



Artillery at the Battle of Cambrai, 20 November – 7 December 1917

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Woohoo! It's all coming together now – mostly, sort of

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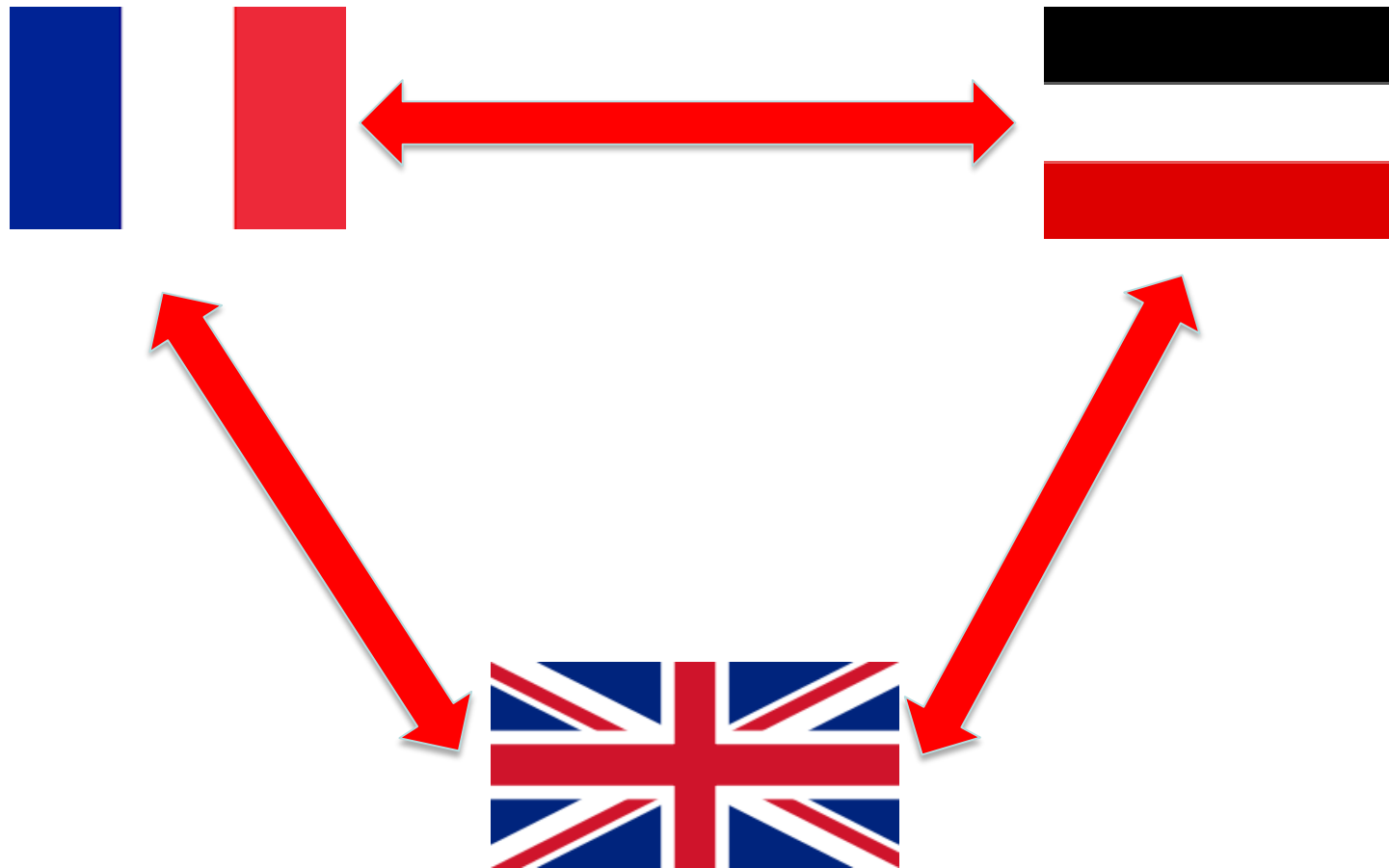
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Scope

- A note on learning and adaptation on the Western Front
- British artillery developments, 1917
 - C2
 - Technical
 - Tactical
- German artillery developments, 1917
 - C2
 - Technical
 - Tactical
- The British attack (and German defence)
 - Plan
 - Execution
- The German counter attack (and the British defence)



Learning & adaptation - a three (or more) way affair & a constant process



(Some) key British artillery developments, 1917

- Built on the lessons of 1916 (new doctrine SS139/4, Artillery in offensive operations)
 - British on the Somme
 - French at Verdun to some extent too
- Command and control
 - C2 increasingly centralised – at corps and army level (GOCRA)
 - CBSO (counter-blaster) in each corps HQ
 - Arty groups & commanders
 - Army field artillery brigades
- Technical & log
 - Increasing technical sophistication – Meteorological, surveying, gun calibration & tables
 - Reliable Newton 6” mortars – increasing number in use
 - Smoke shells
 - Ubiquity of gas
 - Sound ranging (accurate to 25 yards) + flash spotting
- Tactical
 - Shift from bombardments (destruction) to barrages (neutralisation)
 - Infantry increasingly able to fight its own way forward – arty to support
 - Field guns for barrages, not destruction per se – creeping, standing, box
 - Heavy guns for CB and destruction
 - Superimposition



(Some) key German artillery developments, 1917

- Building on its own lessons from 1916 (Verdun, Somme and Eastern Front) – Georg Bruchmüller
- Command and control
 - Corps unimportant
 - Army HQs & Div HQs – div HQs easily overloaded
 - Increasingly centralised C2 as well
 - Intricate fire planning
- Technical
 - Sound ranging with ear horns!
 - Ubiquity of gas
 - Meteorology
 - Calibration & gun tables
- Tactical
 - Short intense bombardments in depth – HQs, comms, gun positions, trenches (Germans never keen on long bombardments)
 - Emphasis on surprise – hence no preparatory bombardments
 - Silent registration on EF
 - Creeping barrages to support infantry
 - Infantry guns and *Minenwerfer*



Bundesarchiv, Bild 183-5360-48
Foto: o. Ang. | 1917

Cambrai – British artillery plan

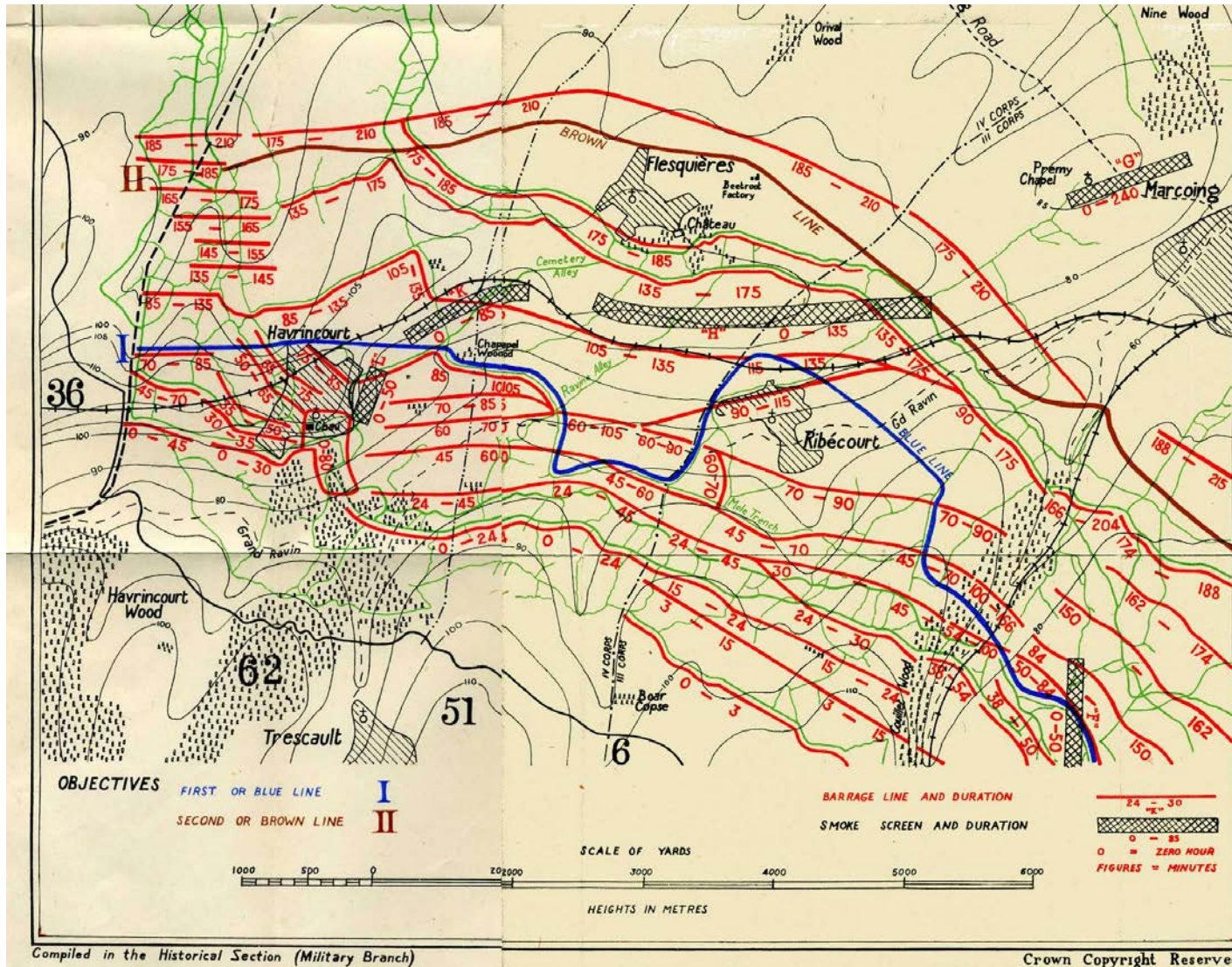
General

- Further developments based on Arras, Messines and Third Ypres
- Two corps attack against Germans in depth on the Hindenburg Line – 400 tanks, 1000 guns
- Quiet sector for the Germans – average infantry, no reserves, old & captured guns

Details

- Return of surprise
 - Tanks & the 106 fuse = less need to cut wire = return to surprise (no prep bombardment)
 - Firing off the map (survey, calibration– no need for registering targets)
- Surprise means reduced need for creeping barrage – return to lifting barrage on trench lines
 - Benefit of not churning up the ground
- Some devolution of batteries in anticipation of breakthrough (including heavies)
- CB: 1/3rd for CB (a standard) – gas & HE
- Neutralise OPs with smoke, disrupt C2 by shelling HQs and phone exchanges
- Plans for AT guns

Cambrai – the attack



The German counter-attack, 30 November

- Germans amass infantry and artillery – good op sec
 - Move at night
 - Temporary air superiority/parity
 - Poor weather hampers RFC
 - Aim to ‘pinch out’ the salient – attack from nth & sth
- British GHQ complacent – using their standards of attack preparation to gauge the Germans
- Counter attack 7am, 30 Nov
- Intense hurricane bombardment – Trommelfeuer (‘drum fire’)
 - British CB infrastructure not in place (sound ranging)
 - In the south (where main assault fell), British guns oriented north to support other ops
 - 350 heavy howitzers and 890 field guns
 - CB not very effective, particularly in the north.
- Hutier infiltration tactics
 - Bypass points of resistance
 - Reduce strong points with *minenwerfer* and infantry guns to help (which made it ‘easy to surrender’)
- Mixed success
 - Big advances in the south
 - Held off in the north
 - Brits lose 150 guns
 - As usual, reinforcements rushed in and the line stabilises



What did it all mean? Cambrai & 1917 in general

British

- Predictive fire a success – will be used extensively in 1918
- Enables the preservation of secrecy
- The Brits now have enough guns and shells to do all the things they want to do
- Emphasises role of
 - CB
 - Use of barrages to protect and assist infantry
- Things to be fixed:
 - Defensive doctrine
 - Co-operation in the open and on the move

Germans

- Abandonment of liner defences
 - Not defending strong points to last man
 - Use of shell holes leave stem open to barrage effects
- Focus on counter attacks (which played into British strengths somewhat)
- Value of Bruchmüller artillery tactics
- Continued use of *minenwerfer* and infantry guns in Hutier infantry tactics

