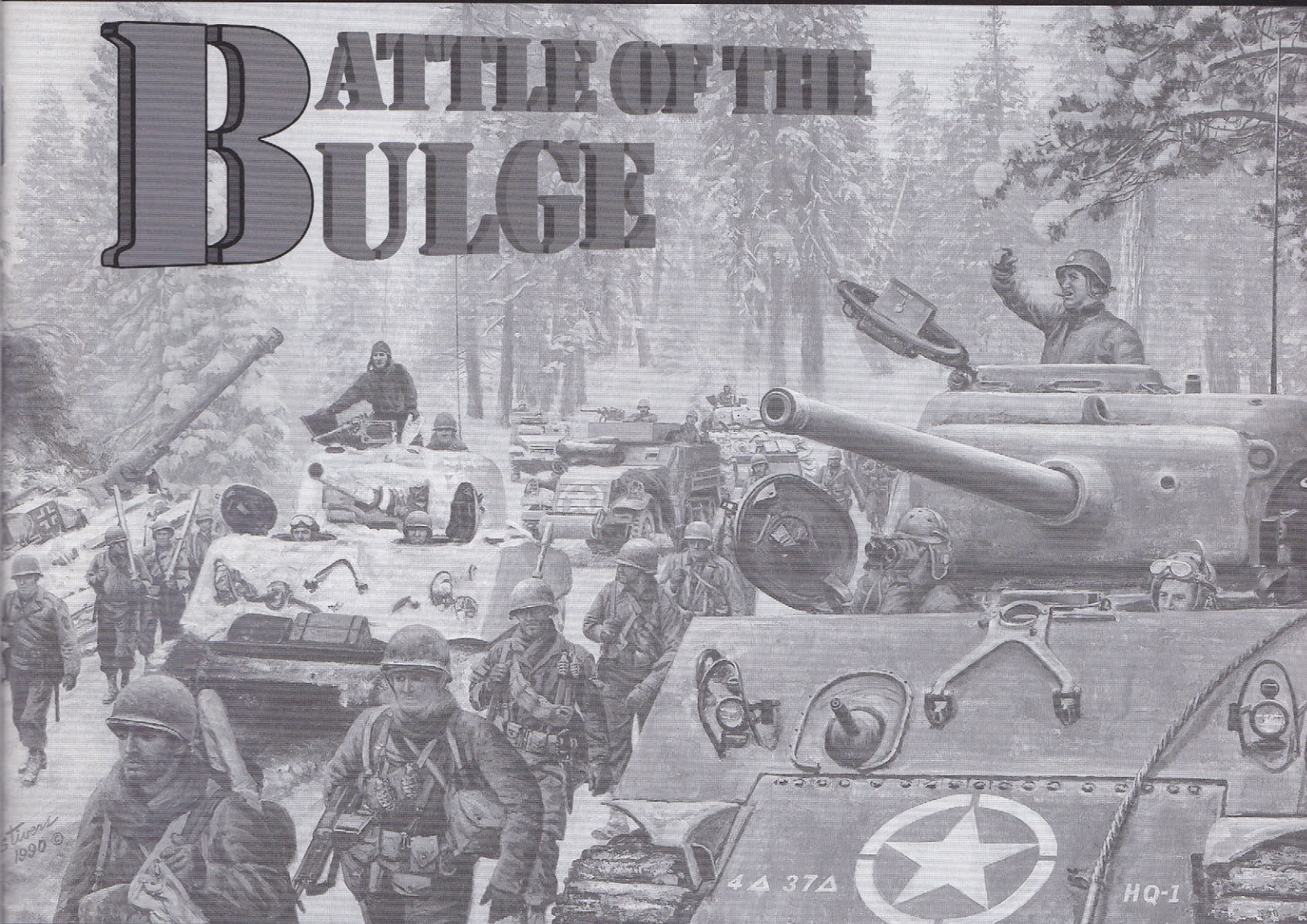


#41/DECEMBER 1996 \$34.95

# COMMAND

GAME SUPPLEMENT

## BATTLE OF THE BULGE



*Also Inside*

**Commander's Call — 17**

**Errata — 19**

**Chrisfire — 20**

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# WAVE OF TERROR

## If this is your first wargame, read this box first.

Don't try to memorize these rules! They are written to create a game that simulates the realities of command as much as possible. You'll find things move along to a real-world kind of rhythm. After a few turns, that rhythm will become second-nature, and you won't need to refer to the rules as often.

Read the rules before you punch out the playing pieces. During play, look up specific rules when you need to, and make notes at places giving you trouble.

The rules are numbered to help you find the ones you need. The first number indicates the major rules section. Those to the right of the decimal indicate specific rules within each section. For example, section 2.0 deals generally with the various game components, while rule 2.8 explains specifically with the different unit types in the game.

The boxed "Notes" give examples of play or explain the rationales behind various rules. This is a wargame of low-to-intermediate complexity. You can learn to play it on your own, but the best way to learn it is to have an experienced gamer help you.

During your first few matches of the game, skip the rules and sections marked Ω. You won't get the full competitive or historical experience, but you will become accustomed to the rhythm and flow, and that will make playing later with all the rules easier.

Most of all, remember — the main reason to play these games is to have fun.

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## 1.0 INTRODUCTION

### 1.1 In General

**Wave of Terror: The Battle of the Bulge** is a two-player simulation of the decisive first two weeks of the campaign fought back and forth across the Ardennes Forest in late December 1944. The US player controls American, British, French and Belgian forces, and is opposed by the German player who commands units of that nation's army, air force and SS.

### 1.2 Game Scale

Each hex on the map represents 1.5 miles from side to opposite side. Each complete game turn represents 24 hours. The vast majority of units in the game represent combat-maneuver battalions or battalion-sized detachments. Artillery units represent Allied brigade-sized "field artillery groups" and German *Volksartillerie Korps* (also brigade-sized formations).

**Old Hands Note.** There are no ZOCs, replacements, or retreat-after combat. And you'll want to pay particular attention when reading the turn sequence and supply sections.

## 2.0 GAME COMPONENTS

### 2.1 In General

The components to a complete game of WoT include these rules, two 34x22" mapsheets, and 720 die-cut, half-inch counters (also referred to as "units" and "unit counters"). Players must also provide one standard (six-sided) die to resolve combat and other events.

### 2.2 Assembling the Maps

The two maps should be fitted together along the long axis before play begins, with hexrow 18xx of the western map overlapping hexrow 10xx of the eastern map. You will need to trim one of the maps to make for a flush fitting between the two sheets. Once matched, secure them together with removable plastic tape or small pieces of masking tape.

### 2.3 The Assembled Maps

The game map depicts the militarily significant terrain found across the Ardennes in late 1944. A hexagonal ("hex") grid is printed over the map to regulate the placement and movement of units. A unit is considered to be in only one hex at any one time. Each hex contains natural and/or manmade terrain features that affect movement and combat.

Every hex on the maps has a unique, four-digit identification number printed in it. (For example, Bastogne is in hex 2033 of the east map.) The numbers are provided to help you find places more quickly and to allow you to record unit positions if a game has to be interrupted before it can be finished.

In these rules, whenever a hex number is mentioned it will be preceded by the letter "W" if it refers to a hex on the west map, and by the letter "E" if it refers to a hex on the east map. (Thus locating Bastogne in hex E2033.)

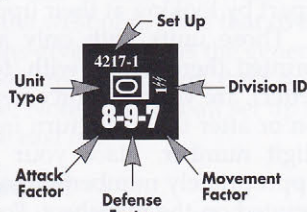
# THE BATTLE OF THE BULGE

## 2.4 Counters

Most of the 720 counters represent combat-maneuver battalions; others serve as informational markers and memory aids. After reading through these rules at least one time, carefully punch out the counters. Trimming the "dog ears" from their corners with a fingernail clipper greatly facilitates handling during play and also enhances their appearance. Each combat unit counter has several pieces information: the side it's on, its step and combat strengths, its type, its movement factor, the parent organization (division, brigade or regiment) to which it belongs (or a specific unit I.D. if it's an independent unit), and its set up hex or game turn of entry into play.

## 2.5 A Sample Combat Unit

This unit is one of the two heavy panzer (tank) battalions from the German side's 1st SS Panzer Division. It has a step strength of two (shown by the fact there's printing on both sides of the counter), an attack factor of eight, a defense factor of nine, and a movement factor of seven. It starts the game in or within one hex of hex E4217.



## 2.6 Nationality & Service Branch

An Allied unit's nationality, and a German unit's service branch, is shown by its color scheme and/or an abbreviation.

### Allied Nationalities

US, French & Belgian: white on olive drab green  
British: black on tan

### German Service Branches

Army - black on gray  
SS - white on black  
Air Force - black on sky blue

**Design Note.** For all game purposes, French and Belgian units function as part of the American Army. See 8.5 for special restrictions on British units.

## 2.7 Abbreviations

The following abbreviations appear on various units of both sides:

A - US Armored Division	Gd - Guards
B - Brigade	H - Hussars
Bel - Belgian Fusiliers	L - Lehr
F - French	Lt - Light
FEB - Führer Escort Brigade	R - Regiment
FGB - Führer Grenadier Brigade	Rg - Rangers
FJ - Fallschirmjäger	SS - Schutzstaffel
	V - Volksgrenadier

## 2.8 Unit Types

All ground units in the game belong to one of the following types:



## 2.9 Heavy Status

Some German units have a thick black band down the right side of their unit type box. Those are "heavy units" (or simply, "heavies"), which have special rules pertaining to their movement across blocked and unbridged water hexsides (see the Terrain Effects Chart and 9.8ff).

## 2.10 Motorized Status

Units with two wheel symbols (dots) on the bottom of their type-box are motorized (truckborne).

**Design Note.** Though there are many "paratroop," "glider" and "air landing" infantry units in the game on both sides, that status means little in actual game terms. There are no paratroops during play, meaning those unit types behave pretty much as marching or motorized infantry.

**Old Hands Note.** The usual worries about whether a unit is "mechanized," or "straight-leg" are not a concern in this game system.

## 2.11 Attack & Defense Factors

If a unit has three numbers printed across the bottom, the first is its "attack factor" and the second its "defense factor." The first is a quantification of its ability to perform in offensive combat, while the second number is used as its fighting strength when on the defense. (The third number is its movement factor.) If a unit has only two numbers printed across the bottom, the second is its movement factor and the first is its combined "combat factor." That is, on such units the same number is used as the combat strength for both attack and defense.

## 2.12 Movement Factor

This number is the measure of a unit's ability to move across the hex grid printed over the map. Units pay different costs to enter different hexes, with those exact costs being determined by the terrain in each hex and along the exact hexsides move across.

## 2.13 Steps

"Step" is an arbitrary term used to describe one increment of a unit's ability to absorb losses in combat. All but three of the non-artillery ground units in the game have two steps (also called "strength steps"). The second step comes into play, after the unit has lost a step in combat, by flipping the unit over so its reverse side (with lower combat factors) shows upward.

When units of this size are eliminated in game play, it doesn't mean all the men in it have been killed. It means sufficient casualties and equipment losses have taken place to render it useless for further combat operations (which may in some cases mean fewer than 10 percent casualties have actually been suffered).

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## 2.14 Units & Parent Organizations

The majority of units in the game are part of a "parent organization." That is, most of the individual battalions are part of a regiment, brigade or division. Units belonging to a parent organization have that higher formation's historical identification printed to the right of their type box. For example, look at the units of the German *1st SS Panzer Division* at the top of countersheet number one. There are 11 battalions, each bearing the "1SS" designation: in aggregate, those units comprise all of that division as represented in the game.

Since there are several instances of similarly numbered parent organizations in both sides' armies, abbreviations have been added to help avoid confusion. For instance, note there is a German *9th SS Panzer Division*, a regular German army *9th Panzer Division*, and a regular German army *9th Infantry (Volksgrnadier) Division*. The SS unit stands out from the two other divisions because of its color scheme as well as its "SS" designation, and the *9th Volksgrnadier's* units all carry a "V" to distinguish them from the army's *9th Panzer Division*.

Units with the letter "B" following their I.D. belong to a brigade; those with the letter "R" there belong to a regiment. Those with just an I.D. number designation or abbreviated name (such as "Lehr" in the German army) belong to divisions. Note that within the American army the many similarly numbered infantry and armored divisions are told apart by the addition of the letter "A" after the latter's number designations.

## 2.15 Independent Units

Units that don't belong to any parent organization are easily told from those that do by the fact their I.D. is printed to the left of their type-box. An independent unit is just that — it is the only unit counter in that organization. For example, the German army *11th Assault Gun Battalion* is an independent unit (found near the bottom right of countersheet number one). Don't confuse it with the units of the German army *11th Panzer Division*, the component units of which bear their identification number to the right of their type-boxes.

**Design Note.** The significance of a unit's status as independent or belonging to a parent organization is explained in 7.5, 7.6 and 8.3.

## 2.16 Other Counters

The use of these other counters is explained at appropriate points throughout the remainder of the rules.



Kampfgruppe Peiper ( 7.7 )



German Out of Supply ( 6.13 )



Allied Aerial Supply ( 6.15 )



Clear Skies ( 5.3 )



Allied Ground Support Aircraft ( 9.18 & 10.14 )



Victory Points (4.0)



Bridge Demolished ( 3.9 & 9.14 )



Bridge Repair ( 9.15 )



Town/City Control Markers (3.11, 4.6 & 6.13)



**Beginners Note.** Set aside all the markers followed by an omega ( $\Omega$ ) symbol above. You will not use them in your play. Ignore all rules references to them below.

## 3.0 SET UP & HEX CONTROL

### 3.1 Setting Up

After choosing who will control which side, both players should sort their units into two piles: one for the units that will start the game already in play on the map, and the other for those that will enter play only after the game has been started. The two categories of units can be told apart by looking at their upper corners.

Those units with only a one- or two-digit number printed there (along with, for some, an asterisk and/or letter), are your reinforcement units; they will enter play on or after the game turn indicated by that one- or two-digit number. Place your reinforcement units in the appropriately numbered boxes on the Turn Record Track printed on the mapsheet. For example, all units with the number "5" printed in either of their upper corners should be piled within the Game Turn 5 (20 December) block on the track.

Those units with a four-digit number (often followed by a dash and the number "1" or "2" or "3"), each of which corresponds to a particular hex on the eastern map, are your starting units. (The German also has several units that are simply printed with the letter "A" across their tops. They are also starting units, see below.)

All two-step units are set up at their full, two-step strength.

### 3.2 U.S. First

After both players have put their reinforcement units on the Turn Record Track as described above, the American player should complete his set up before the German player begins his.

### 3.3 Designated Set Up Hexes

The hex numbers in the upper corners of the starting units are referred to as "designated set up hexes." Both players should sequence their side's set up by first placing all their starting units exactly in those designated hexes. In some cases that will make for unwieldy high stacks; break those units into two side-by-side piles sharing the same hex.

Note that most starting units have a "1" or "2" or "3" following their designated set up hex. That number represents the actual hex radius from the designated hex within which the unit may be finally located. For example, the units of the German *12th SS Panzer Division* are all labeled "4110-1." That means those units may start in 4110 and/or any of the hexes one-away from that hex (44109, 4210, 4211, 4111, 4011 and/or 4010).

If a starting unit's designation hex is followed by a "2," that unit may be finally set up in the designation hex, or one one away from it, or a hex two away from it. The same principle extends to those with a "3" printed after their set up designation hex.

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## 3.4 Stacking Limits

When units are first placed in their designated hexes, neither player need worry about observing stacking limits (see section 7.0), but once they've been fully deployed as described in the paragraph above, all units must conform to stacking limits. Within those restrictions, it is permitted for units from different parent organizations to begin the game stacked together; though again, overall stacking limits must still be observed.

## 3.5 The Starting Front Line

The initial front line is printed along the hexsides from E3900/4000 to E3126/3226. From there the front follows the Our River to E4239/4240. The German side starts in control of all territory to the east of that line, while the Allied player controls all to the west of it. Note that over-arching the set up instructions given above is the general proviso units may only be set up in hexes on their own side of the starting front line. Note, too, that all set up of both sides takes place on the east map.

## 3.6 US Front Line Requirement

Whenever a given stack of starting US units' designated set up hex is in a hex bordering the front line, all the units of that stack must begin in front line hexes. For example, three battalions of the US *2nd Infantry Division* have the set up designation "3610-1" printed on them. Hex 3610 borders the starting front line; therefore those units could only be set up in 3610 or 3609 and 3710 — the latter two being the only ones that are no more than one hex away from 3610 and are also themselves front line hexes. Note that within these limits it is permitted for units with different set up designations to begin the game in the same hex.

US starting units that have designated set up hexes behind (to the west of) the starting front line may finally be set up within front line hexes if their radius number (1, 2 or 3) allows for it, but they don't have to be.

**Design Note.** The German has no front line requirements; his starting units are simply set up within their designated and radius set up hexes to the east of the front line.

## Ω 3.7 POL Markers & Belgian Fusiliers

The US player has four counters labeled "POL?" and all bearing the set up designation "2714-3." On the backs of two of them the word "Dummy" appears, while the other two bear the standard circular supply symbol. During set up the US player should deploy all four, no more than one per hex, in any non-town road hexes within that radius of 2714. Deploy them "POL?" side up, not letting the German see which are real and which are the dummies. The Belgian Fusilier infantry unit (Bel) is then set up atop any one of the four markers.

**Old Hands Note.** See 6.13 and 6.14 for more details.

## 3.8 German "A" Units

The German player has four independent assault gun battalions and eight artillery units simply labeled "A"

across their tops. Those units are also part of his starting force. The "A" stands for "Anywhere," meaning those units may start in any hexes (observing stacking rules) on his side of the front line.

## Ω 3.9 Demolished Bridges

All bridges straddling the starting front line are considered demolished at the start of the game and should have "Bridge Blown" markers placed atop them during set up (and kept there until such time as repairs are made). Those places are: E3231/3330, E3232/3331, E3333/3433, E3436/3535, E3506/3607, E3538/3638, E3818/3911, E3028/3128, E3433/3539, E3537/3638, E3939/4040, E4039/4040, E4139/4140.

**Beginners Note.** In your play, bridges are always considered intact and are never destroyed by any means. Ignore all rules pertaining to bridge demolition and repair

## 3.10 US 14th Cavalry Regiment

One of the battalions of the US *14th Cavalry Regiment* begins the game broken down into its three component troops (the three 1-9 armored cavalry units bearing the set up designation "3918-1"). The parent battalion 4-9 is marked with an asterisk in its top left corner as a reminder. Set up the 1-9s and set aside the 4-9. For details on how the three smaller units can be reformed into the 4-9 after play has begun, see 8.7.

## 3.11 Hex Control

"Hex control" is the term used to describe which side is "in control" of particular hex at each instant during play. Once set up is completed, hex control is really only important when considering town and city hexes and when tracing supply lines into such hexes. A town or city hex is under the control of the side that presently has a unit in it or was the last to have one of its units pass through the place. At the start of the game the Allies control all town and city hexes west of the front line; the German controls all to the east of it.

The control status of a hex changes the instant a unit from the other side enters and/or moves through it. Control markers have been provided to place in town and city hexes in situations where the front isn't defined enough to make control status obvious. Control status is important for victory point awards (see 4.0), supply line tracing (see 6.13), and bridge demolition (see 9.14).

# 4.0 HOW TO WIN

## 4.1 In General

Most matches of WoT will be won by the player who gains the most "victory points," awarded for the elimination of enemy units, the capture of city hexes, and certain other events. Other ways of gaining victory, not involved in tallying points, are also available to both players.

## 4.2 Concession

Though each match nominally lasts 17 complete game turns, either player is free to concede defeat at any time prior to that if he becomes convinced his position is hope-

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less and beyond recouping. For purposes of record keeping, concessions grant a strategic (the highest kind) victory to the winner.

## 4.3 Sudden Death German Strategic Victory

Play stops, and the German player is declared the victor, the instant he moves any supplied unit off the map via any of the road hexes between W1810 and E1800. (Such an exit takes place using the road movement rate.)

**Design Note.** In actuality, of course, a single German unit breaking free of the map and pressing on toward Antwerp would not have "won" the campaign or the war for the Germans. The idea behind this victory condition, however, is that in accomplishing such a feat the German player has so over-matched both his game opponent's and historical counterpart's performance as to deserve being awarded the win. In the psychological sense it also works to instill in the mind of the Allied player the historically proper degree of apprehension about such a development.

## 4.4 Allied Automatic Strategic Victory

At the end of Game Turn 17, if there are no supplied German units anywhere west of the starting front line, the Allied player is declared to have won a strategic victory no matter what the point situation.

## 4.5 Allied Automatic Operational Victory

At the end of Game Turn 17, if the Allied player's forces control the city of St. Vith (E3119), he is declared to have won an automatic operational victory no matter what the point situation. (Of course, he may pass on this if he feels the final point tabulation will give him a strategic victory.)

**Design Note.** The idea behind 4.4 and 4.5 is that the German player, for this to be a historically valid simulation, must remain true to the assumptions and goals behind Hitler's decision to launch the actual battle. Ground was to be given up only sparingly, lest valuable springboards for future offensive actions be lost.

## 4.6 Winning on Points

Most games between opponents of roughly equal skill will not be won by any of the extreme situations described above; they will be determined by their overall accumulation of victory points (VP) throughout the course of the game. If none of the kinds of victories described above are achieved, the player with the most VP at the end of the game is declared the winner. If both have precisely the same amount, the game is a draw. Victory points are awarded as described below.

At the start of the game both players have zero VP. Use the markers provided in the counter mix to keep a running total of both sides' accumulating VP throughout the game.

## 4.7 City Hex VP

At the end of the game, both players are awarded 10 VP for every city hex they control on their opponent's side of the starting front line. Neither is awarded any VP

for controlling cities on his own side of the starting front line.

**Old Hands Note.** The supply state of any units in the friendly controlled cities is irrelevant.

## 4.8 Step Loss VP

Both players are awarded one VP for every step of their opponent's non-artillery units they eliminate during the course of the game, and two VP for every one of his artillery steps.

## 4.9 National Socialist Ardor VP

At the end of every game turn, examine the area west of the Meuse River line between W2343 and E1800, inclusive. The German is awarded one VP for every unit (supply condition irrelevant) he has within that area. (Yes, the same units generate new VP at the end every game turn they survive there.)

## 4.10 British East of the Meuse VP

If the Allied player decides to move British units into the area east of the Meuse River line (W2444 to E2100 — see 8.5), he rolls two dice at time the first such unit crosses the line. The German is immediately awarded that number of VP. Only one such dice roll and German VP award is ever made per game.

## 4.11 German Optional Reinforcements VP

If the German player decides to enter into play the *10th SS* and/or *11th Panzer Divisions* without first meeting the Meuse River crossing prerequisite for their free entry (see 8.4), the Allied player is awarded five VP for the *11th's* entry and 10 VP for that of the *10th SS* (for a maximum of 15 VP).

## 4.12 Allied Optional Reinforcements VP

If the two units of the *US 5th Armored Division* (see 8.6) that enter play as reinforcements on Game Turn 1 are ever found adjacent to any German unit(s), the German player is immediately awarded four VP.

If the Allied player decides to enter into play any, some or all of the five units of the *US 5th Armored Division* available as reinforcements on Game Turn 8, the German player is awarded eight VP. (Both these VP awards are one-time awards.)

**Design Note.** Worried about a potential attack by the German *15th Army*, off the map to the north, the Allied high command kept the bulk of *5th Armored Division* in reserve in that area. The single combat command of the division that was released for operations within the area of the game map was never actually committed to combat.

## 4.13 Degree of Victory

A player can win one of three degrees of victory based on his victory point margin over his opponent's total. From highest to lowest, those degrees of victory are: strategic, operational, tactical.

To determine the victor's degree of victory, divide the losing player's total of VP into his. If the result is between

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1.01 and 1.99, he has won a tactical victory. If the result is between 2.00 and 2.99, he has won an operational victory. If it's 3.00 or higher, he has won a strategic (a.k.a. "monstrous fine") victory.

The descriptions below allow players to gauge how their conduct of operations altered or maintained the general course of the war as compared to history.

## 4.14 Allied Tactical Victory

The Allies have won the battle, but at such a cost their crossing of the Rhine takes place perhaps as much as a month behind the historical schedule. The Allied and Soviet armies eventually link up only a few miles east of the Ruhr industrial area in north Germany, though the westerners are still the first into Bavaria.

## 4.15 Allied Operational Victory

This was the historical result; the general course of the war is maintained.

## 4.16 Allied Strategic Victory

The German offensive has been smashed with crippling losses to Hitler's western armies. The Allies follow up by launching their final offensive into the Rhineland and beyond as much as a month ahead of the historic schedule. The western Allies eventually link up with the Soviets about 15 miles east of Berlin.

## 4.17 German Tactical Victory

The Germans have chewed up numerous Allied divisions and then succeed in withdrawing in good order back into their Westwall fortifications. The launch of the Allied offensive into the Rhineland and across the Rhine River is delayed until mid-April.

## 4.18 German Operational Victory

The equivalent of several Allied divisions have been completely annihilated, with still others severely mauled — and all this with only relatively light losses to the German divisions engaged. Allied offensive operations are delayed well into May, allowing Hitler to transfer many divisions east in the meantime. Because of those transfers, the Soviet drive is also stalled until mid-June, when the collapse of Germany finally takes place.

## 4.19 German Strategic Victory

The battle has been a complete fiasco for the Allies. The great victory allows Hitler to preserve the life of his crumbling Reich into early September, when Berlin becomes the first city struck by an atomic bomb.

**Design Note.** The savage and all-pervading irony inherent in the German player's achieving a strategic victory is deliberate.

## 5.0 THE TURN SEQUENCE

### 5.1 In General

Each of the 17 game turns of Wave of Terror is divided into two "couplets" of strictly sequenced steps (also called "phases"), along with three phases separate from

those couplets in which both players participate. Every action taken by a player must be carried out in the appropriate phase as described below. Once a player has finished a particular phase he may not go back to perform some forgotten action or redo a poorly executed one unless his opponent graciously permits it.

**Beginners Note.** This is war to the hilt; don't feel compelled to be gracious.

### 5.2 Turn Sequence Outline

The turn sequence is given below in outline. The rest of the rules are organized, as much as possible, to explain things in the order they're encountered as you work through each game turn's sequence. Note the German Operations Segment is the first in both couplets of all 17 game turns.

#### I. Game Turn Weather Determination Phase

#### II. First Couplet

- A. German Operations Segment
  - 1. German Bridge Repair Declaration Phase
  - 2. German Movement or Combat Phase
  - 3. German Combat or Movement Phase
  - 4. German Bridge Repair Resolution Phase
- B. Allied Operations Segment
  - 1. Allied Bridge Repair Declaration Phase
  - 2. Allied Movement or Combat Phase
  - 3. Allied Combat or Movement Phase
  - 4. Allied Bridge Repair Declaration Phase

#### III. First Artillery Recovery Phase

#### IV. Second Player Turn Couplet

- A. German Operations Segment
  - 1. German Bridge Repair Declaration Phase
  - 2. German Movement or Combat Phase
  - 3. German Combat or Movement Phase
  - 4. German Bridge Repair Resolution Phase
- B. Allied Operations Segment
  - 1. Allied Bridge Repair Declaration Phase
  - 2. Allied Movement or Combat Phase
  - 3. Allied Combat or Movement Phase
  - 4. Allied Bridge Repair Declaration Phase

#### V. Second Artillery Recovery Phase

### 5.3 Weather

During the portion of the campaign depicted here, the ground conditions were pretty much always abysmal. That is, off-road movement was dominated by mud, interspersed with short freezes that, again, quickly turned into mud as soon as the ground was subjected to heavy traffic. All of that was often covered with melting or blowing snow. Thus, the lack of off-road mobility is accounted for by the high movement costs for off road movement. Likewise, the weather rules are only concerned with conditions aloft, to determine are the skies overcast, or are they clear enough to allow the Allied air forces to apply their air supremacy to combat ground support, interdiction, and aerial supply operations.

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The weather during the first three game turns is always overcast. After that, at the start of every game turn the German player rolls a die to determine the weather for that entire game turn. If the die roll result falls within the range for that game turn printed on the Game Turn Record Track on the mapsheet, the weather for that game turn is overcast, otherwise it's clear.

During Clear Skies game turns the Allied player has eight aircraft units available for use on various missions (unless Operation Baseplate has been launched by the German, see below, in which case the Allied player has only four aircraft available per game turn).

These rules are generally written with overcast weather taken as the norm; for the changes and potentialities created by clear skies, see 9.17, 9.18 and 10.14.

## Ω 5.4 Operation Baseplate

As soon as a game turn's weather has been determined to be Clear Skies, the German player should roll one die to see if the *Luftwaffe* high command launches Operation Baseplate that turn. The operation is considered to have been launched on a roll of six. Keep making one die roll per Clear Skies game turn until the operation is triggered or the game ends, whichever comes first.

The effect of launching Baseplate is immediate and permanent. That is, during that and all subsequent Clear Skies game turns Allied aircraft availability is reduced from eight to four units per game turn.

## 5.5 Bridge Repair

For details on repairing blown bridges, see 9.15.

## 5.6 Move or Fight

At the start of every one of his operations segments in both player turn couplets, the player who is up must declare in what order he will carry out his movement and combat phases that couplet. That is, he may choose to have his units move first and fight second, or fight first and move second. The decision is always up to him (exception: see 5.7). The big advantage in choosing a fight/move sequence is that all your attacks that couplet thereby gain a one column rightward odds shift.

No matter what phase order you choose for one of your segments, all your non-artillery units get to participate to the limit of their normal capabilities in both phases. Moving or fighting does not preclude a non-artillery unit from performing both tasks during each couplet; only the order of execution is variable.

Each player only makes one phase order declaration per couplet, at the start of his own operations segment, which is then applied to all his units throughout that couplet. You may never choose one phase order for some of your units and the other phase order for others. Further, neither player may ever decide to have two of the same kind of phases during the same operations segment; he must always take one movement and one combat phase. Only their order of execution may be varied.

## 5.7 Artillery Recovery

In this game, unlike non-artillery units, artillery units may only move or fight (actually "bombard") once each player turn couplet; they may never do both during the

same couplet. During the course of each couplet, as each of your artillery units moves, defends or bombards, flip it over so its "DONE" side shows. During both artillery recovery phases, both players should flip back all their artillery units so their top sides (the one with the printed movement factor) again show upward.

**Design Note.** For more specifics on artillery movement and combat, see 6.3, 7.4, and 10.18ff.

## 5.8 Special Game Turn 1 Rules

- The German player must always choose to carry out his combat phase first during the first couplet of Game Turn 1.
- The Allied player may not conduct any attacks during the first player turn couplet of Game Turn 1.
- No Allied artillery unit may bombard during all of Game Turn 1.
- Neither player may use column movement during the first player turn couplet of Game Turn 1.
- All units of both sides are automatically in supply during all of Game Turn 1.
- Neither side may conduct bridge demolition attempts during all of Game Turn 1.
- Neither side may conduct bridge repair during the first player turn couplet of Game Turn 1.
- No Allied reinforcements may enter the map during the first player turn couplet of Game Turn 1.

# Ω 6.0 SUPPLY

## 6.1 In General

Units require supply in order to be able to operate with their full (printed-on-the-counter) movement and combat factors. Units are always either "supplied" or "out of supply" (also referred to as "OOS" or "unsupplied"). No unit is ever reduced in step strength or eliminated simply for being OOS.

## 6.2 When to Check Supply

Check the supply state of each of your units at the instant you begin moving it in each of your movement phases throughout the game. Check the supply states of all involved units of the attacking side at the start of every combat resolution process in every combat phase throughout the game. (Exceptions: see 5.8.)

## 6.3 OOS Effects

Units that are found to be OOS at the start of their movement have their movement factor reduced to three movement points for that phase. (Thus German artillery unit movement is unaffected by being OOS.)

Attacking non-artillery units that are found to be OOS at the start of their particular attack's resolution process have their attack factor halved for those computations. In such situations, round down all remainders, but no unit or stack ever has its attack factor reduced to less than one for any reason(s). When halving more than one unit in the same battle, add up the attack factors of all units to be halved in that battle then make just one grand division.

OOS artillery units may not bombard.

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## 6.4 Defense Unaffected by OOS

OOS defenders are unaffected by their OOS status: defense factors remain full.

## 6.5 How Units Are Supplied

Units are supplied when they are able to trace a supply line (a path of contiguous hexes) from a friendly supply source to their location hex. There are no counters in the game representing the materiel being consumed; this is all done just in the mind's eye of the player.

## 6.6. Tracing Supply Lines

Each unit's supply line has two portions: non-road and road. The non-road portion extends back from the unit's hex location a maximum of three hexes to a road hex. From that road hex the path is traced along the course of the road (never again leaving that path), over distances of any length, back to a friendly supply source hex.

Of course, units located on road hexes are not required to make use of a non-road supply line portion; they may simply trace directly back along the road. Likewise, units within three hexes of a friendly supply source need not make use of a road supply line portion; they may simply trace directly to the supply source, road or no road.

When counting the three-hex non-road length; count from the unit to the road; *don't* count the hex the unit is in; *do* count the hex the road being traced to is in.

## 6.7 Allied Supply Sources

Allied supply sources are all the hexes along the maps' west, north and south edges. An Allied board edge supply source hex temporarily loses its supply capacity while occupied by a German unit. That capacity is regained, however, as soon as the German unit leaves or is eliminated.

## 6.8 German Supply Sources

German supply sources are all hexes along the east map edge. A German board edge supply source hex temporarily loses its supply capacity while occupied by an Allied unit. That capacity is regained as soon as the Allied unit leaves or is eliminated.

## 6.9 Supply Line Capacity

There are no limits to the number of units that may trace supply through any given supply path. Nor are there any limits on the number of units that may trace supply to any single, friendly, map edge supply source.

## 6.10 Blocked & Water Hexsides

No non-road supply line may cross more than one blocked or unbridged water hexside. That water or blocked hexside will always be the last hexside that particular supply line may cross on its way to the tracing unit. Thus, for example, a German unit in E3435 (assuming the bridge across the Our River there is still down) could trace non-road supply over the water to the road in 3534, but another German unit in, say, 3335 could not.

## 6.11 Demolished Bridges

The road portion of a supply line may never cross over a demolished bridge. The non-road portion may only do so as described in 6.10 above.

## 6.12 Willful OOS

Both players may willfully move their units into hexes where they will, or likely will, become OOS.

## 6.13 Enemy Controlled Towns & Cities

No portion of a supply line may enter or pass through enemy controlled town or city hexes, even if no enemy units are actually in such hexes at the time of tracing. Use the control markers provided to indicate which town and cities hexes are controlled by which side in areas where the delineation of the front line itself does not make that status obvious.

## 6.14 Enemy Units

Of course, no portion of any supply line may ever be traced into or through hexes containing enemy units at time of tracing.

## 6.15 Allied Aerial Supply

During all Clear Skies game turns, the Allied player automatically has available three aerial supply markers for immediate use. The Allied player commits them, once per Clear Skies game turn, at the end of the Weather Determination Phase by placing them, no more than one per hex, in any clear, forest, town, city or ridge hexes on the map. Each counter can serve as a supply source for up to 30 steps of any types (exception: count every artillery step so supplied as two steps).

Units may trace supply lines to these counters that contain any combination of road and non-road hexes, as long as the total length is not over five hexes (but again, only one blocked or unbridged water hexside).

Aerial supply is sufficient to enable Allied artillery units drawing on it to bombard.

If a German unit enters a hex containing an Allied aerial supply marker immediately remove it. It does, though, become available for reuse on subsequent Clear Skies game turns.

## 6.16 German Supply Problems

In addition to the normal burdens of supply tracing, the units of some German parent organizations may become OOS according to the German Supply Problems table printed on the mapsheet.

Beginning Game Turn 4, the German player rolls two dice and consults the table at the start of the first player turn couplet. All units of the parent organizations indicated by the result of the dice roll are automatically OOS for that entire game turn. (OOS markers have been provided in the counter mix for use in identifying units suffering this kind of penalty.) Units of the designated parent organizations that may also happen to be OOS due to inability to trace a valid supply line do *not* suffer any kind of "double" OOS penalties because of the dice roll outcome.

If the German player gains control of a real POL depot or any Liege hex, even temporarily, using a unit that is in regular supply at the instant of capture, he no longer consults the Supply Problems table for the rest of the game.

## 6.17 POL Depots

The Allied player has four POL depot markers, two real and two dummy, which he deploys at the start of the

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game according to 3.7. Those units have no step, stacking or combat values of their own. Each time a German unit enters a POL hex, flip that marker over to check its real or dummy status. Dummy or real, the depot is immediately removed (but see 6.13 above). In all games, remove all POL markers at the start of Game Turn 6. The Allied units in the game never make any kind of logistical use of the POL depots.

## 7.0 STACKING

### 7.1 In General

"Stacking" is the word used to describe the piling of more than one unit into the same hex at the same time. The general rule is that both players may stack up to four of their side's non-artillery units in any hex at any one time.

### 7.2 Stacking & Movement

The stacking rule is in effect at all times throughout the game turn. That means players must pay attention to the sequence in which they move their units or they risk having carelessly made early moves block units moved near the end of their movement phases. But within the limits of the rules of this section, there is no limit to the number of units that may enter and pass through a given hex over the course of any given movement phase.

Units that begin a movement phase stacked together need not remain together.

Make a check of each of your own stacks at the end of each phase in the turn sequence. If any of your units are found to be over stacked at any of those times, eliminate the excess unit(s).

### Ω 7.3 Fog o' War

Neither player is ever free to examine the units that lie beneath the top unit of any of his opponent's stacks until the combat resolution process begins for a force involved in combat. Both players may, of course, freely examine their own stacks at all times.

**Beginners Note.** You are free to examine all stacks and each other's roster sheets at all times.

### Ω 7.4 Artillery Stacking

Artillery units are an exception to the general four-units-per-hex stacking rule. No artillery unit may ever stack with any other unit, either artillery or non-artillery, not even temporarily during the course of any unit's movement.

### 7.5 Stacking Across Parent Organizations

Within the limits described above, it is permitted for units from different parent organizations and/or independent units to stack together, both temporarily during the course of a unit's move and between phases, segments and game turns.

**Design Note.** All artillery units of both sides are also considered independent units, but rule 7.4 supersedes rules 7.5 and 7.6.

### 7.6 Independent Units

There may never be more than three independent non-artillery units in any one hex at any one time. The general four-units-per hex rule still pertains, though, in that the fourth unit in such a three-high stack of independents could be any non-artillery unit belonging to any parent organization of that same side. Likewise, two independent units could stack with one or two non-artillery units from the same or different parent organizations, and one independent unit could stack with any three non-artillery units belonging to the same or different parent organizations.

### Ω 7.7 Kampfgruppe Peiper

At the start of the game the German player may select a total of any four units from *1st SS Panzer Division*, stacking them together beneath the KG counter in any hex within that parent organization's set-up radius. The advantage of this for the German player is that the entire KG may always be moved as if it had no stacking value during that side's movement phases. (Between phases, though, its stacking value is normal.) Thus allowing it to move freely even through hexes containing artillery units, as long as when it comes to rest at the end of each movement phase it is in conformity with normal stacking rules.

Further, the KG is always automatically supplied throughout Game Turns 1, 2 and 3. The KG counter itself has no VP, step, stacking or combat values.

Units may be dropped out of the KG once play has begun, but no new units may ever be added to it. The KG is considered permanently eliminated the instant the last unit within it is eliminated. The KG always has a movement factor of seven.

At the end of Game Turn 3, the German player rolls a die. On a result of six, the KG counter is immediately and permanently removed — though not any units that are still beneath it. Make one such check at the end of each game turn until a six is eventually rolled.

If the KG contains one or more heavy units, then the entire KG is considered to be heavy.

### 7.8 Free Stackers

Note that all the counters pictured in rule 2.16 have no stacking values of their own and may be freely added to any stacks in accordance with the rules governing their use.

### 7.9 Stack Movement

To move together as a stack, non-artillery units must begin their side's movement phase already stacked together. But non-artillery units are not required to move together simply because they started the movement phase in the same hex; such units might be moved together, individually, or in smaller sub-stacks.

### 7.10 Splitting Stacks

When moving a stack you may halt it temporarily to allow a unit or sub-stack to split off and move away on a separate course. The units left behind in the original ("parent") stack may then resume their own movement, even splitting off other units again, if desired. But once

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you begin moving an entirely different parent stack (or individual unit that began in a different hex), you may no longer resume the movement of the earlier-moved stack without your opponent's permission.

If units with differing movement factors are traveling together in a stack, the stack must use the movement factor of the slowest units (exception, see 7.7 above). Of course, as the slower units in a stack exhaust their MFs, you may leave them behind and continue on with the faster ones.

## 8.0 REINFORCEMENTS

### 8.1 In General

Reinforcements are units that don't start the game on the map at the beginning of play; instead, they enter play after the game has begun. In general, reinforcement units become available for entry any time over the course of either of your movement phases of the game turn printed across the top of their counters.

It is permitted for both players to delay the arrival turn of their reinforcement units, but those game turn times may never be advanced.

### 8.2 Entry Areas

All German reinforcements enter via any map edge hexes along the eastern edge of the assembled game map that are not occupied by any Allied units at the time of entry.

All British reinforcement units enter via any western or northern map edges hexes from W1810 to E2000, inclusive. Again, entry hexes may not be occupied by enemy units at the instant of movement onto the map.

US and French reinforcement units enter via any map edge hexes according to the letter-code printed after their arrival turn across the top of their counters. An "N" refers to the north edge, from W1800 to E3900, inclusive. A "W" means the west edge, from W1800 to W 1844, inclusive. An "S" indicates the south edge, from W1844 to E4244, inclusive. And again, entry hexes may not be occupied by any enemy units at the instant of movement onto the map.

### 8.3 Moving Onto the Map

Within the above restrictions, both players are free to choose their arriving units' exact entry hexes, but the following strictures must also be observed.

All the units of a given parent organization must enter through the same hex. More than one parent organization may be chosen to enter through the same hex during the same movement phase. Once the entry hex for a group of units is chosen, stack them up within regular limits in a "column" starting at the board edge and leading away from it. From there, units are moved onto the map one stack or unit at a time, paying all normal movement costs from their very first move, even before they get onto the actual map. All off-map terrain is considered to consist of clear road hexes.

Within the limits of the stacking rules, independent units may be entered alone, stacked with parent organization units or other independent units.

Reinforcements always enter play supplied and at their full step strength, and they have all their normal movement and combat capabilities available for immediate use according to the regular rules governing them (including entry via Column Movement, if all normal strictures for it are met, see 9.17).

### 8.4 German Optional Reinforcements

The German has two parent organization reinforcements, the *10th SS* and *11th Panzer Divisions*, which have an asterisk (\*) printed after their Game Turn 5 arrival times on their counters. Those units may enter play as scheduled only if at the start of Game Turn 5 there are five or more supplied German units in any hexes west of the Meuse River line (W2343 to E2000). If that condition is not in effect, the German may choose to: 1) delay those divisions' arrivals from turn to turn until such time as a five-unit Meuse crossing has been accomplished; or 2) bring on one or both divisions then or later, without worrying about accomplishing the crossing, but at the cost of a victory point award to the Allied player (see 4.11).

### 8.5 British Across the Meuse

The general rule is British units may only move and attack into hexes west of the Meuse River line. However, the Allied player may choose, starting on Game Turn 10 or thereafter, to commit a force of any one British division or any three British brigades to operate (move and/or fight) on the east side of that line. Such a decision carries with it a one-time VP award for the German (see 4.10). Once that decision is made, the chosen units are free to operate on both sides of the river for the rest of the game.

### 8.6 US 5th Armored Division

The *US 5th Armored Division* is another asterisked reinforcement parent organization with restrictions on its commitment into play (see 4.12).

### 8.7 US 14th Armored Cavalry Regiment

The Allied player may choose to reform that unit's three squadrons (the 1-9s with the set up coordinate "3918-1" printed on their counters) at the end of any movement phase in which all three are in the same hex. Simply remove the 1-9s and substitute the 4-9 in place. Once rejoined, the battalion may never be broken down again during the course of a game. Once one or more of the 1-9s is eliminated from play, it is impossible to reform the battalion.

## 9.0 MOVEMENT

### 9.1 In General

The movement factors printed in the lower-right of the units are the number of movement points (referred to as "MP" or "MF") available to them to use in moving across the map during its side's movement phase each couplet. Units move from hex to adjacent hex (no "skipping" of hexes is allowed), paying varied costs to do so depending on the terrain in and around the hex being entered. The movement of each player's units takes place only during his own player turns' movement phases; no enemy movement takes place during your own player turn.

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## 9.2 Movement Limits

MPs may not be accumulated from phase to phase or turn to turn, nor may they be loaned or given from one unit to another. Within the limits described in this section and in the turn sequence, a player may move all, some or none of his units in each of his movement phases throughout the game. Units that move are not required to expend all their MPs before stopping. The movement of each unit must be completed before that of another is begun. A player may only adjust the position of an already moved unit if his opponent allows it.

## 9.3 Minimum Movement Ability

All units are generally guaranteed the ability to move at least one hex during their side's movement phase by expending all their available MPs at the start of their move. This guarantee does not allow units to enter hexes or cross hexsides that are otherwise impassable to them.

## 9.4 Enemy Units

It is not allowed for any of your units to enter hexes occupied by any enemy unit; exception: see 6.16.

## 9.5 No Off Map Moves

Moving off the map by any unit once in play is prohibited except as described for German units in 4.3.

## 9.6 Terrain

There are two general categories of terrain on the map: Natural and Manmade. Each category is divided into different types (see below).

No hex is considered to contain more than one natural terrain type. For a hex to be considered "Clear," it must contain only clear natural terrain; any forest or ridges or marsh printing existing in such a hex would change its status to that of whatever terrain type was printed there.

## 9.7 Natural Terrain

There are seven kinds of natural terrain on the map: Clear, Forest, Ridge, Marsh, Blocked Hexsides, Major River and Lake Hexsides, and Minor River Hexsides. The effects of these features on movement are described below and on the Terrain Effects Chart printed on the mapsheet. For example, each Clear hex costs all units two MP to enter.

## 9.8 Blocked Hexsides

All artillery units and all units with printed MFs of five or more are prohibited from ever moving across any blocked hexside. (Yes, that prohibition remains in effect for OOS units with printed MFs of five or more.)

Non-artillery units with printed movement factors less than five may move across such hexes, no more than one per movement phase, provided they began their move in the hex next to it and move no farther that phase after crossing it.

## 9.9 Unbridged Water Hexsides

Water, in the form of lakes and major and minor rivers, exists along hexsides, rather than in-hex like the terrains described above.

Units may move across major river or lake hexsides only via intact bridges.

Certain units may cross unbridged minor river hexsides by making "improvised crossings," see below. (And, yes, a minor river hexside with a blown bridge is considered "unbridged" until such time as repairs are completed.)

**Design Note.** Unlike many other games, a unit prohibited from moving across a certain type of hexside may attack across that same type of hexside (see 10.13).

## 9.10 Improvised Minor River Crossings

Artillery and Heavy units (see 2.9) may never make improvised minor river crossings, all other units may. (Artillery and Heavies may only move across water on intact bridges.)

To make an improvised crossing, eligible units must begin their side's movement phase already in the hex containing the hexside to be crossed. At any point during his movement phase, the owning player announces where a crossing is being made, then moves the units. They may not move any farther that phase.

## 9.11 Manmade Terrain

Manmade terrain exists in five types: Roads, Bridges, Towns, Cities, and West Wall Fortifications. Except for roads and demolished bridges, no manmade terrain types have movement effects of their own. Rather, the cost for entering such hexes is determined by the natural terrain type involved in each move.

## 9.12 Roads

Units may move from road hex to road hex via road hexsides at the cost of only one MP per hex. Note that a blown road bridge works to cut that road at the bridge hexside until such time as repairs are completed.

## 9.13 Bridges

All bridges except those straddling the starting front line (see 3.9) begin the game intact. Bridges are either intact or demolished ("blown"). Intact bridges completely nullify the movement costs and prohibitions that would otherwise be in place for units attempting to cross the water spanned by the bridge.

## 9.14 Bridge Demolition

After Game Turn 1, either player may attempt to demolish bridges for which he controls both abutment hexes when an enemy unit first moves into either of those hexes. Bridge demolition attempts take place during the movement phase and possibly also during combat, if triggered by an advance after combat (see 10.26). In general, both players may attempt any number of bridge demolitions per movement phase, but no more than one demolition attempt may be made for any one particular bridge throughout a single game turn.

Procedure is the non-moving player calls on the other player to temporarily stop moving when an enemy unit or stack first enters an abutment hex of a bridge that was until that instant entirely controlled by the non-moving player. The non-moving player then rolls a die. A result of six (6) means the bridge has been demolished before the moving unit or stack could cross it. Place a "Demolished

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Bridge" marker across that hexside. Exception: If the moving unit is German and there is one or more supplied US Engineer units within two hexes of the abutment hex being moved into, the bridge is considered blown on a die roll of five (5) or six (6).

The moving unit or stack triggering the successful demolition of the bridge may continue moving in other directions.

**Design Note.** The procedures given above represent the only bridge demolition methodologies used in the game. It is prohibited, for example, for either player to attempt "pre-emptive bridge demolition campaigns" at the start of, or during, the game.

## Ω 9.15 Bridge Repair

Except during the first couplet of Game Turn 1, both players may repair bridges during their own side's operation segments throughout the course of the game. No new bridge construction takes place, only demolished bridges printed on the mapsheet may be repaired.

The German player may never make more than 20 bridge repairs over the course of a game, and he may never make more than three repairs per couplet; the Allied player has no such limits. Bridges may not be uprooted and moved for reassembly at another site.

In general, you may repair any demolished bridge for which you control both abutment hexes and can trace a normal supply line to at least one of them at the time of beginning the repair. Declare a repair effort underway at any eligible demolished bridge at the start of your operations segment and place a construction marker atop that hexside. At the end of your operations segment remove the counter to reveal the intact bridge icon printed on the map.

## Ω 9.16 No Bridges Peiper

If the German has gained control of two bridge abutment hexes by having KG Peiper move into or through them, he may not make repairs on such spans until such time as a supplied unit not belonging to the KG enters or passes through either of those hexes. (The KG carried no bridge repair equipment with it.)

## Ω 9.17 Column Movement

All normally (not aerially) supplied units other than German artillery are potentially eligible to use column movement. To be able to do so, any normally supplied unit other than a German artillery unit must start its side's movement phase on a road hex and not adjacent to any enemy unit(s). Such units are then eligible to move — only on roads — up to twice their printed movement factor as long as they never pass directly adjacent to any enemy units during the move or end their movement in a hex adjacent to any.

Neither side may use column movement during the first player turn couplet of Game Turn 1. Further, no German units may ever use column movement during game turns for which the weather is determined to be Clear Skies (see 5.3). German artillery never uses column movement.

**Design Note.** For another important restriction on the mobility of both sides' artillery units, see 5.7.

## Ω 9.18 Allied Airpower Road Interdiction

As soon as any game turn's weather has been determined to be Clear Skies, the Allied player may choose to commit any number of his available aircraft units (either eight or four, see 5.3 and 5.4) to interdiction missions. To do that he immediately places them, no more than one per hex, in any road hexes anywhere on the map. The effect is to nullify the roads in those hexes for movement purposes — but not for supply tracing! — throughout the game turn. At the end of each Clear Skies game turn the Allied player should pick up all his interdiction aircraft from the game map.

**Design Note.** The road nullification effect pertains to both German and Allied movement into such hexes. Air-to-ground liaison was not always what it should have been for the Allies during this campaign; there were several major air-to-ground "friendly fire" incidents.

# 10.0 COMBAT

## 10.1 In General

During your side's combat phase you can attack all enemy units adjacent to your units across playable hexsides. The player whose player turn it is, is considered "the attacker," and the other is "the defender," no matter what the overall situation across the map. Attacking is always voluntary.

## 10.2 Multi-Hex Attacks

An enemy occupied hex may be attacked in one battle by as many of your eligible units as you can bring to bear from the surrounding hexes; however, no single attack may have as its objective more than one hex.

## 10.3 Indivisibility of Units

No Single attacking unit may have its combat factor divided and applied to more than one battle. Likewise, no defending unit or stack may have part of its defense strength attacked by one or a few attackers while another part is attacked by others. Defending units stacked together may only be attacked as if they constituted one combined unit. No attacking unit may attack more than once per combat phase and no defending unit may be attacked more than once per combat phase.

## 10.4 Attack Sequencing

Aside from the restrictions described above, there is no artificial limit on the number of attacks each player may set up during his combat phase. The attacker need not declare all his attacks beforehand, and he may resolve them in any order he wishes, as long as the resolution of one is completed before that of the next is begun.

## 10.5 Basic Combat Procedure

Normally the attacking player should strive to have more attack factors involved in a given battle than the

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defender has defense factors. Such attacks are called "high odds attacks." To resolve them, the attacking player must first calculate his "odds." Do that by adding up the combat factors of all the attacking units involved in a battle; then determine the combat factors of the enemy units defending in the battle. Divide the attacker total by the defender total and round off (down) any remainder.

**Example:** 26 attack factors versus 7 defense factors yields an odds ratio of 3:1. That is:  $26 \div 7 = 3.71$ , which rounds down to 3. To turn that "3" into a ratio, you must set a "1" next to it on the right. Thus "3" becomes "3:1" (which is read "3-to-1"), which corresponds with a column on the Combat Results Table (on the map).

## 10.6 Poor Odds Attacks

Battles in which the attacking force has fewer combat factors than the defender are called "poor odds attacks." Procedures are modified in that now you divide the defender's total by the attacker's; round remainders up, and set the "1" on the left side.

**Poor Odds Example:** A force with 5 attack factors is attacking a force with 11 defense factors. Divide 11 by 5 ( $11 \div 5 = 2.2$ ), and round up (2.2 becomes 3), then set the "1" on the left of that "3," yielding odds of 1:3.

**Beginners Note.** "High Odds" and "Low Odds" attacks are simply terms of convenience, good for nothing more than indicating which of the two odds calculating procedures you'll use for a given battle. It's possible to have successes with low odds attacks, and fiascos at high odds. In general, though, the higher your combat odds, the better the chances for success in any attack. That is, you want to be attacking on the right side of the CRT. And, of course, in situations where the two sides have precisely the same amount of combat factors involved, no mathematics are necessary; odds will be 1:1.

## 10.7 Odds Limits

The column headings on the CRT range from 1:4 to 7:1. If the combat ratio obtained for a battle is 1:5 or lower, that battle automatically has a combat result of 4/0. If the combat ratio obtained for a battle is 8:1 or more, that battle has an automatic combat result of 0/4.

## 10.8 Combat Resolution Die Roll

To resolve a battle, find the odds column of the CRT corresponding to its odds ratio and roll a die. Look down the proper odds column on the CRT until you cross-index with the number you just rolled. That is your "combat result" for that battle. For example, if you're attacking at 2:1 and roll a "4," your result is "1/2."

## 10.9 Numeric Combat Results

Numeric results to the left of the slash apply to the attacker; those to the right apply to the defender. All results are given in terms of step losses to the forces involved. That is, each whole-number increment of the combat result means one step of the affected side must be eliminated.

Combat results are applied by the players among their own involved units as each sees fit, with the single exception that no involved unit of your side may be completely eliminated until all your involved units have first been reduced to one step.

## 10.10 Zero Combat Results

A zero (0) combat result means the involved forces of the side receiving that result are entirely unaffected; there is no step loss for that side.

## 10.11 Terrain Effects on Combat

Natural and manmade terrain have effects on combat, shown on the Terrain Effects Chart printed on the map-sheet, either by generating column shifts favorable to the defender or by halving the combat factors of attacking units. It is always the terrain in the defender's hex and long its hexsides that determines those effects; the terrain in the attacker's hex(es) has no bearing. In every battle, all applicable terrain effects are cumulatively applied.

## 10.12 Roads & Intact Bridges

Roads and/or intact bridges don't negate or modify any of the combat effects of manmade or natural terrain; they affect only movement and supply, not combat.

## 10.13 Water & Blocked Hexsides

When halving the combat factors of multiple units attacking through such hexsides, add up the factors of all the affected units involved in the battle and then make just one grand division. Round all remainders down.

Non-artillery units are not prohibited from making such attacks, not even those prohibited from moving across such hexsides. Similarly, artillery bombardment strengths are unaffected by such hexsides.

## Ω 10.14 Allied Combat Air Support

During Clear Skies game turns the Allied player has available either eight or four (see 5.3 and 5.4) aircraft units to support his ground operations. Each air unit may be committed once per game turn. For procedures for interdiction missions, see 9.19 and 9.20.

The Allied player may commit any air units not used for interdiction to provide direct combat ground support to any of his battles, offensive or defensive, during the game turn. No more than one plane may be committed per battle. The effect is to shift the odds one column in the Allied side's favor in the battles being so supported.

## Ω 10.15 Concentric Assaults

Whenever a single hex is attacked by units in opposite hexes, or by units in three hexes with one hex between each one and the next, or by units in more than three hexes, a concentric assault has been created, which works to generate a 1R odds shift. The presence of other units of the same side as those being concentrically assaulted in hexes next to the assaulted hex in no way serves to negate this shift. In the diagrams to the right the unit in the center is being concentrically assaulted.

## Ω 10.16 Parent Organizations in Combat

Non-artillery units from different parent organizations may never take part in the same attack, either from the same or different hexes.

# THE BATTLE OF THE BULGE

Defending units from different parent organizations stacked together in the same hex suffer no penalties because of their differing organizational affiliations.

## Ω 10.17 Independent Units in Combat

No more than four independent non-artillery units may ever take part in the same attack, either from the same or different hexes. Independent units do not suffer any defensive penalties when attacked while stacked with non-independent units or any allowable mix of independents and non-independents.

## Ω 10.18 Artillery in Combat

Both sides' supplied (normally or aurally) artillery units may each be used once per player turn couplet to assist in attacks or defenses.

All artillery units of both sides are independent units with special stacking and movement provisions, see 7.4.

Artillery units never actually attack the way non-artillery units do, either alone or in conjunction with non-artillery units. What they do instead is support the attacks and defenses of in-range non-artillery units by contributing their "bombardment factor" to the odds calculation process. Further, artillery units must be supplied in order to be able to bombard at all.

No artillery unit may both move and bombard during the same player turn couplet. They may move or they may bombard during a couplet, never both (see 5.6 and 5.7). Likewise, any artillery unit that is itself attacked during the course of an enemy combat phase should be flipped so its "DONE" side shows upward.

Artillery never conduct independent shoots; they bombard only in direct support of the attacks and defenses of their side's non-artillery units.

**Design Note.** The historic I.D.s. on Allied artillery units are read: "corps/group." Thus "3/1" means "the 1st Artillery Group of 3rd Corps." An I.D. such as "1 Army" means "1st Army's Artillery Group."

## Ω10.19 Artillery on the Defense

Every artillery unit has a defense factor of two (2) and one (1) step, no matter which side is showing upward. An artillery unit being attacked during an enemy combat phase cannot bombard to try to increase its own, or any other, hex's defense strength during that phase. (In such situations, the attacking player should resolve his attacks against enemy artillery units first.)

## Ω10.20 Artillery Range

All artillery units have a range of four hexes. Count from the artillery unit to the hex of the friendly unit being supported. Don't count the artillery unit's hex; do count the hex being supported. In a situation in which a multi-hex attack is being supported, four hexes to any one of the involved, friendly non-artillery units is enough to put the supporting artillery unit within range of the battle.

## Ω10.21 Artillery & Terrain

Artillery bombardment is never affected by blocked or unbridged water hexsides. Neither are there any "line of sight" requirements in this game.

## Ω 10. 22 Artillery Maximums

The Allied player may never commit more than five in-range artillery units to bombard in support of any one attack or defense; the German limit is two artillery units per attack or defense. British and US artillery units may provide support without regard to the nationalities of the units being supported.

## Ω 10. 23 Artillery Bombardment Strength

During each artillery-supported battle's odds calculation process, each player rolls one die for each of his bombarding artillery units. That result is that artillery unit's bombardment strength for that battle. Make a new calculation for each artillery unit each time it bombards.

## Ω 10.24 Support Declaration

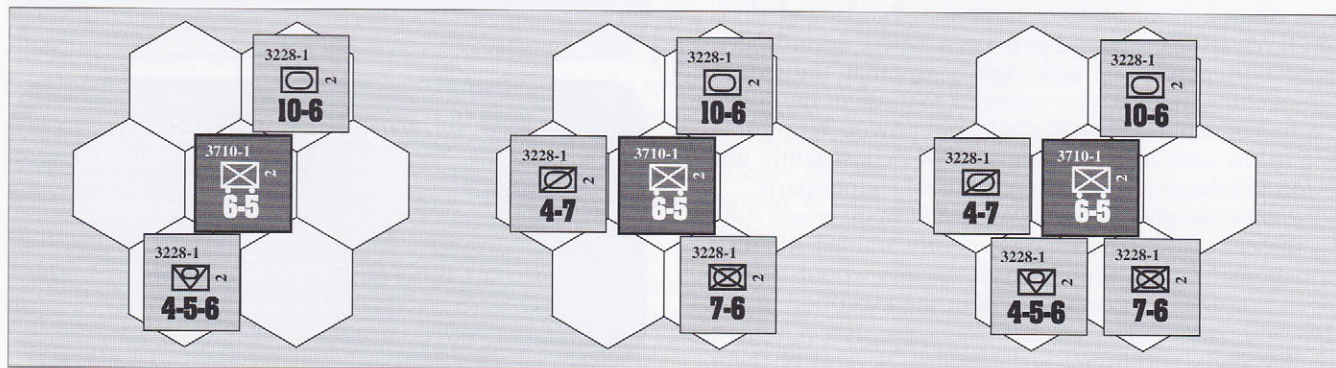
Artillery bombardment supports are declared by each player, attacker always first, on a battle by battle basis at the start of each one's odds calculation process.

## 10.25 Combat-First Odds Shift

In every player turn couplet in which a player uses the Fight/Move rather than the Move/Fight sequence, all his attacks gain a one column rightward odds shift.

## 10.26 Advance After Combat

Whenever all the defenders in a battle are eliminated, one, some or all of the involved non-artillery attacking units may occupy the vacated hex. Normal stacking limits apply, but this kind of movement doesn't require the expenditure of MPs. Advances are not mandatory, but the decision to do so must be made immediately, before the next battle's resolution process is begun. Victorious defenders never advance after combat; they simply hold their position.



# WAVE OF TERROR

Important stricture: victorious attackers are prohibited from advancing after combat across hexsides or into hexes they couldn't move across or into during their normal movement. For example, victorious attackers that just fought and won a battle across a major river hexside would only be allowed to advance after combat if an intact bridge were present across the hexside of the advance.

An advance after combat can trigger a bridge demolition attempt (see 9.14).

## 11.0 DESIGNER'S NOTES

You'd think that with all the games, official histories and other books on this subject, coming up with an exact order of battle would be easy. Actually, though there's a lot of O.B. data out there, much of it is contradictory. Unit histories proved most helpful, particularly those from outfits that were already veterans at the time this campaign began. Those from green units, like the US 106th Infantry Division, tended to be sketchy. German units were often difficult to pin down in that many of them had organizations for this battle that varied considerably from their earlier structures.

Anyway, I've always felt the "cannon counting" approach to assigning combat factors is never of much help. Through my research I tried to establish a general gauge of every involved "parent organization's" overall proficiency and then factored that into my final numbers.

I used the "cookie cutter" approach with Allied units because of the US Army's penchant, well developed by late 1944, for standardization. Of course, veteran divisions tended to gather up a lot of extra equipment, and that surplus is reflected in their greater staying power (higher reduced step strengths).

The Green American units required some shakedown, but still mostly fought pretty well. They start out as sixes, but after a round of combat lose half their strength.

Airborne units had fewer men in their line companies and lighter weapons for support, but still managed to generate about the same staying power as their ground-pounder brethren. I rated US glider infantry units one point lower because those troops were considered the black sheep of the airborne community, demonstrated slightly less elan, and were chronically understrength.

The battalions from both sides' armor and panzer units are assumed to actually go into battle as combined arms groupings of tanks, infantry, engineers and division-held artillery, and have been rated accordingly. Many will point out, and rightly so, that individual German tank models were superior to those of the Allies in terms of armor protection and fire power. Yet by this time in the war, Allied armor divisions consistently outperformed their German organizational counterparts.

Perhaps the greatest mistake the Germans made during the campaign was sending poorly trained infantry formations into a battle in which success would largely depend on their performance. With the exception of the 12th and 26th Volksgrenadier Divisions, few German infantry units performed well. Indeed, several of them

were shot up so badly on the first day that they failed to make any significant contribution throughout the rest of the campaign.

But though all the German units were rated according to their highly varied offensive capabilities, it was assumed they could all defend well (and they did). Few of the German infantry units had participated in offensive fighting in the recent past, but they all had men well experienced in defensive fighting.

I realize I might have gone against the grain in simply "factoring in" von der Heydte's paratroop drop. But in my opinion, given all the factors weighing against him, the colonel's mission had no real chance of success. A lot would have had to change for his detachment of 1,300 troops to have been able to make a difference as a combat unit. So why go through the exercise of a drop with a suicide die roll (one through five you're dead)? Even a full strength von der Heydte unit would have been swiftly overwhelmed by any American division.

The real contribution of the von der Heydte paratroop drop is reflected in the US reinforcement schedule. One combat command of the 3rd Armored Division and one regiment of the 1st Infantry Division arrive at the front several days after their divisions' main bodies. While that delay can hardly be described as decisive, you'll find getting those American troops earlier would sure have been handy.

What you have here is a game without a lot of chrome. There are no troublesome unit "modes," combined arms bonuses, tank-type comparisons, headquarters units and chains of command, complex logistical rules, and so on. After all, what are all those staff-weeny REMFs for if not to accomplish all that stuff for you — the commanding general?

The game is intended to be able to be set up and played to a conclusion over a long Saturday gaming session, or maybe over a couple weekday evenings. Players are given a system that sets them to combating each other, not the rules. ★

If you have questions about these or any other XTR/Command game rules, write us at  
PO Box 4017, San Luis Obispo CA 93403, or e-mail  
to [perello@aol.com](mailto:perello@aol.com).

Please include a stamped, self-addressed envelope.  
We prefer questions to be phrased for Yes/No  
answers.

### XTR on the Internet

An independently maintained WWW page dedicated to  
XTR/Command games.

Official errata, reviews, articles, sneak previews of upcoming games  
etc. can be found at:

<<http://www.peg.apc.org/~filthy/xtr-home>>

For more info contact Phil Thé at <[filthy@acslink.net.au](mailto:filthy@acslink.net.au)>

# COMMANDER'S CALL

by Ty Bomba

## This Issue's Game

Ah, the Ardennes — the original "forest of the night." Whenever our treading of the feedback path brings us 'round to revisiting one of the hobby's classic topics — and the Battle of the Bulge certainly has to be one of the most classic — the final playtesting here at our offices always takes on a special intensity and feeling of elation. Understand, then, you are about to play a wargame that's simple and elegant in design, sound in simulation value, and — best of all — a most excellent, brutal and monstrous-fine fight. To designer Desch I say: "You duh man, John — you duh man!"

## The Game Schedule

Ted Raicer's turned in one of his projects, and I've added one of Chris Perello's new voter-approved proposals to the schedule (see the box). Beyond the games now scheduled (which means they're either already turned into our office or are being done by Chris or me), I feel confident about the following projects coming in soon: *The Old Contemptibles: The Battles of Mons and Le Cateau*, by Ron Bell; *Clash of Giants: The Battle of the Marne*, by Ted Raicer; *Operation Crusader and Cantigny: The AEF's Baptism of Fire*, by John Desch; *So Far From God: With Scott in Mexico*; and *Greasy Grass: Custer's Last Stand*, both by Hans von Stockhausen. (Note also that among those seven games only *So Far From God* is a mini-monster; all the rest are one-mappers.)

## Feedback From No. 39

In a nutshell, the voting on the new game proposals in hobby edition no. 39 assures Chris Perello will be busy as a game designer for years to come. Only one of his proposals, *Sidi Rezegh*, failed to get the needed 6.20 for voter approval (it drew a 5.12); the others scored this way: *Waterloo & Laon* - 6.48; *Borodino* - 6.44; *Chancellorsville* - 6.22; and *Kasserine* - 6.30. The *Spanish Civil War* proposal, from neophyte designer Javier Romero, also got a thumbs up at 6.28.

You second thoughts on *Mukden* came in this way (first survey/second survey): overall - 6.63/5.77; map - 6.60/6.42; coun-

ters - 6.36/6.31; rules clarity & completeness - 7.09/7.08. You played *Mukden* to completion an average of 2.00 times, taking 2.83 hours to do so each time. As a result of that experience you rated its complexity as 4.36. Twenty-seven percent declined to express an opinion on the game's playbalance, while 11 percent said the Japanese are heavily favored to win, and another 33 percent said that same side is slightly favored. Only six percent thought the game equally balanced, leaving 16 and seven percent, respectively, maintaining the Russians are slight or heavy favorites to win. Eighty-three percent concluded *Mukden* was a good choice for publication in the magazine; 17 percent said no, it wasn't. (Without doubt, THE complaint we heard about *Mukden* was: "Wah! The Russians can't do anything but defend!" Sad but true — the historic Russian commanders were pretty bummed about that too.)

Your second thoughts on *The Moscow Option: Guderian's Gambit* were: overall - 6.74/6.26; map - 6.15/5.89; counters - 6.40/6.38; rules clarity & completeness - 7.19/6.89. You played it to completion an average of 2.42 times, taking 2.53 hours to do so each time, and thereby concluded it has a complexity of 4.48. Twenty-eight percent declined to judge its playbalance, while five percent and 21 percent said the Germans are heavily and slightly favored to win, respectively. Thirty-one percent said the game is evenly balanced, leaving nine percent who testified the Soviets are slight favorites to win, and a slender three percent who claim they're the heavily favored side. Eighty-two percent said TMOGG was a good choice for the magazine; 18 percent said no it wasn't. (On the perceived playbalance-imbalance, my feeling is the more "glamorous" side is always the one that gets the greater amount of intellectual effort put into perfecting its strategies first.)

You rated the contents of hobby edition no. 39 this way: *Hoorah!* overall - 6.63; map - 6.17; counters - 7.19; rules clarity & completeness - 6.69;

D-Elm - 6.00; *Strike North* overall - 7.00; map - 6.22; counters - 6.48; rules clarity & completeness - 6.53; Commander's Call - 6.53; Hobby Edition no. 39 overall - 7.12. A fat 42 percent thought hobby edition no. 39 was better than no. 38; 40 percent said the two were of about equal worth; 12 percent thought the earlier issue the better of the two; and six percent declined to express an opinion.

I also asked five "general survey" questions in that issue. The answers, though in no way really shocking, are still interesting.

Twenty-eight percent of you say it's true you won't play any game that requires the use of roster sheets to track unit strengths. That's more than I would have liked to see answer that question in the affirmative, but then I also always figure at least 20 percent of you will respond negatively to any question I pose. So my feeling is the response shows we don't need to be overly concerned that publishing a game with rosters is a waste of time. (I was moved to ask the question because I'd noticed some feedback cards come in, whenever we do a game with rosters, with comments along the lines of: "I really like this topic, but I won't play this game

## Issue Game Schedule

Issue Game Title(s)

### 1997

- 42\* Blitzkrieg '40 & Shiloh
- 43† Chattanooga
- 44\* Second Front Now & The Alamo
- 45\* Sea Lion & The Battle of Yarmuk
- 46† End of Empire
- 47\* Attila: Scourge o' God & Perfidious Albion

### 1998

- 48† Tomorrow the World, 2nd Ed.
- 49† The Great Rebellion
- 50\* Meuse-Argonne & Iron Dream
- 51\* Armies of the Czar & Waterloo/Laon

## Notes

\* = Two-game issues

† = Mini-Monster issues

because of having to use rosters! Wah!") And those of you who are ag'in' 'em, don't fret; looking at the schedule, it appears we won't be doing another game with roster sheets for over a year.

In response to my question asking you to tell how many paper wargames you own, the answers ranged from a low of four to a high of "600 plus," with the average being 186. I seem to remember when I asked the same question during the first year of our operation the average was 149.

Your reported ages averaged out to 40.08 years. That figure's also up, I believe, from about 37 or 38 back in 1989. Most chillingly, the youngest respondent in the survey gave his age as 27. So, at this rate we can estimate our hobby of non-computer wargaming has about another 30 years to go.

You've been in the hobby an average of 24.6 years. The smallest figure here was one year, the highest was 35.

And, last, 24 percent of you say you play one or more computer wargames each month. What I take from that is the computer revolution has not yet really arrived for our hobby. The software and hardware aren't yet good enough to replace paper and cardboard for those of us really savvy, really in the know and really cool. Forward.

## Issue 41's Feedback Loop

Please use the combined newsstand/hobby edition feedback card bound into the magazine to vote on the following new game proposals and survey questions. Vote by placing one whole number (only!) on the corresponding spaces on the postcard. If it's a rating question, "0" means "Don't publish this game under any circumstances;" or "This article was so uninteresting I didn't even read it!" From there, each higher number indicates a slightly more favorable opinion, until you get to "9," which means: "This game idea is top-notch; please publish this game as soon as possible!" Or: "This article couldn't have been any better!" In yes/no questions, "1" means "yes," and "2" means "no," and "0" means "no opinion," or "not applicable."

Next issue we'll present the feedback results from issue no. 40. To be counted in the voting on this issue, your card must reach us by 15 March.

**1. Borodino 1941.** In October 1941, the German army had advanced to within 100 kilometers of Moscow. For the invaders, the victorious end of the war in the east seemed to be at hand. The 40th Panzer Corps, consisting of the 10th Panzer Division, SS Motorized Infantry Division "Das Reich," and other attached units, had reached Napoleon's old battle ground from 120 years earlier. Manning the Mozhaish defense line was a motley group of Red units (including one tank company

without engines for its vehicles), quickly thrown in the way of the advancing enemy. But enroute from Vladivostok is the 32nd Rifle Division, along with new tank brigades and anti-tank units. These reinforcements have been ordered to hold the Germans "at all costs," to create time for the Soviets to build and man defense lines farther east. If the 32nd doesn't hold, there is nothing left to stop the invaders on the way to Moscow.

This game will be a tactical/operational treatment of this little known but important engagement between 40th Panzer Corps and the hastily assembled Soviet forces in the vicinity of Mozhaish and Borodino. Rules will take into account the use of direct and indirect artillery fire, combined arms and armor in combat. But artillery rules will be structured so as not to over burden players while still giving the proper treatment to the big guns' effects at this scale. Using the strengths and weaknesses of both side's combined arms capabilities will be the ultimate test of success for the two players.

There will be 200 half-inch counters, depicting units at company and battalion levels. There will be one 34x22" small-hex map, at about 800 meters per hex. The complexity will be about 5.5, by Timothy B. Frank.

**2. Hedgerow Hell: The Normandy Breakout.** This two-map mini-monster will use the Wave of Terror system, along with its time, ground and unit scales, to simulate the decisive phase of the 1944 Normandy campaign, from 16 July through 23 August (Operation Cobra).

The joined mapsheets will cover the entire Anglo-American front, from Caen west to the Gulf of St. Malo, and south past Avranches and the Argentan/Falaise area. There will be between 720 and 960 half-inch units (mostly battalions). The game will be rich in the chewy, crunchy, salty sweet, high-fiber goodness that's made WW2 games so popular. Guaranteed to loosen and scour the arterial plaque build up that can occur in gamers who indulge in a diet of too many non-WW2 titles. For the magazine by Ty Bomba.

**3. The Balkans 1940-41.** At 5:30 a.m. on 28 October 1940, Greece became the 10th victim of Axis aggression in World War II. All along a 100-mile front on the Greek/Albanian border, Italian forces attacked expecting an easy victory. The mountain warfare continued through the winter and into the spring, with both sides fighting to a stalemate. By April, Italy needed assistance from Germany to get out of the mess. Hitler, preparing for the invasion of the USSR, couldn't allow the Balkans to become an open southern flank behind his advancing armies. Hitler therefore ordered an attack on Yugoslavia and Greece.

This game will be a straightforward treatment of the Balkan campaigns from October 1940 through April 1941. There will be two short scenarios and a campaign game linking the two. The first scenario will cover the Italo-Greek War from October 1940 through March 1941. The Second scenario will deal with the German invasion. There will be about 300 half-inch counters, with units depicted as divisions, brigades and regiments. The 34x22 large-hex map will show all of Greece, Yugoslavia and Albania at 16 miles per hex. Complexity will be about 5.0. By Timothy B. Frank.

**4. The Russo-Finnish War, November 1939 - March 1940.** For their war against Finland, the Soviets initially deployed some 600,000 troops on the border between Leningrad and Murmansk. Against that horde, the Finns were able to muster no more than 150,000 troops, with virtually no armor or heavy artillery. Because of that, the Soviets expected the campaign would last no longer than two weeks. But with tenacity and individual soldier initiative, the outnumbered Finnish army was able to slow down and some case halt the Reds at the Mannerheim Line and elsewhere along the frontier, climaxing with the destruction of two invading divisions at Suomussalmi. The Finnish ski troops, partisans, tank-killer teams, and the Arctic environment did much to frustrate Stalin's bid for a quick victory.

This game will have one 34x22" large-hex map scaled to 16 miles per hex and showing all of Finland

and the adjoining territory. There will be 200 counters, depicting units as divisions, brigades and regiments. Units of the Communist "Finnish National Army" will be included, along with foreign volunteers and optional Western intervention forces.

Rules will take into account the capabilities of the Finnish ski troops and partisans, the inefficiency of the Soviet command structure and their eventual refinement enabling them to better coordinate their attacks. Other rules will allow for lengthening the campaign and the entry of British and French units. Complexity will be about 5.0. By Timothy B. Frank.

**5. The Third World War in Poland.** The potential for war in central Europe has virtually ended since the collapse of the Soviet Union and the reunification of Germany; however, there are forces and factions at work that could eventually plunge the continent back into war. TTWWIP will cover that possibility in a multi-scenario format. It will be a two player game illustrating a number of possible wars that might be waged across the Polish plains in the near future, from a reexpanding Russia to a German move to reclaim East Prussia. The map will include all of present day Poland, along with most of the Czech Republic, Slovakia, western Belarus and the southern Baltic.

Russian units will be corps-sized tank and combined arms "army echelons," along with some airborne divisions and division-size "operational maneuver groups." Those types of units will emphasize the Russian doctrines of weight combined with operational subtlety. They will also be relatively fragile to represent the great technological gap that's come to exist between the forces of the old Soviet empire and the western Alliance. The Poles, Czechs and Slovaks will use division-size units that will show their greater need for flexibility and willingness to try to adopt western doctrines. Western units will include British, German, US and French forces. The first three will be represented by brigade-size battlegroups, while the French will be shown in their small divisions.

All units in all the armies will have extensive zones of control, representing the "Deep Battle" doctrines of all the forces involved. Each hex will equal 10 miles, therefore one hex will be within the immediate range of the units' major weapons, two hexes for heavy artillery, and out to 10 hexes for helicopter strikes. Airpower and air defense will be dealt with abstractly, but will still have important effects on ground maneuver and combat. Battlefield missiles and IRBMs will be included, as well as nuclear and chemical weapons.

Special rules will cover the use of nukes, anti-satellite weapons and electronic warfare. There will be one 34x22" small hex map and approximately 280 half inch counters. Complexity will be about 5.0 to 6.0, by Adam S. Carmichael.

**6. New Orleans, 1862.** This game will deal with the Union capture of the city on an operational level, covering both land and naval components with a large-hex map showing the area from the city to the mouth of the Mississippi River and on to 100 miles below in the Gulf of Mexico. The 5/8 inch counters will include all the historical naval and land forces, as well as the fortresses, involved.

A second scenario will consider the situation that could have resulted had the British and/or French aided the Confederates in their defense. A third scenario will cover the possibility of a Confederate/European land and sea offensive to retake Union-held New Orleans late in 1862. A fourth scenario will consider the results of an improved Rebel defense in 1862, examining the possible outcomes if they'd kept sufficient ground forces in the area rather than sending them north to Shiloh and elsewhere.

The game's mechanics will be of low complexity, with solitaire play easy to accomplish. By Adrian McGrath and Chris Smith, both of whom are residents of New Orleans.

**7. Invasion: Pearl Harbor.** This will be a low-complexity what-if game covering a hypothetical Japanese invasion of Hawaii during World War II. A second scenario will cover a late-1942 US counter-invasion to begin retaking the islands. The game will be set on the operational level, with the large-hex map showing the

entire island of Oahu. The focus will be on land combat, but will have important air and naval sub-systems. A two player game, but with solitaire play easily accomplished. By Adrian McGrath and Chris Smith.

**8. Pharaohs & Kings: Ancient Empires at War.** This will be a strategic-level, low-complexity, multi-scenario examination of the most important military operations conducted during the rise and fall of ancient Egypt, Babylon, Sumer, Assyria, Israel, Judea, etc. Scenarios will range across the period from 2300 (the time of Sargon "the Great" of Akkad) to 600 BC (the fall of Nineveh and the end of Assyria). The full-size, large-hex map will cover from Upper Egypt to the Nile Delta, then east across the Levant from Jerusalem to Carthage, and through Mesopotamia past the Tigris and Euphrates to the Persian Gulf.

The counter mix will include infantry, light cavalry, chariots, slingers, archers, baggage trains, leaders, fortifications and siege equipment. Naval warfare will be included as an abstracted sub-system. The game will be playable solitaire, two- or multi-player. By Adrian McGrath and Chris Smith.

## Second Thoughts on Issue 39

Please reevaluate the games from hobby edition no. 39.

9. *Hoorah!* game overall
10. Map
11. Counters
12. Rules Clarity & Completeness
13. Estimate *Hoorah!* complexity from 1 (simple) to 9 (hyper-complex).
14. How many times have you played *Hoorah!* to completion? (0-never; 1-once; 2, 3, etc., 9-nine or more times.)
15. How long does it take to play *Hoorah!* to completion? (0-can't say; 1-about one hour; 2-about two hours, etc.)
16. Which side is favored to win *Hoorah!* between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Confederates/British are heavily favored.
  - 2 — The Confederates/British are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Union is slightly favored.
  - 5 — The Union is heavily favored.
17. Was *Hoorah!* a good choice for publication in the magazine? (1-yes; 2-no)
18. *Strike North* game overall
19. Map
20. Counters
21. Rules Clarity & Completeness
22. Estimate the complexity of *Strike North's* 1940 scenarios using the 1 (simple) to 9 (hyper-complex) scale.
23. Estimate the complexity of *Strike North's* 1943 scenarios using the 1 (simple) to 9 (hyper-complex) scale.
24. How many times have you played a 1940 scenario to completion? (0-never; 1-once; 2, 3, etc., 9-nine or more times.)
25. How many times have you played a 1943 scenario to completion? (0-never; 1-once; 2, 3, etc., 9-nine or more times.)
26. How long does it take to play a 1940 scenario to completion? (0-can't say; 1-one hour; 2-two hours, etc.)
27. How long does it take to play a 1943 scenario to completion? (0-can't say; 1-one hour; 2-two hours, etc.)
28. Which side is favored to win 1940 Scenario I more often in matches between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Germans are heavily favored.
  - 2 — The Germans are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Allies are slightly favored.
  - 5 — The Allies are heavily favored.
29. Which side is favored to win 1940 Scenario II more often in matches between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Germans are heavily favored.
  - 2 — The Germans are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Allies are slightly favored.
  - 5 — The Allies are heavily favored.
30. Which side is favored to win 1943 Scenario I more often in matches between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Germans are heavily favored.
  - 2 — The Germans are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Allies are slightly favored.
  - 5 — The Allies are heavily favored.
31. Which side is favored to win 1943 Scenario II more often in matches between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Germans are heavily favored.
  - 2 — The Germans are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Allies are slightly favored.
  - 5 — The Allies are heavily favored.
32. Which side is favored to win 1943 Scenario III more often in matches between opponents of equal skill?
  - 0 — No opinion, or can't say.
  - 1 — The Germans are heavily favored.
  - 2 — The Germans are slightly favored.
  - 3 — The game is evenly balanced.
  - 4 — The Allies are slightly favored.
  - 5 — The Allies are heavily favored.
33. Was *Strike North* a good choice for publication in the magazine (1-yes; 2-no)

## This Issue

Rate the contents of hobby edition no. 41.

34. *Wave of Terror* game overall
35. Map
36. Counters
37. Rules Clarity & Completeness
38. Commander's Call
39. Chrisfire
40. Hobby Edition no. 41 overall
41. Was this issue of the hobby edition better than the previous? (0=no opinion, or can't say; 1=yes; 2=no; 3=the two were of about the same value.)

# ERRATA

## Strike North

We'll publish replacements for those counters in #44, the next one in which we'll be using 5/8" in counters.

## 1943 Counters

The British 1st Airborne Division is not motorized; it shouldn't have the two wheel dots beneath its type box. The German 1st and 2nd Paratroop Divisions, 4th and 20th Luftwaffe Field Divisions and the Hermann Göring Panzer Division are inappropriately printed field-gray, rather than sky blue, on their front sides.

## 1940 Counters

The British 24th Guards Brigade wrongly transmutes into the "246" Brigade on its substitute counter.

## Buena Vista

### Counters

We'll print replacements for the following counters in issue 42.

One of the American Saltillo Garrison units is missing its reverse-side factors. They should be a morale rating of "3" and a shock value of "4." The Mexican Pueb/M unit figure is missing on the reverse. Both units of the Mexican 7th Cavalry belong in Torrejon's (T) brigade.

On some countersheet the setup numbers for five Mexican units disappeared. They are: Guan/J - 4424, SL/J - 4424, 3/T - 4516, 3/J (3/T) - 4516, 7/T - 4516.

## Moscow Burning

### Counters

The Event Locator chit reading "1422" should read "1442" (Taganrog). ★

Since 1983

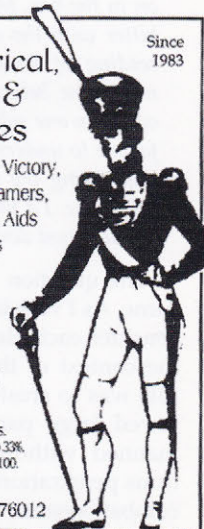
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# CHRISFIRE

by Chris Perello

Anybody who has played one of my designs knows I am fascinated by combat resolution processes. Each of my games has been built around a somewhat unusual combat system. *Mason-Dixon* (#35) is no exception. For those not familiar with it, the MD combat system features a number of quirks. The terrain in the defender's hex governs the combat stacking limit for both sides; the more constricted the terrain, the fewer units can fight in the hex. The number of dice rolled per combat varies from one (for the best prepared and supported attacks) to three (for hasty or unsupported attacks). Ground units are rated for their ability to move to battle and exploit success; the higher the rating, the higher the unit's maneuverability before and after combat. Most combat results are exchanges, but there are five types, each using a slightly different calculation for steps lost. After most battles, the attacker may advance into the defender's hex even if the defender is not eliminated, forcing the defender to counterattack or retreat in his turn to avoid being pocketed in hex.

The rationale for much of this is covered in my designer's notes. Still, there just isn't enough room to explain everything. One of the areas I did not discuss in the designer's notes was the nature of the exchanges, and I've fielded a lot of questions about that. The following came via e-mail:

*The biggest paradigm shift comes with the combat table. ... In the rules it is mentioned that unless the result is an SX, only one step is ever lost by a unit. We're doing that, but our brains are frying, trying to make a new model of what's going on in the hex. My confusion is especially bitter with the exchanges, like HX. The reading of its description in the rules makes me believe total annihilation will occur on one side. The other part difficult for me to understand is the flipping sides and taking the face value instead of the difference. I'd like to hear your reasons. I like it, I just don't understand it enough.*

The question goes to the heart of the game. As I've said before, it's important to consider each element of a design within the context of the whole. The context in MD was to create a game system that allowed large parts of a front to be unmanned without allowing deep, disastrous penetrations by the other side, and a combat system that rewarded planning

and allowed for wide variations in the size of forces involved (varying from one brigade to 10 divisions per side in a single battle). That virtually demanded an exchange-based combat results set, since the losses suffered in a battle would be determined by the size of one side.

The variety of exchanges was created to allow more flexibility in combat results. It also allowed me to structure the counters so in some types of exchanges certain units would be effectively invulnerable. For example, in a Half Exchange (HX) in the 1995 Scenario, a US armored division (9-5-4) attacking a CSA mech brigade (5-4-0) takes no losses: the CSA unit would be eliminated (losing more than half its defense strength), while the US unit has to lose no more than two defense factors (less than or equal to the defender's loss), but can only lose five or zero, so it loses zero.

Relatively few people are actually killed while a unit is functioning well — it is able to suppress the attackers to keep them from focusing their fire. Most casualties occur when the structure (organization, cohesion, call it what you like) of the unit breaks down and the attacker is able to mass fire against parts of the defending unit. This is as true in modern combat as it was in the days of linear tactics.

A unit's defense factor represents the threshold at which the unit structure breaks down. Damage inflicted at a lower level kills individuals but does not affect the unit as a whole. A unit with a high defense rating has some combination of large numbers of troops/weapons, mixed arms, high morale, and excellent training. A low rated unit could have poor morale, or be particularly susceptible to casualties (read light infantry, though they are tougher in close terrain). The face value is taken in the exchange because it means that threshold has been reached.

The changes from front to back of a two-step unit reflect the same basic factors. In units where there is a significant drop, the unit has lost some important part of its structure, either physically or in morale terms. For example, in the 1917 scenario, most infantry divisions drop from attack factors of "3," "4" or "5" to an attack factor of "1." These units have lost not only a lot of bodies, but also the hard core or officers and NCOs who provide the bulk of the motivation and coordination on the attack. On the other hand, the same units generally retain most or all of their defense factors. This is because in 1917 most of the losses were among the infantry, leaving the machine gunners, artillery, communications and administrators intact. In general, the better trained

and equipped a unit, the less effect losing a step has on it.

The distinction between one- and two-step units has little to do with morale or training. Even raw unit size is not critical, though obviously a larger unit would be better able to take losses and continue to function. The distinction really is a reflection of the administrative base of the unit. A two-step unit has an effective administrative base allowing the rapid replacement of soldiers and equipment. A one-step unit has too restricted an administrative base to withstand any serious level of casualties. Note this is regardless of the official size of the unit: many Soviet and German infantry "divisions" in WWII would be treated as brigades in this game (as the CSA Mexican units are). \*

## Classified Ads & Conventions

**Crusades '97** hosted by Conn. Game Club. Our fifth annual wintercon, 10-12 January 1997 (MLK weekend) daily from 9 am - midnight. Ramada Inn, Norwalk CT (203/853-3477 for room rates). Primarily historical miniatures and collectible card games, with rpg and boardgames included for the first time. For info contact Phillip Spera, 2 Sibley Lane, East Haven CT 06512, 203/469-9391, e-mail Phillip.Spera@usa.racal.com.

**JOHN CON '97**, Johns Hopkins University, 21-23 February 1997. Sci-fi, fantasy, comics, role-playing. Guests of Honor are writer Michael Stackpole, artist Lissanne Lake, and Stan Sakai, creator of Usagi Yojombo. 24-hour gaming, movies, art show, dealer's room. For info contact Sarah, Julian, Marc or Marcus at 410/467-3137. Web page <[http://hops.cs.jhu.edu/~marcus\\_d/johncon.html](http://hops.cs.jhu.edu/~marcus_d/johncon.html)>.

**Wanted:** Poland '39 variant counters from Command 19 and #20. Kevin Treese, 317 West Sherman, DuBois PA 15801.

**FOR SALE:** Classic Command issues 1 & 2. Both mint with game. \$100 postpaid. Mark Stille, 11308 Crescendo Place, Silver Spring MD 20901.

**WANTED to buy:** AH/VG "Napoleon on the Danube" and "Napoleon at Bay." Francisco Ronco Poce, C/Sánchez Perrier n°5, Casa 6, 3°F, 41009 Sevilla, Spain, or call (95)438-3864 in Spain.

**ORCON 20**, 14-17 Feb 1997, LA Airport Wyndham Hotel (formerly the LAX Hyatt). All types of family, strategy and adventure board, card, role-playing, miniature and computer gaming, plus flea market, auction, exhibitors, seminars, demonstrations, special guests. STRATEGICON, 333 N San Fernando Blvd, Burbank, CA 91502, 808/848-1748.

**WANTED:** SPI Army Group South Quad; GDW Bar Lev and Burma. Punched OK. Eric Ellingson, 445 Erin Dr, Marion, IA 52302.

**FOR SALE:** 100+ wargames (classics to recent), 250+ military & history books (new and used). Build your game and book library at very reasonable cost. Send 32¢ stamp for full list. Larry Burman, 2824 Maryland Ave., Baltimore MD 21218. \*

## Wave of Terror

**Counters.** There are five replacement counters on the *Hell Before Night* countersheet #1. The *FEB* bicycle battalion has an MF of 4, not 6. The battalion of the German 276 ID replaces the original unit with factors of "3-7-6.". The *Lehr* panzerjäger battalion has a corrected setup hex. The battalion of the US 1 ID replaces the one printed with a combat strength of 5. The US VP marker replaces one of the two "x100" markers on the original.

**9.17 (addition).** Exception: During both player turn couplets of Game Turn 3, the column movement rate for all units of the US 101st Airborne Division is triple, rather than just double, the normal road rate. This reflects the fact that during their first day in the battle area that division's trucks kept their headlights on while driving in the dark. That was against regulations for movement in a battle zone, but it did allow them to move much faster than otherwise would have been possible. ⚡

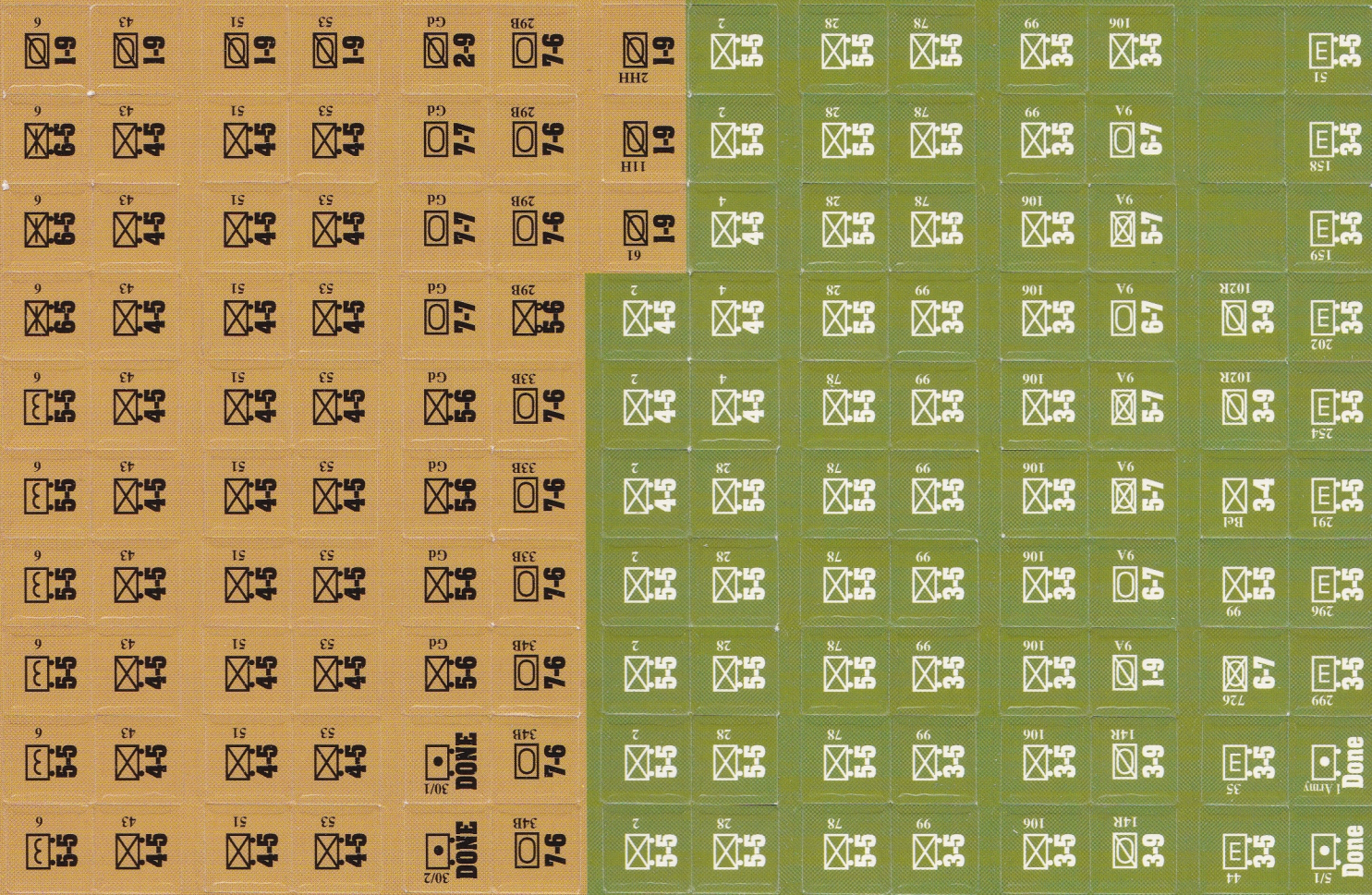




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**This is a supplement to Command #41**



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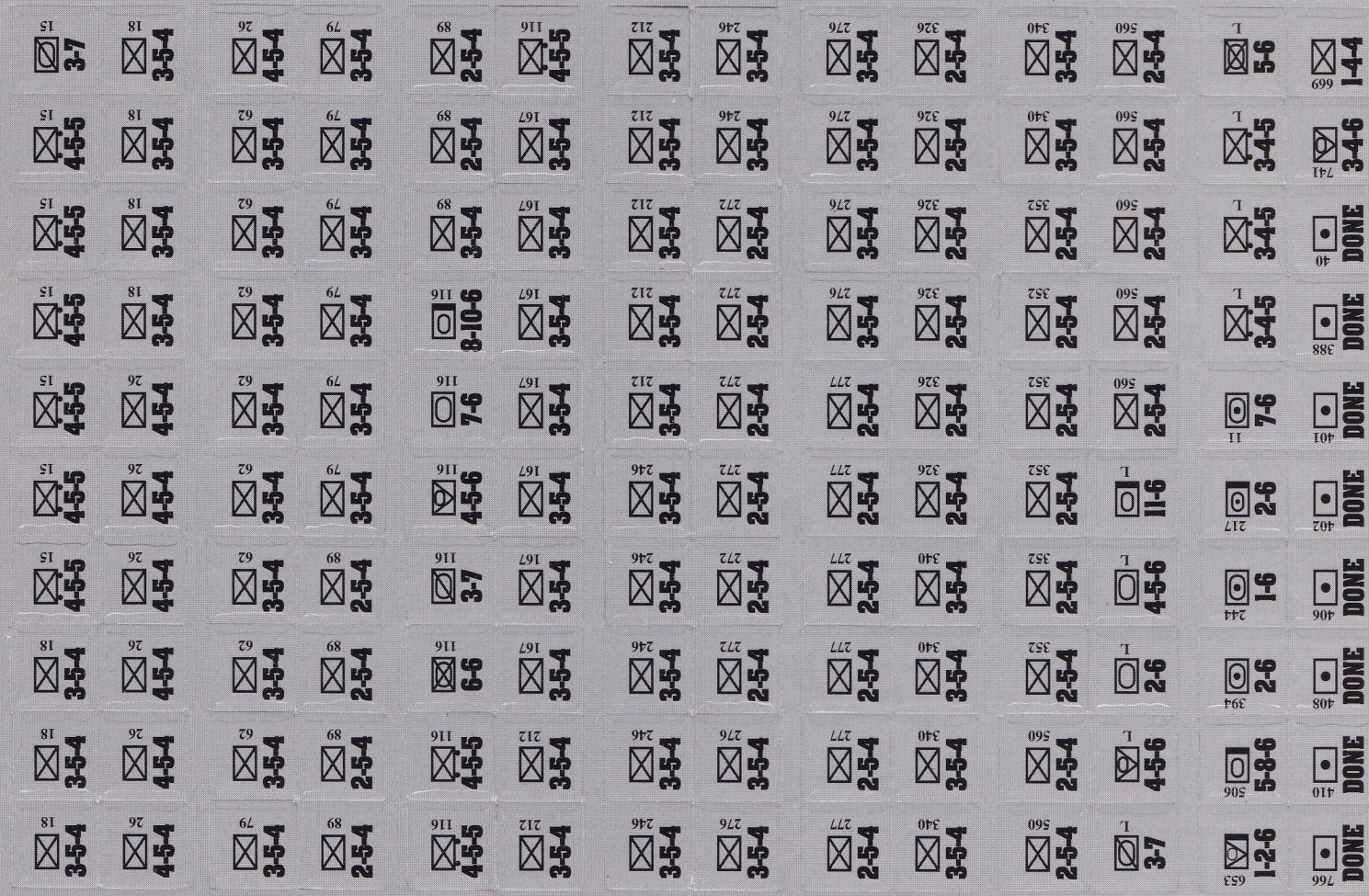
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


























































































































































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

































































































































































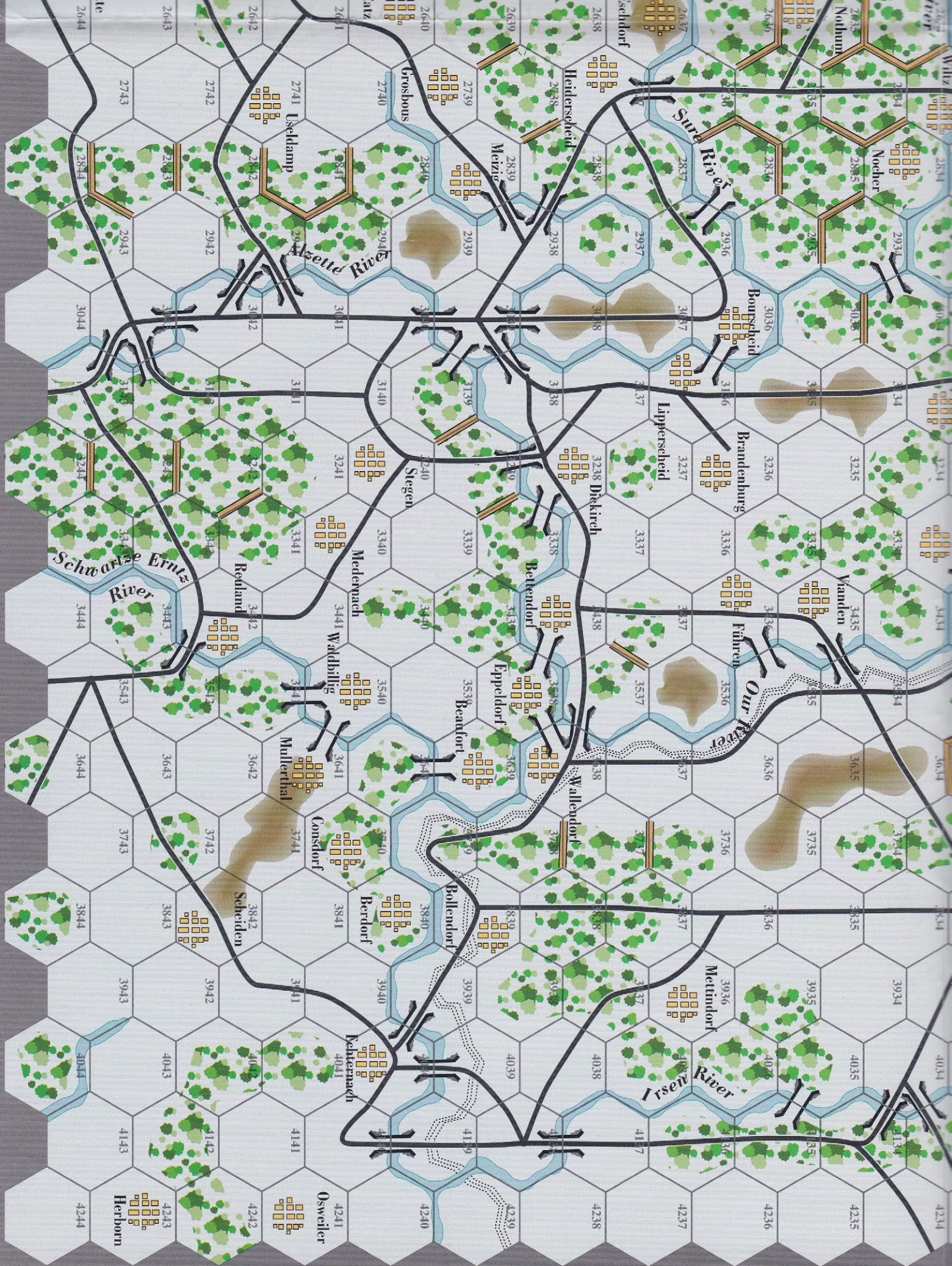
# Wave of Terror

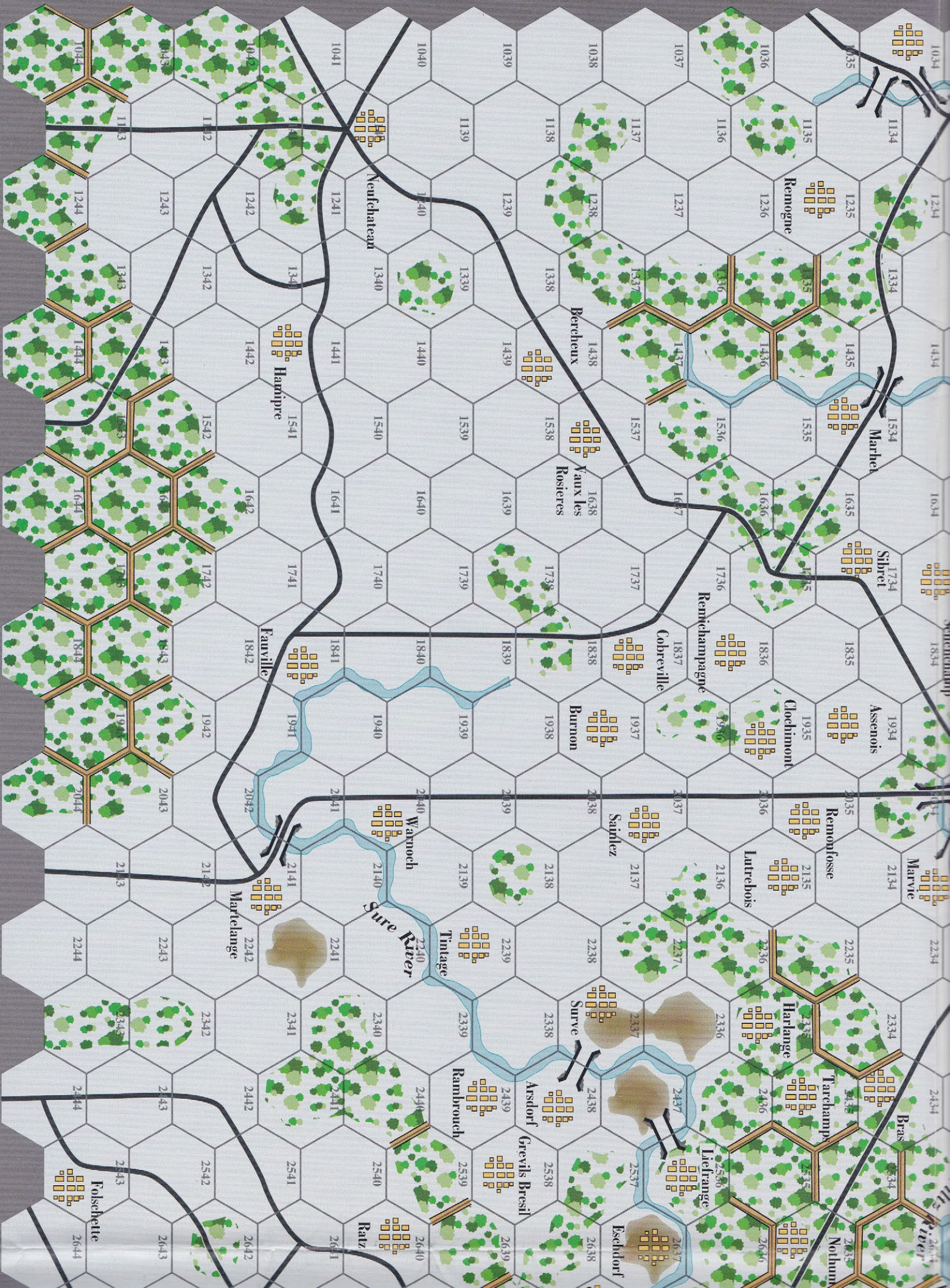
FRONT 1 of 3

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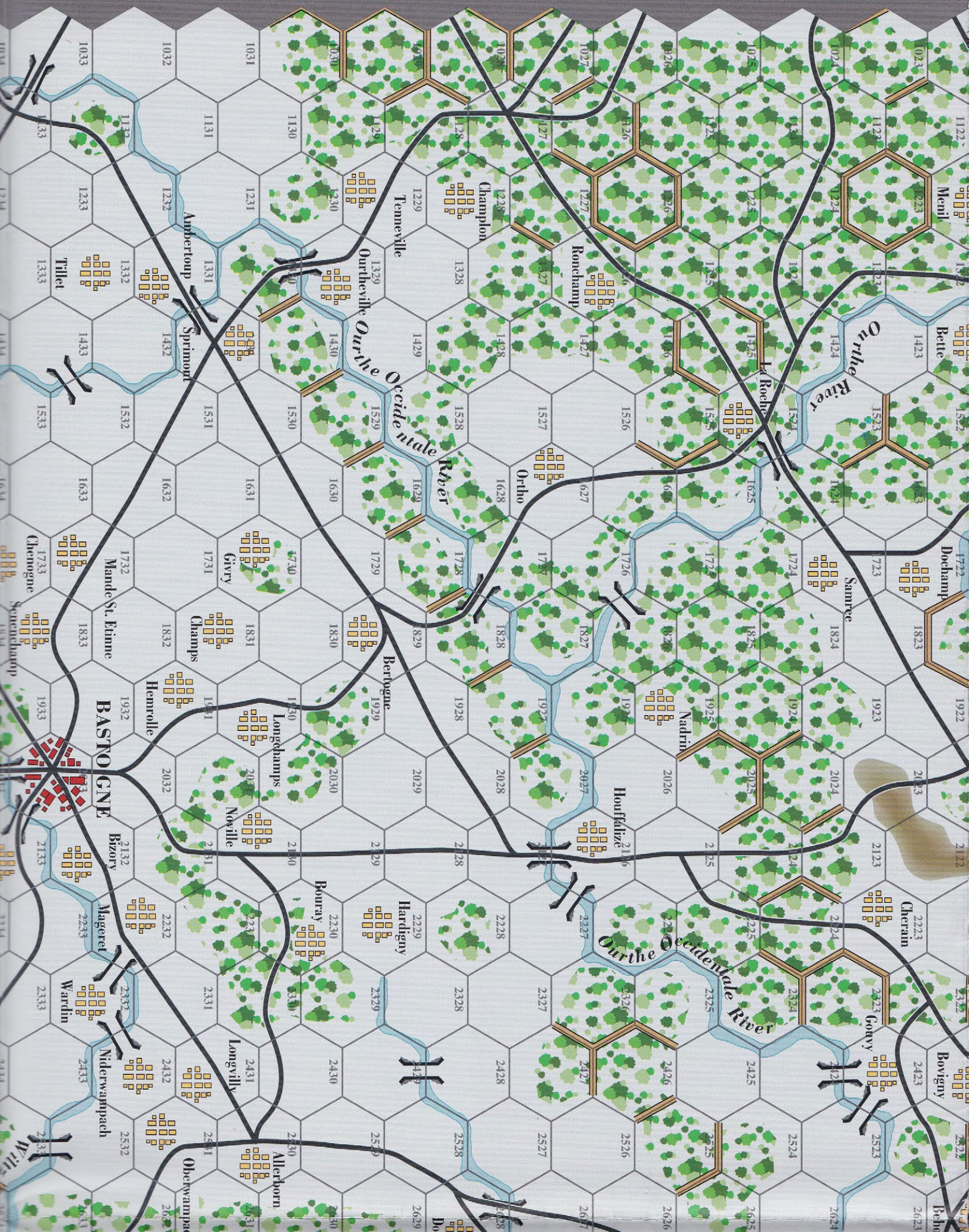
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									

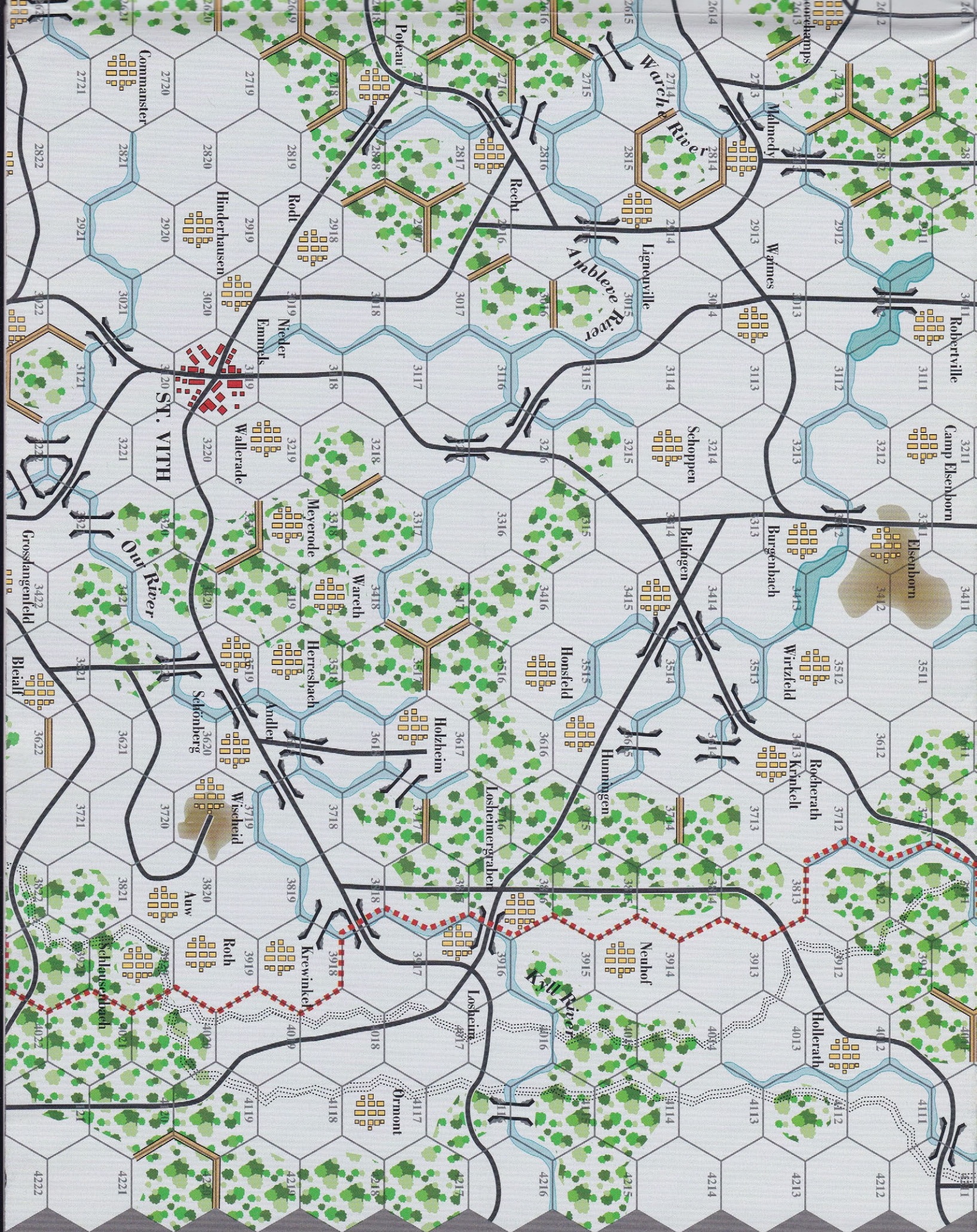
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									

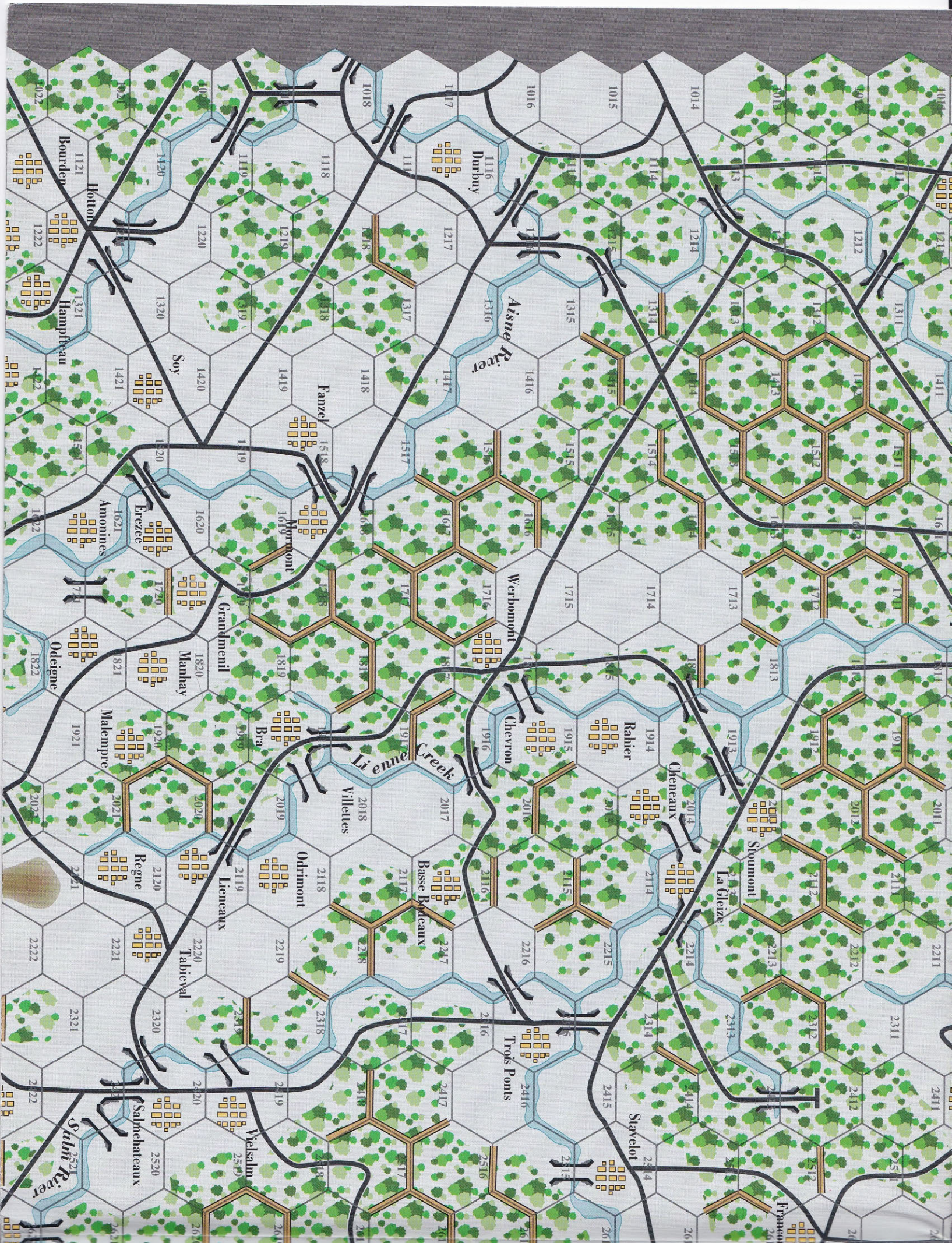




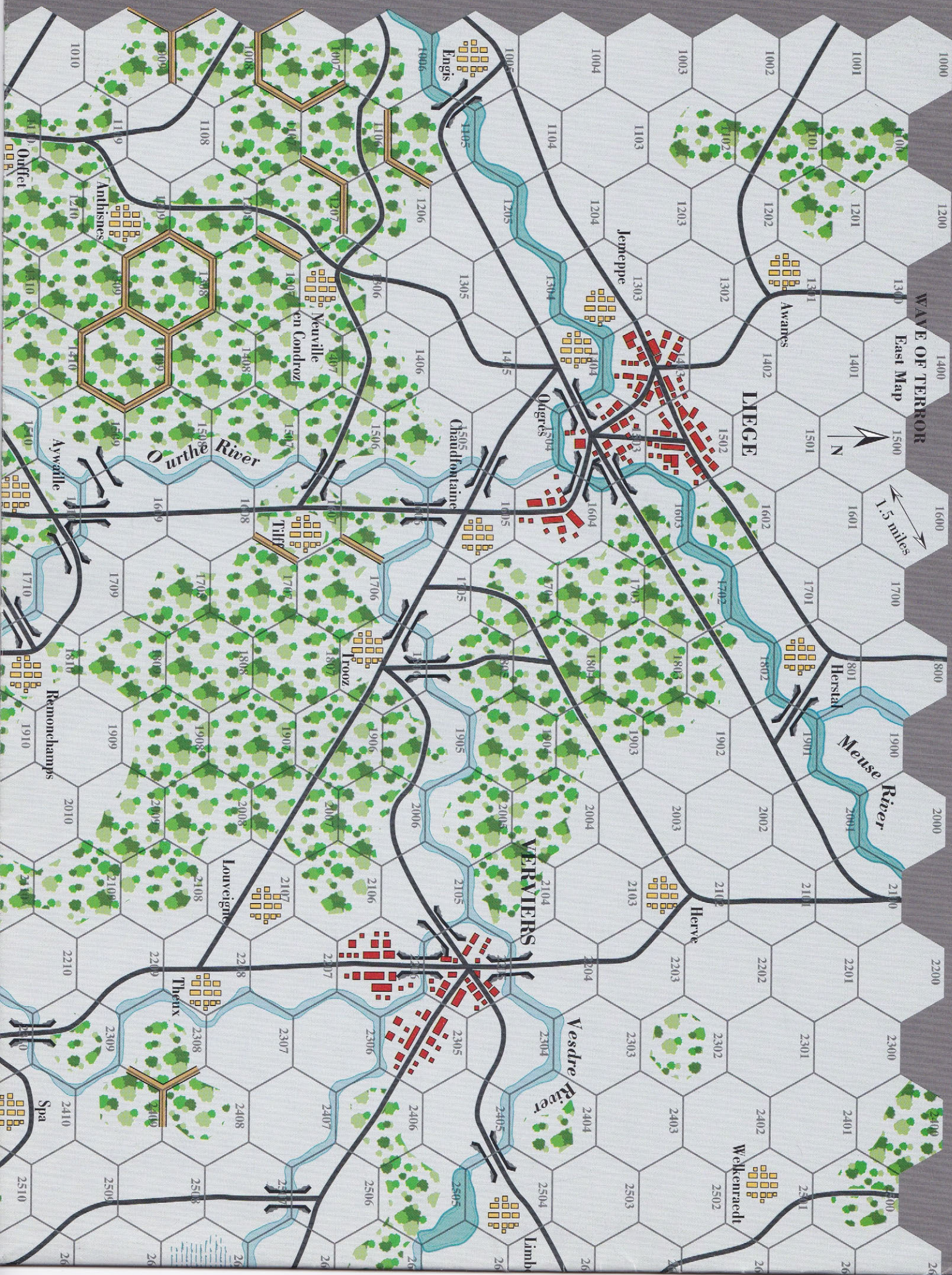


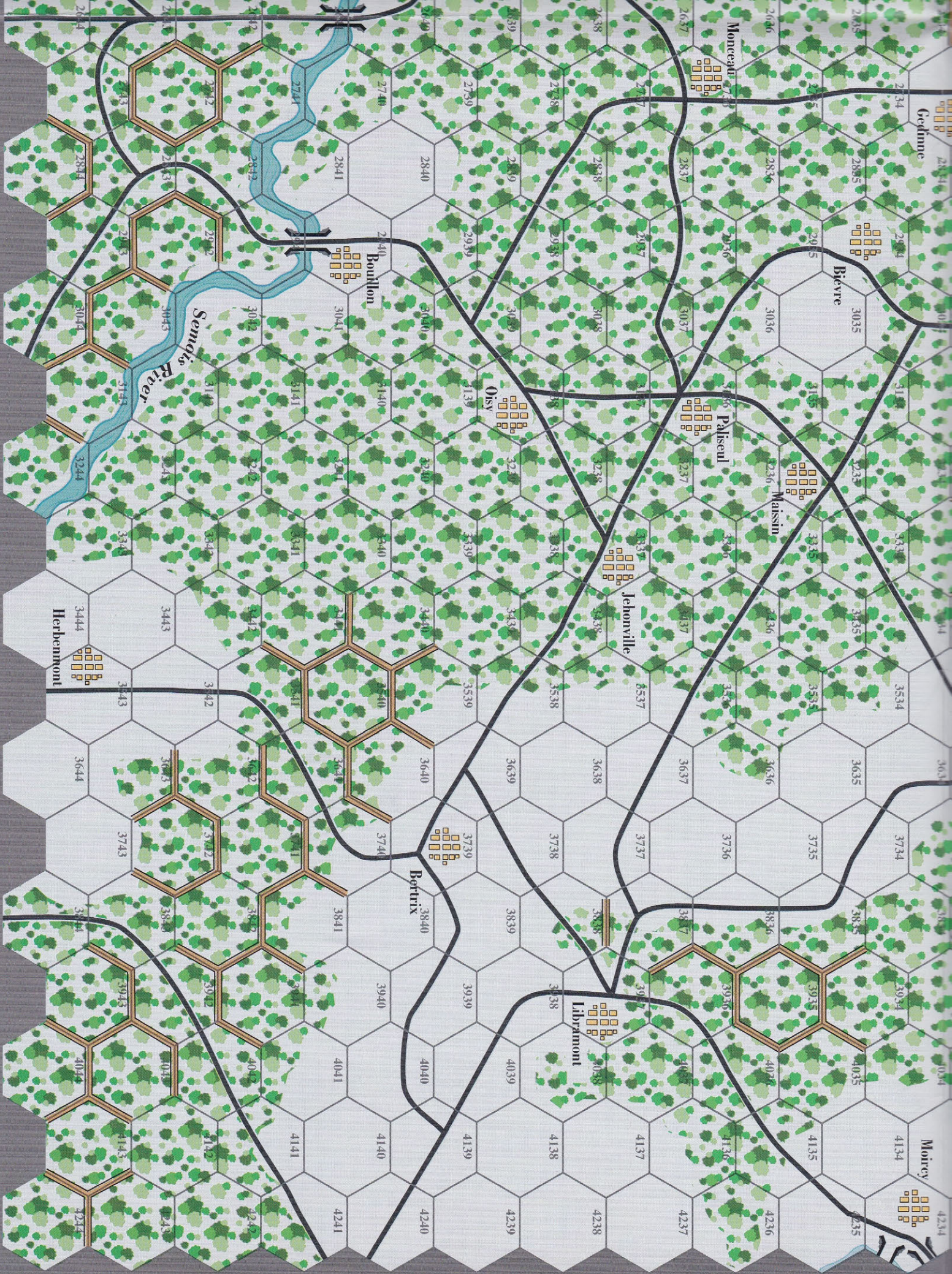






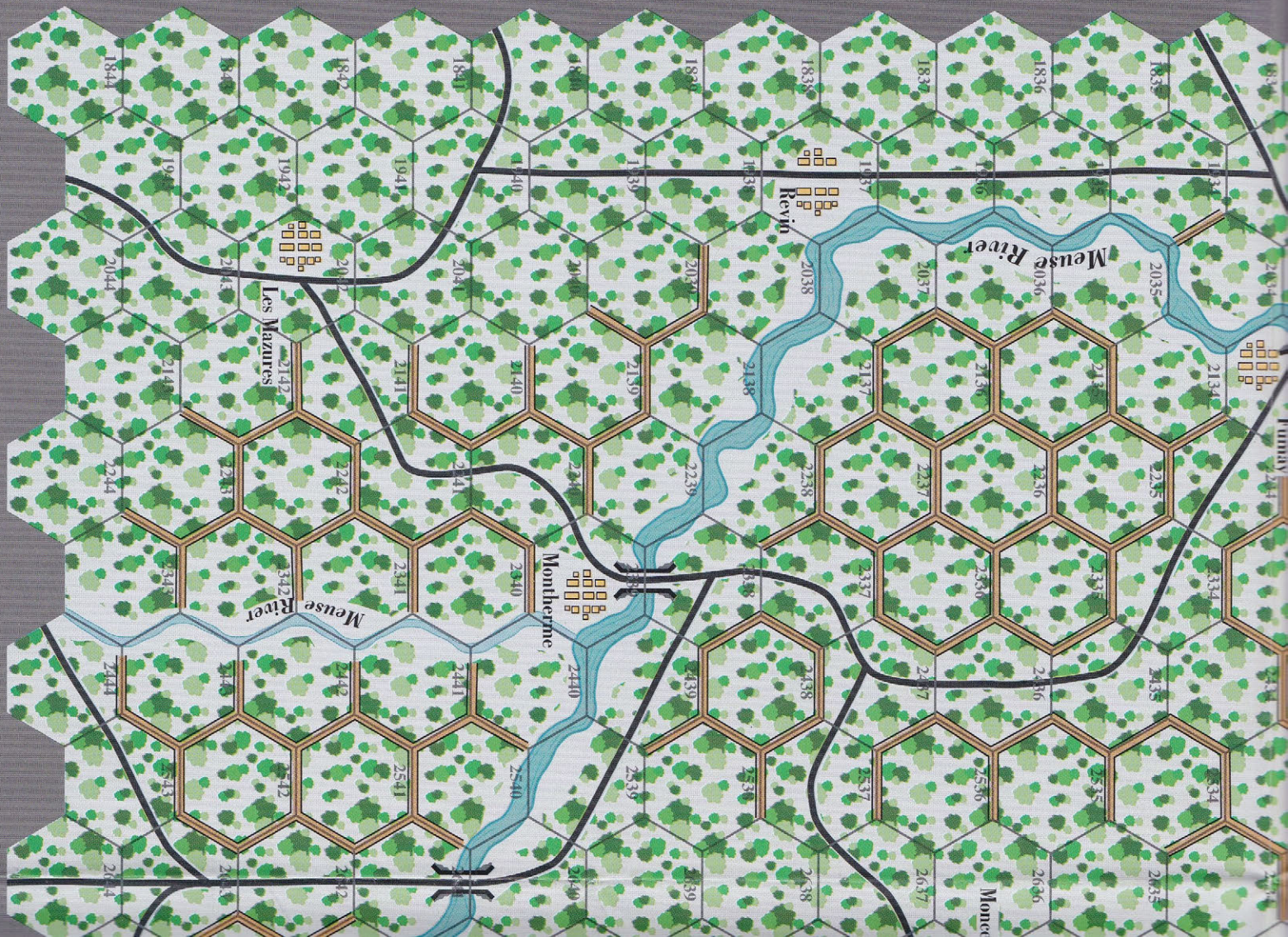


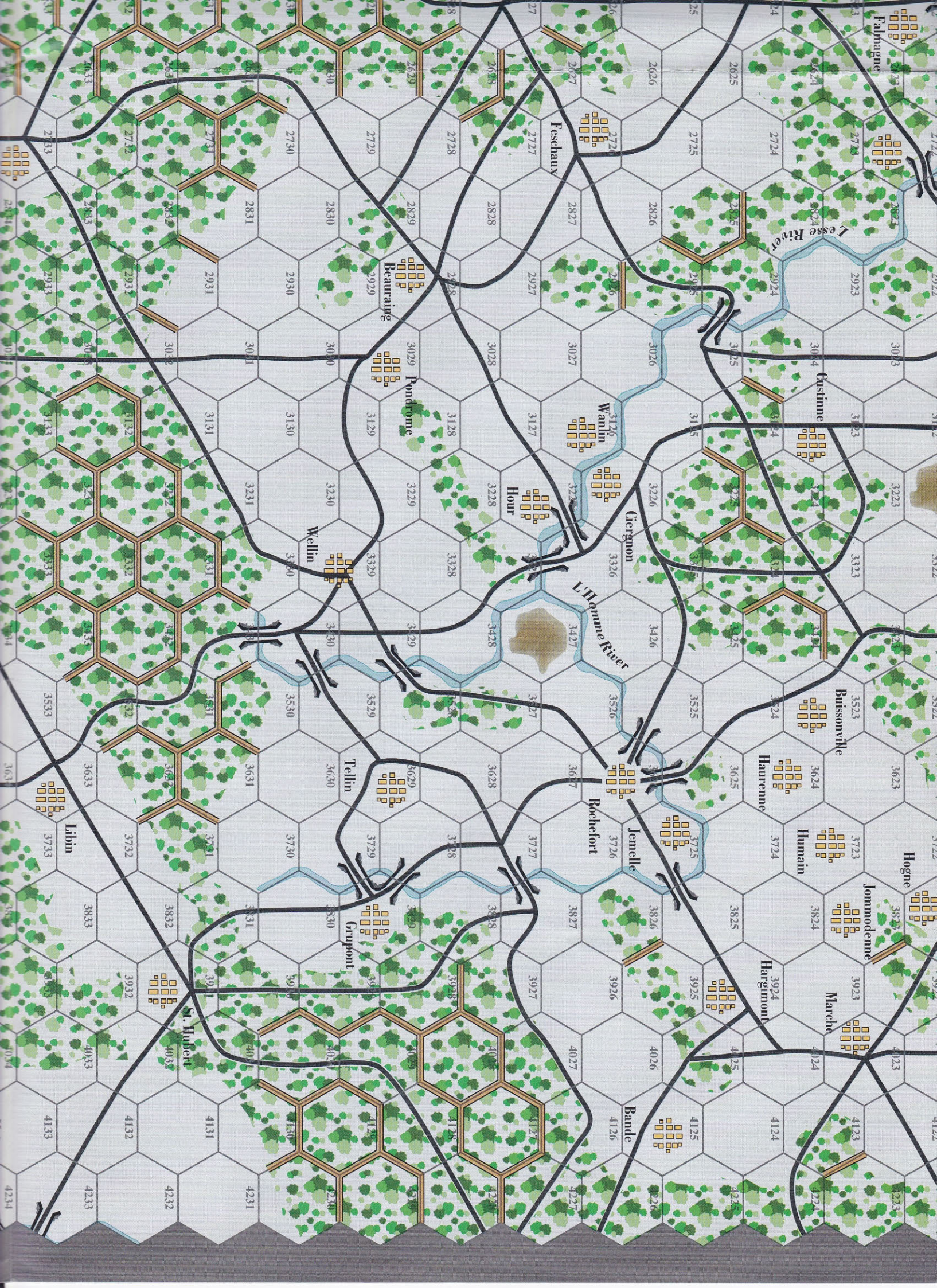




6  
7  
8  
9

Game Turn	23 Dec	Overcast: 1-2
Game Turn	8	Overcast: 1
Game Turn	9	Overcast: 1
Game Turn	10	Overcast: 1
Game Turn	11	Overcast: 1
Game Turn	12	Overcast: 1
Game Turn	13	Overcast: 1
Game Turn	14	Overcast: 1
Game Turn	15	Overcast: 1
Game Turn	16	Overcast: 1
Game Turn	17	Overcast: 1





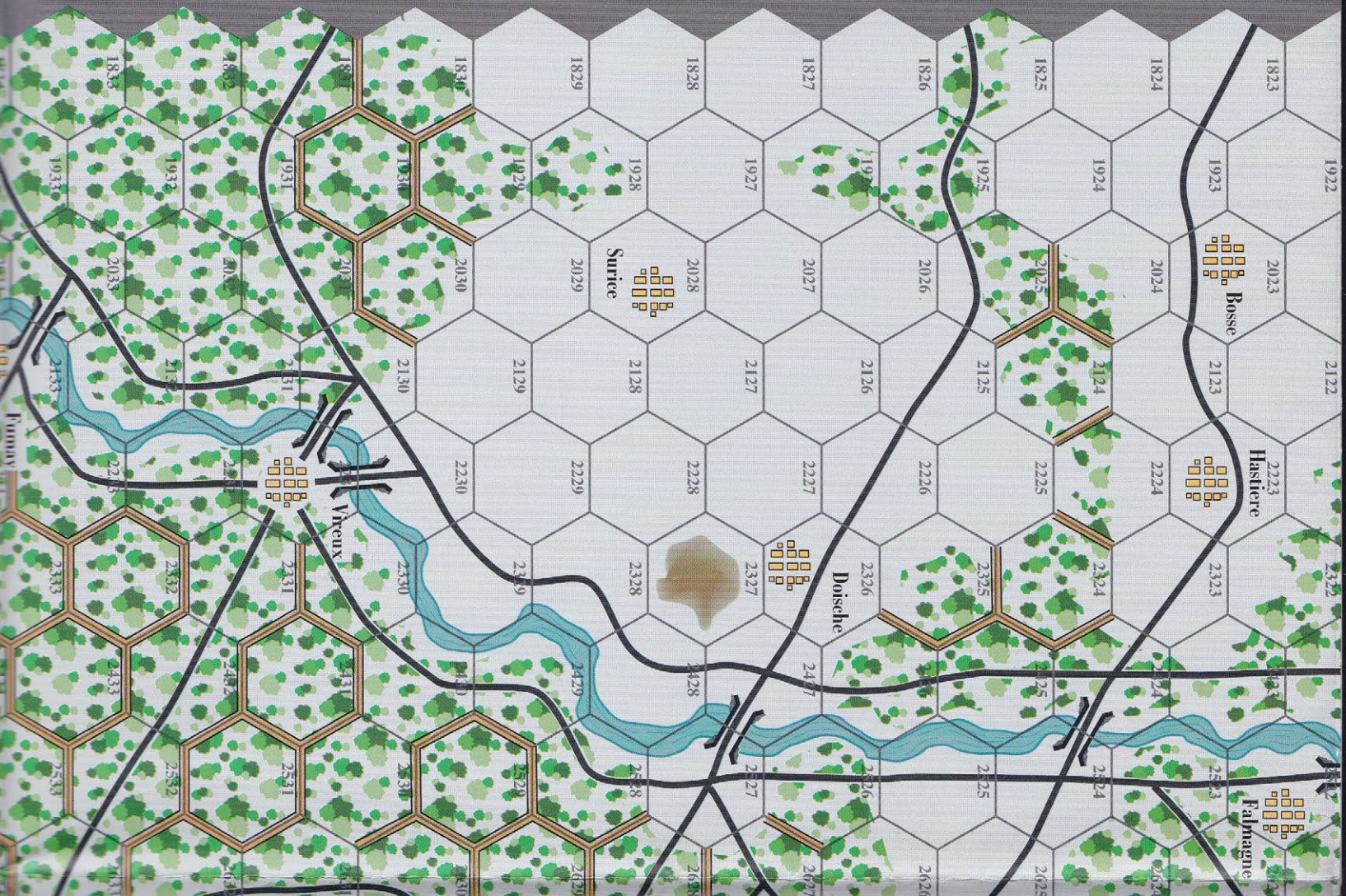
2	1SS Pz. Div.
3	1SS Pz. Div. & 10SS Pz. Div.
4	3rd Pz. Gren. Div & Pz. Lehr Div.
5	9SS Pz. Div. & Führer Escort Brig.
6	2nd Pz. Div.
7	No Effect - No Unit Made OOS
8	116th Pz. Div.
9	2SS Pz. Div. & Führer Gren. Brig.
10	12SS Pz. Div. & 9th Pz. Div
11	15th Pz. Gren. Div.
12	11th Pz. Div.

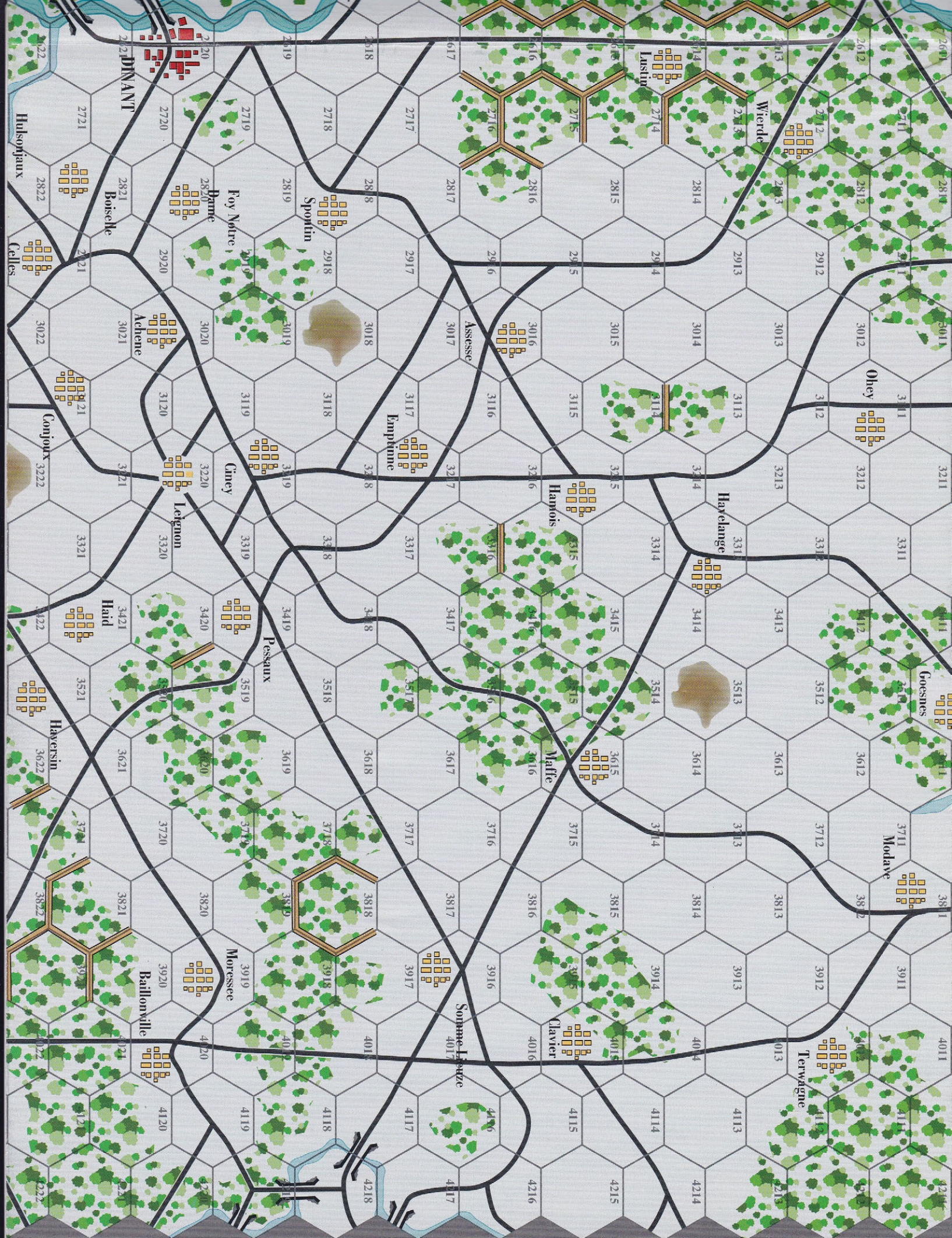
# Victory Point Track

0
1
2
3
4
5
6

## Game Turn Record Track

Game Turn	1	16 Dec '44	Overcast: 1-6
Game Turn	2	17 Dec	Overcast: 1-6
Game Turn	3	18 Dec	Overcast: 1-6
Game Turn	4	19 Dec	Overcast: 1-5
Game Turn	5	20 Dec	Overcast: 1-5
Game Turn	6	21 Dec	Overcast: 1-4
Game Turn	7	22 Dec	Overcast: 1-3





West Wall Fortifications	OTIH	IL
Starting Front Line Hexside	NE	NE

**Notes**  
 L = Shift the odds that number of columns leftward. That is, for example, a 3:1 attack against a defender in a forest hex would be shifted to 2:1 odds.  
 NE = No Effect.  
 OTIH = Movement cost is determined by the Other Terrain In the Hex.  
 \*This movement cost is only available when moving from one road hex to another road hex via road hexsides, otherwise cost is OTIH.  
 †Artillery and all units with printed MFs of 5 or more are prohibited from moving into or across these kinds of terrain.  
 ‡Blown bridges are considered unbridged water hexsides until such time as rebuilding takes place. Note that all bridges straddling the starting front line begin the game blown.

### Combat Results Table

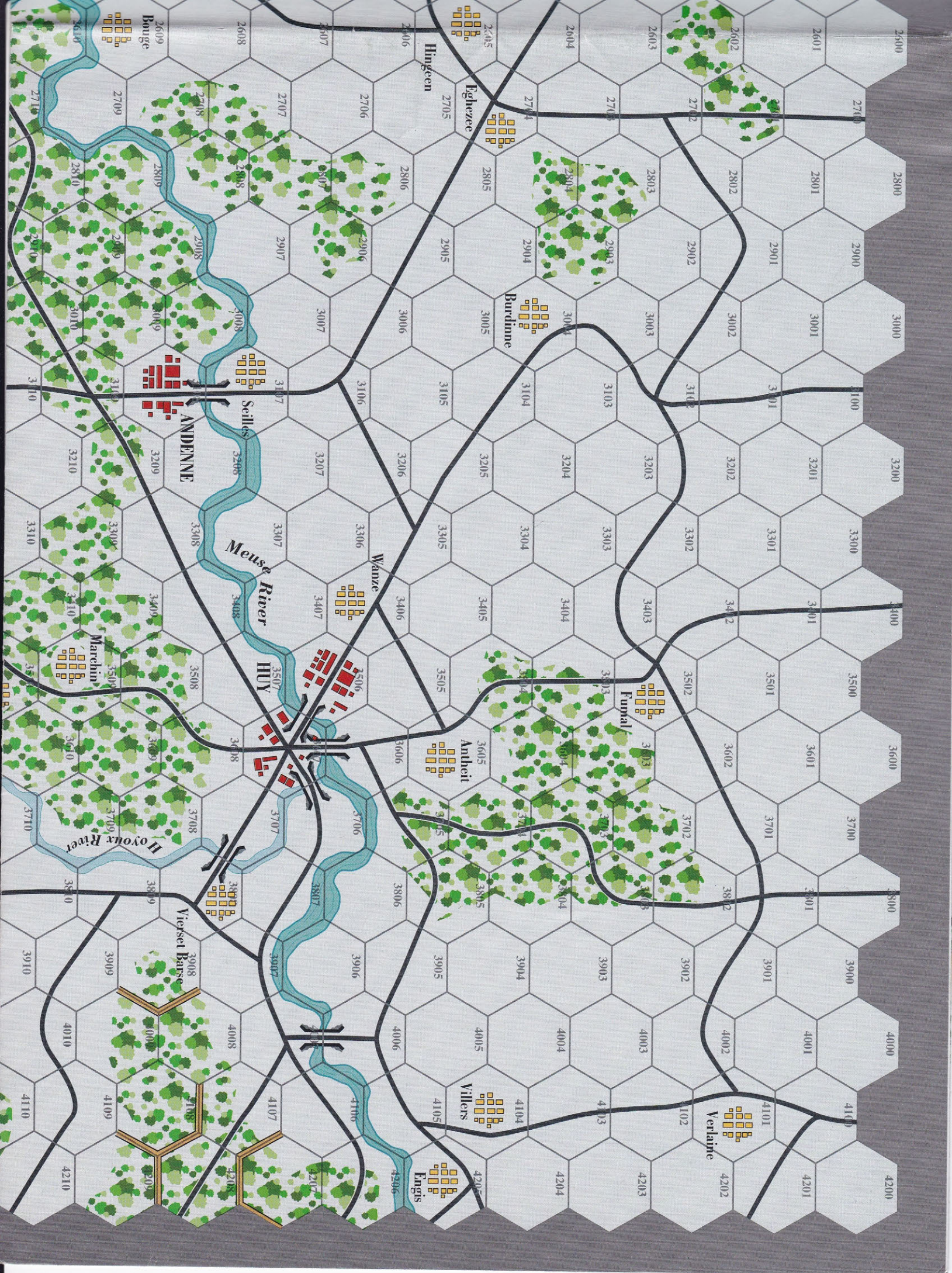
Die	Odds:Ratios									
Roll	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1	6:1	7:1
1	4/0	3/0	3/0	2/0	2/1	1/1	1/1	1/2	1/2	1/3
2	4/0	3/0	3/0	2/1	1/1	1/1	1/2	1/2	1/3	1/3
3	4/0	3/0	2/0	1/1	1/1	1/2	1/2	1/3	1/3	0/3
4	3/0	2/0	2/0	1/1	1/2	1/2	1/3	1/3	0/3	0/4
5	3/0	2/1	2/1	1/2	1/2	1/3	1/3	0/3	0/3	0/4
6	3/1	2/1	1/1	1/2	1/2	0/3	0/3	0/3	0/4	0/4

**Notes**  
 Odds higher than 7:1 generate automatic 0/4 results.  
 Odds lower than 1:4 generate automatic 4/0 results.

### German Supply Problems Table

Dice	Units Made OOS
Roll	





# WAVE OF TERROR: The Battle of the Bulge

Game Design: John Desch  
Map Graphics: Beth Queman  
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Terrain Effects Chart

Terrain Type	Movement Cost	Combat Effect
Road	1°	NE
Clear	2	NE
Forest	2	IL
Ridge	2	2L
Marsh	2*	NE
Blocked Hexside	Entire MF*	All non-artillery units halved when attacking through such hexsides
Major River & Lake Hexsides	Units May Cross Only via Intact Bridges	All non-artillery units halved when attacking through such hexsides
Minor River Hexsides	Entire MF†	All non-artillery units halved when attacking through such hexsides
Intact Bridges#	Nullifies Water Hexside Crossing Costs	All non-artillery units halved when attacking through such hexsides
Town	OTIH	IL
City	OTIH	2L

