germans had an idea that something was up before the British attack began. On the night of November 18th a raid on British lines yielded six prisoners from the 36th Division who, when questioned, gave information indicating an attack that included tanks was scheduled to be launched against Havrincourt on the 20th. Other forms of intelligence pointed to, at the very least, a large-scale raid. When the British were observed cutting their own wire just before dawn on November 20th German artillery bombarded their line for about half an hour. Several battalions had been put on alert by their local commanders.

But the Germans were overcome by confidence in the great depth of their defenses at Cambrai, and by the expectation that any major British offensive would be preceded by the usual First World War practice of an artillery barrage of days or even weeks duration. Nor had they appreciated the extent to which the British had built up their forces. The weather had been poor and no air reconnaissance had been carried out for ten days prior to November 20th. By moving at night, making extensive use of camouflage, and moving into position at the very last minute the British had largely succeeded in bringing units and supplies to the Cambrai front undetected. When the Tank Corps emerged out of the autumn mist that first morning, they had achieved operational surprise. This surprise is represented with a few special rules in the game.

Later in the campaign the British themselves were aware of German divisions massing to the north and south of the shoulders of the wedge they had driven into the German position. Despite this, no coordinated preparations were made. Their lines were not adjusted, few reserves were in readiness, and the Tank Corps was in the process of withdrawing for refit in its winter quarters. The British were surprised in turn when the German attack was not preceded by a long artillery barrage and some German troops infiltrated the British lines. This surprise is represented with a few special rules in the “Prince Rupprecht’s Revenge” scenario.

Artillery

There can be no arguing the centrality of artillery on the WWI battlefield. At the same time, previous games published on the subject of Cambrai featured maps dense with artillery counters and rulebooks heavy with artillery combat and supply rules. I wanted to avoid a repetition of this in *Breakthrough: Cambrai*. Simply put, artillery units support other forces in ground combat and were – except for the occasional unpleasant surprise – well to the rear when British and German forces engaged each other. Players, moreover, derive the most enjoyment commanding an army in its totality, or the forces at the spearhead of an advance, not managing supporting arms or an army’s logistical tail. I wanted to retain the importance of artillery, and the atmosphere artillery imparted to the WWI battlefield, while leaving it for the greater part in the background and letting players concentrate on directing and setting objectives for their front line troops. Hence the genesis of the artillery rules in the game.

Artillery during the First World War could be called upon to perform a complex variety of barrages: hurricane, interdiction, direct support, box, rolling, drumfire, and SOS. To require the player to directly handle all of these missions, or to have an entire phase devoted to resolving them, was undesirable on several counts. First, a separate phase would increase the time it took to play what was intended to be a fairly short game. Second, a separate phase where both players plotted and carried out artillery missions would diminish the environment of the rapid back and forth play that is a hallmark of the impulse system. Third, a large number of artillery missions would introduce too high a degree of tactical decision-making into what is really an operational level design. Fourth, the map would become more and more cluttered with markers tracking these many missions as well as the supply state of each artillery unit.

The solution was not however to simply copy the format of separate bombardment impulses that are found in several area-impulse system titles. Separating the preparatory artillery bombardment from ground assault has worked in a World War Two setting but I felt it was not right for World War One. What was the point of a rolling barrage, for example, if the other player could react to it before he was attacked? Some kind of innovation was called for. So I folded the use of artillery into the assault impulse. Artillery would now work in close conjunction with other units during a single impulse and before the other side could make a large-scale response. It captured the essence of the 1917 battlefield simply, realistically, and effectively.

But how much detail should artillery be accorded? Hurricane, direct support and rolling barrages all benefit the attacker so it made sense to include these options, leaving their use open to the player at the beginning of his assault impulse. Interdiction and box barrages, in contrast, are measures geared to hinder the enemy’s ability to launch an assault, so these artillery missions could be abstracted into other rules, such as the movement rules. They are also part of the rationale behind the German garrison units. I considered allowing SOS barrages to be placed by the defender during an assault impulse but decided it was easier to simply assume this sort of bombardment and blend the impact of these barrages into game abstractly, such as through the



defense value modifiers and the ability of fortified areas to absorb the first CP of either a Hurricane Barrage or assault. Drumfire barrages are assumed to be on-going but as these did not directly impact the ground campaign in a significant manner they were excluded.

Impulses and Turn Length

The most successful area-impulse games in my opinion have been those featuring both rapid back and forth decision-making by the players and turns consisting of an unknown and variable number of impulses. Titles that allow players to alternate impulses until both pass are known to take many hours to play, and titles that allow the attacker to continue taking additional impulses until he loses a combat deprive the other player of enough to do until the pendulum swings back in his favor.

At the same time I did not want to simply incorporate the system where both players take one action each impulse. *Breakthrough: Cambrai* would have fewer units to manage than games like *Turning Point: Stalingrad* and *Breakout: Normandy*. Especially with the use of artillery folded into the assault impulse, players would not need a large number of impulses each turn. Too many impulses, in fact, might lead to ahistorical behavior on the part of the players, such as throwing individual brigades or regiments at the enemy one after another in low-odds “pot-shots” hoping for a big differential on one of the combat die rolls. So rather than allowing both players to take one action each impulse, I took a page from an American Civil War design of mine depicting the proto-trench warfare at Cold Harbor, *Not War But Murder*, and had players alternate impulses. This had the effect of making each turn, on average, quicker to complete than these other impulse-based titles, thereby speeding up the game. A seven turn basic game between experienced players ought to be playable in only a few hours, a single evening at most.

Fortifications

The Hindenburg “line” was actually a series of defensive belts several miles deep. Each belt had concrete dugouts bristling with machine-guns. The garrison units in the game, in part, are meant to represent these permanent installations. The German defenses even had an anti-tank capability. Having experienced tanks before, some of the trenches were as much as sixteen feet wide and eighteen feet deep, making them impassable to tanks. The British were aware of this problem and had come up with a way to traverse them. Their workshops created fascines – bundles of brushwood tightly held together with large chains and weighing nearly two tons each. Every tank carried one fascine. A triggering device would drop the fascine into the trench and allow the tank to cross over. The fascines worked so well the game simply assumes their use and does not include detailed rules for crossing trenches.

Tanks and Cavalry

A major point of the Cambrai offensive was to make use of the tanks of the Tank Corps and to demonstrate their true potential on the battlefield. Cambrai had been purposely selected because of its largely flat and hard chalky ground and because the terrain had not been riddled with craters from previous artillery barrages. Sources differ but the most reliable numbers are a total of 378 fighting tanks,

plus another 98 tanks equipped for special duties (hauling supplies, removing wire, etc.), for a total of 476 tanks. There were two combat versions of the Mark IV tank. The “male” tanks were equipped with four .303 Lewis machine guns and two six-pounder sponson guns, while the “female” tanks were equipped with six .303 Lewis guns.

The benefits of having tanks on the battlefield are conveyed via a few simple rules. One is their high attack value. Another is their ability to produce an overrun. The British player must exploit these advantages to the utmost. At the same time the tank battalion of the First World War did not have great staying power. Working inside a tank was a grueling, exhausting experience. The temperature inside the cramped interior, despite the November weather, exceeded a hundred degrees. The noise was deafening, permitting only hand signals while the vehicle was in operation. The engine fumes polluted the air the crew had to breathe. Bits of metal would fly off inside the tank’s interior when the exterior was struck by external fire, causing injuries. Fire was a constant danger. Mechanically the Mark IV tank was difficult to operate. Simply performing a turn required four of the crew to act cooperatively. Breakdowns were common, and tanks frequently become stuck for one reason or another and had to be ditched. All these difficulties are reflected in the tank refit rules.

Cavalry were still imagined to be the forces of exploitation once a breach in the enemy’s line had occurred. The 1st Cavalry Division had been placed under the command of IV Corps. It was to advance north between Bourlon Wood and the west side of the St. Quentin canal and occupy positions north and north-west of Cambrai. The 2nd and 5th Cavalry Divisions would advance around Cambrai from the east, then move north and link up with the 1st Cavalry Division before proceeding to seize bridge crossing on the Sensee river. The cavalry release rules represent the Cavalry Corps being held back until III and IV Corps have disrupted the German defenses enough to allow them to begin advancing towards their objectives.

Unfortunately the Cavalry Corps was not utilized to the fullest during the crucial first 48 hours of the campaign. One problem was that the Cavalry Corps Headquarters was located too far to the rear. In the case of the 1st Cavalry Division, none of the major units had been in action since the autumn of 1914. Many of the better officers had transferred out, while the senior officers doubted the chances of a breakthrough after years of disappointing stalemate. The movement of the cavalry divisions was completely cautious and their progress on the first day fell far short of their goals. Strength-wise a cavalry division, dismounted, was roughly the equivalent of an infantry brigade in terms of numbers and fire-power, hence the attack value of “1” for each brigade in a cavalry division.

Logistics

Ground combat on the Western Front of World War One was a bloody affair. During an offensive casualties were sustained at a pace faster than the organizations of the time could cope with, leading to units burning themselves out or what in the game is termed becoming exhausted. Even had they possessed the necessary organization, after over three years of war neither side had large pools of manpower with which to replace their losses. In general the best way of



increasing combat strength at the front lines was to replace an exhausted division with a fresh one. The swapping rule depicts this process by which new formations switched places with those that had been depleted by combat.

A similar problem arose with artillery shells. These were rapidly consumed in the initial stages of an offensive. While there might be plenty of shells at depots far behind the front, these had to be transported to the battle, and this would take time. Inevitably, shortages would occur. These difficulties are represented with the refit roll for Hurricane Barrage markers and the ammunition die rolls for Rolling Barrage and Direct Support markers.

The dismounted cavalry rules, which allow these units to act as an “ersatz” form of infantry “replacements” for the British player may raise a few eyebrows. But as early as November 23 Douglas Haig, the British Army Commander-in-Chief, ordered the use of cavalry “in any numbers” to occupy parts of the line in order to free up depleted infantry formations for offensive operations. The dismounted cavalry rules represent this practice. The more the British player dismounts his cavalry, of course, the more he concedes that he no longer believes a breakthrough is possible.

Canals

Bridge seizure and demolition played a small though crucial role in the campaign. It made sense then to include some simple rules to make possible “what if” situations along the St. Quentin Canal in the first crucial hours of the British offensive. The destruction of an iron bridge between les Rues Vertes and Masnieres prevented tanks from crossing and held up nearly all the cavalry, with the notable exception of the Fort Garry Horse, part of the Canadian Cavalry Brigade. While engineer units existed to repair bridges, and some minor repairs certainly occurred, I did not find any case of a repair to a damaged or destroyed bridge allowing tanks or cavalry to cross during the battle, or otherwise contributing significantly to the final outcome of the campaign, so it was deemed better to exclude bridge repair rules entirely to prevent the British from advancing too easily. Once a bridge is gone it is – in the context of the game – gone for good.

Victory Conditions

The goals of Operation “GY” are clearly laid out in the first entry of the Third Army plan:

The object of the operation is to break the enemy’s defensive system by a coup de main; with the assistance of tanks to pass the Cavalry Corps through the break thus made; to seize Cambrai, Bourlon Wood, and the passages over the Sensée River and to cut off the troops holding the German front between Havrincourt and that river (*History of the Great War*, p. 306).

Although it was an important railhead and headquarters the capture of the city of Cambrai was not an *immediate* goal of the British advance. Infantry of IV Corps on the left, supported by tanks, would capture both Bourlon Wood and the town of Bourlon immediately north of it while infantry of III Corps, also supported by tanks, would seize crossings over the Canal de St. Quentin. The divisions of the Cavalry Corps would exploit these gains, enveloping Cambrai from west and east. With Bourlon secured IV Corps would press north, with the Cavalry Corps on its right galloping north to seize the crossings over the Sensée River, while III Corps would

capture Crèvecoeur and advance (with the aid of French units not included in the game) in a south-easterly direction. Had the plan succeeded a large stretch of the Hindenburg Line north of Cambrai would have been flanked. The breakthrough victory conditions reflect the grand ambitions of Third Army’s “GY” plan. Once the Cavalry Corps has broken into the open – represented in the game by entering one or more of certain zones on the northern edge of the map – it is assumed the Germans have been forced to withdraw from a large part of the Hindenburg Line to avoid being cut off, or at the very least the battle has become more mobile and the stalemate of trench warfare has been broken.

These ambitions were probably more than Third Army could attain given the forces put at its disposal. There was still the possibility of a smaller sort of victory, one based more on the original idea conceived by J. F. C. Fuller and Henry Hugh Tudor of the tank attack as a giant raid to smash a portion of the Hindenburg Line, seize and hold that ground temporarily, and then withdraw before the Germans could organize a counter-attack. The victory conditions based on victory points reflect this goal. In contrast to previous area movement games, where many areas might not be worth any victory point, and a single area might be worth more than one point, each area on the *Breakthrough: Cambrai* map is worth a single victory point to the British player. This is to reflect the Western Front setting, where even small territorial conquests would be regarded as significant.

While each area is worth but one point towards a British victory some areas are, in truth, more valuable than others. Haig gave the offensive 48 hours to secure its initial objectives. Thereafter he would allow the attack to continue only if certain objectives had been met. To depict this I came up with the Haig decision die roll, and weighted the modifiers to this roll to reflect Haig’s preferred objectives. Along with the operational sectors this introduces realistic limitations on the attack paths that may be chosen by the British player while at the same time not mandating that he merely reenact the historical decisions. The British player does not have to pursue all of Haig’s objectives, or any of them, but the less he does so the more he risks Haig ordering him to shut the offensive down and withdraw. The “sudden death” nature of the Haig decision die roll creates a great deal of game tension, particularly for the British player, and also works to reduce the length of the average game.

Most important for Haig was the town of Bourlon. The side that controlled the Bourlon Wood and town of Bourlon that lay below its summit could use the position to observe much of the battlefield. Bourlon Wood had to be held at all costs by the Germans, and it had to be captured at all costs by the British. Once the initial breakthrough did not occur, Haig discontinued offensive operations elsewhere and poured his reinforcements into an attempt to capture this vital position. With great effort the British managed to capture the wood but were so exhausted that their attack on the town itself was repulsed. The Germans soon worked their way back into Bourlon Wood with assaults of their own.

November 26th was chosen as the end of the basic game because it gives the British player roughly the same amount of the time as the historical British offensive. A final attack was launched on the 27th that made no headway – the Germans had reinforced themselves too much by this time to have any hope of pushing them back any further. It became



clear after this last attack that the Bournon position could not be cleared of all German opposition, so Haig shut down the offensive entirely and ordered his forces to dig in where they presently were. A German counter-attack was expected – though not of the nature that eventually materialized just a few days later.

The focus of the game is the *British Cambrai offensive*. All the main components – the map, counters, and rules – were created to simulate it. Despite this I decided to include the German counter-offensive as a scenario for the simple reason that it was a major action in its own right: the first major German offensive on the Western Front in nearly two years. The Arras Group in the north and the Busigny Group in the south each attacked the base of the “bulge” in the German defenses, hoping to join up around Havrincourt and isolated the British position. The scenario includes the larger of the two attacks – the Arras Group – in its entirety but only a portion of the attacks by Busigny Group. This was necessitated both by the configuration of the map, which was meant to depict the British offensive in an optimal manner, and the limitations of the counter mix.

During November 30th and December 1st the attacks by Busigny Group in the south made excellent progress, briefly capturing the town of Gouzeaucourt before being pushed out by a counter-attack led by the British Guards Division. The attacks by Arras Group in the north were subjected to heavy artillery fire, suffered many losses during their attacks, and overall made little progress. While the battle petered out over the course of the first week of December the heaviest fighting was largely over, and the British withdrawing, by the morning of December 4 so the scenario depicting the German counter-offensive and the campaign game scenario both conclude during the night of December 3.

Although a strategic failure the British “GY” offensive of 1917 was an important event in military history. The combination of tanks, unregistered artillery fire, and close air support had proven itself at the tactical level, and would set the tone for both the last year of the First World War and for decades of warfare to come. The days of fortifications and entrenchments, and the bloody stalemate they produced, were coming to a close.

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