

Invasion of Normandy

25298

Nick Noppinger

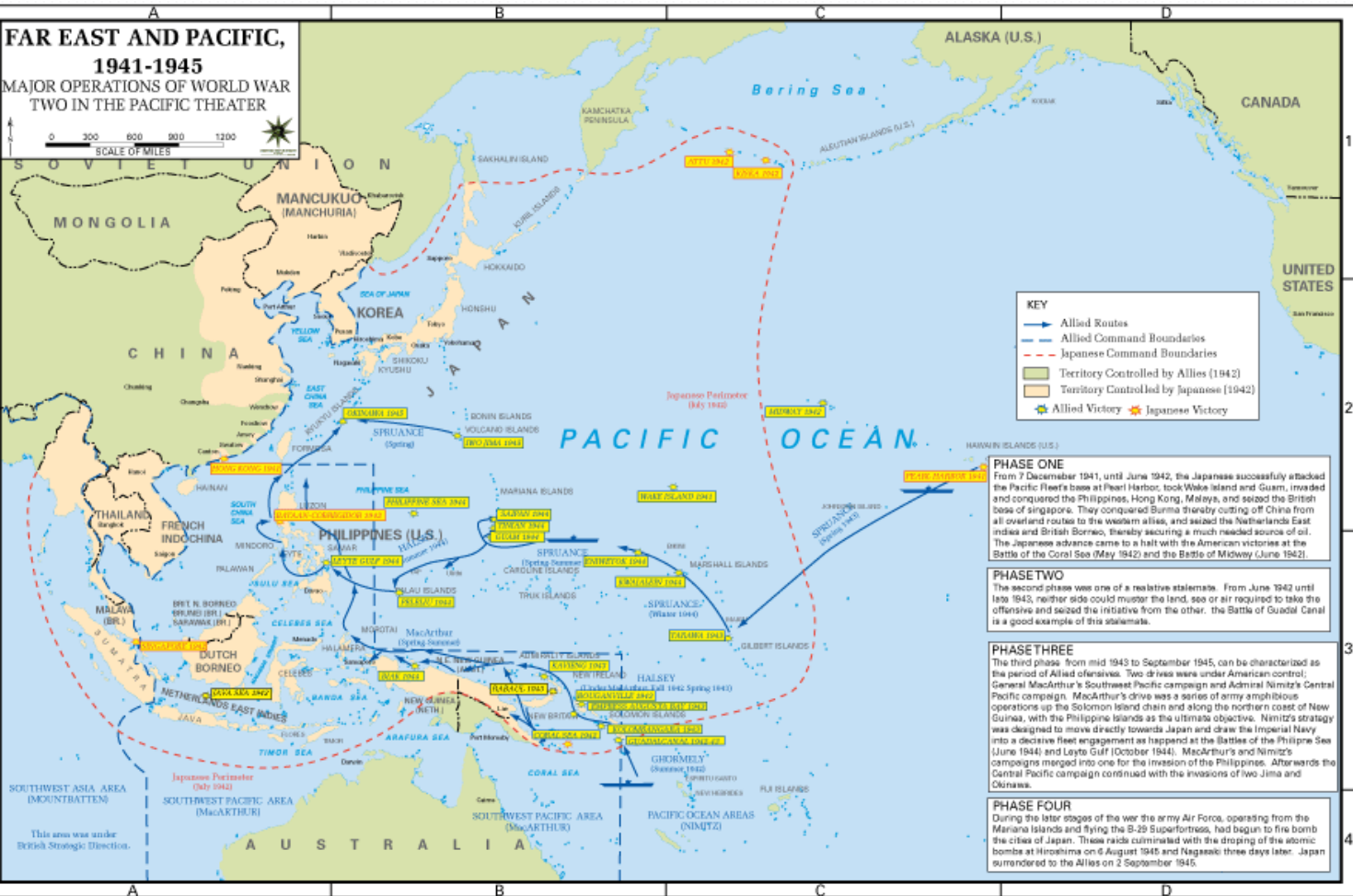
Class Schedule

- Class One- The Context or Mentalities
- Class Two- The Invasion
- Class Three- The Campaign and Breakout

Normandy

- Marks the first time that American troops, in large numbers, will go up against the Germans
- American becomes the senior partner among the Western Allies
- We were not entirely prepared for the combat in Western Europe
- The Northwestern European Campaign is where the bulk of US WW2 casualties will occur.
- Germany is by far the strongest Axis power.

FAR EAST AND PACIFIC, 1941-1945
MAJOR OPERATIONS OF WORLD WAR TWO IN THE PACIFIC THEATER



KEY

- Allied Routes
- - - Allied Command Boundaries
- - - Japanese Command Boundaries
- Territory Controlled by Allies (1942)
- Territory Controlled by Japanese (1942)
- ★ Allied Victory
- ★ Japanese Victory

PHASE ONE
 From 7 December 1941, until June 1942, the Japanese successfully attacked the Pacific Fleet's base at Pearl Harbor, took Wake Island and Guam, invaded and conquered the Philippines, Hong Kong, Malaya, and seized the British base of Singapore. They conquered Burma thereby cutting off China from all overland routes to the western allies, and seized the Netherlands East Indies and British Borneo, thereby securing a much needed source of oil. The Japanese advance came to a halt with the American victories at the Battle of the Coral Sea (May 1942) and the Battle of Midway (June 1942).

PHASE TWO
 The second phase was one of a relative stalemate. From June 1942 until late 1943, neither side could muster the land, sea or air resources to take the offensive and seized the initiative from the other. The Battle of Guadal Canal is a good example of this stalemate.

PHASE THREE
 The third phase from mid 1943 to September 1945, can be characterized as the period of Allied offensives. Two drives were under American control: General MacArthur's Southwest Pacific campaign and Admiral Nimitz's Central Pacific campaign. MacArthur's drive was a series of army amphibious operations up the Solomon Island chain and along the northern coast of New Guinea, with the Philippine Islands as the ultimate objective. Nimitz's strategy was designed to move directly towards Japan and draw the Imperial Navy into a decisive fleet engagement as happened at the Battle of the Philippine Sea (June 1944) and Leyte Gulf (October 1944). MacArthur's and Nimitz's campaigns merged into one for the invasion of the Philippines. Afterwards the Central Pacific campaign continued with the invasions of Iwo Jima and Okinawa.

PHASE FOUR
 During the later stages of the war the Army Air Force, operating from the Mariana Islands and flying the B-29 Superfortress, had begun to fire bomb the cities of Japan. These raids culminated with the dropping of the atomic bombs at Hiroshima on 6 August 1945 and Nagasaki three days later. Japan surrendered to the Allies on 2 September 1945.

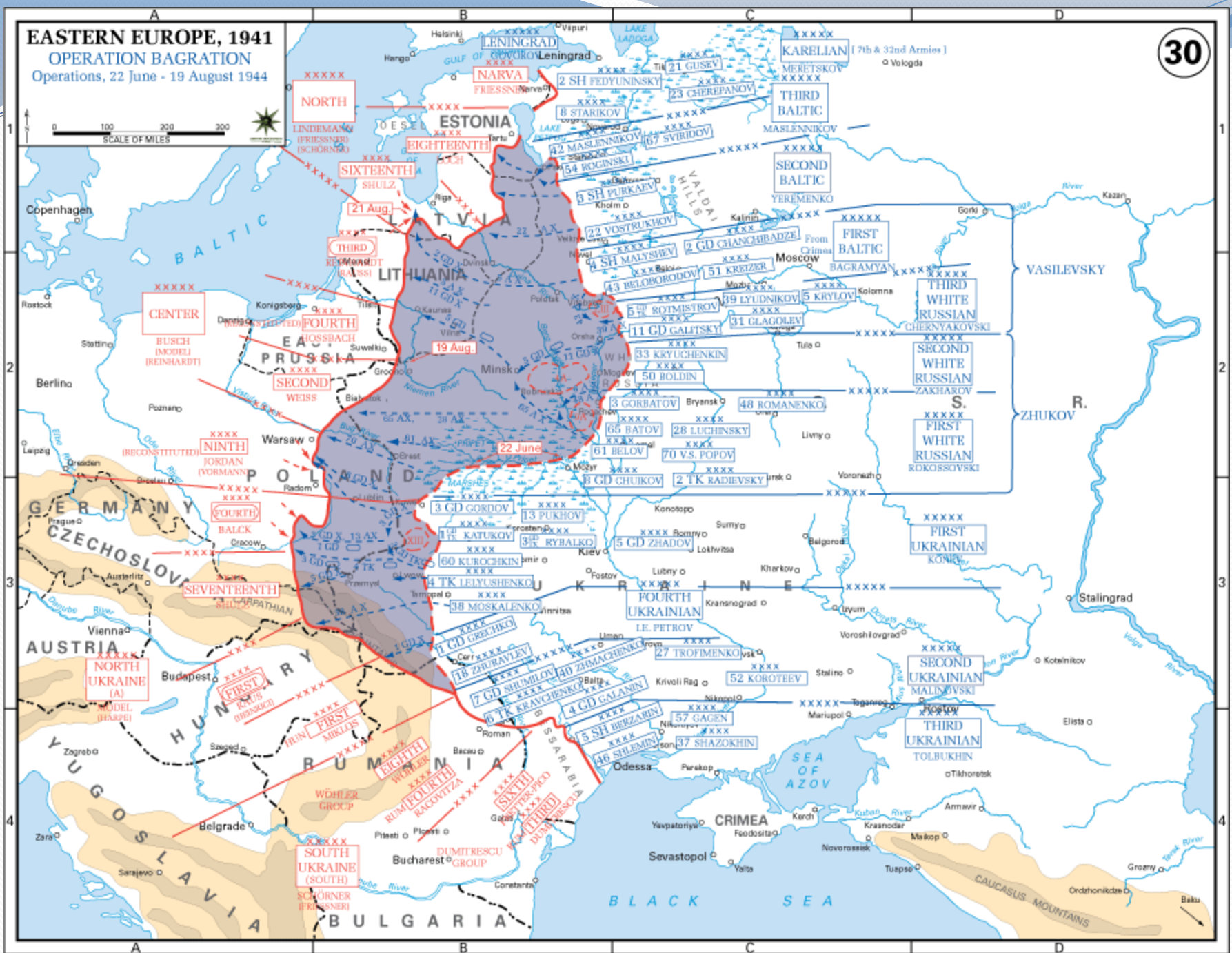
TIMELINE

- 1941**
 - Japanese invade Pearl Harbor, 7 Dec.
 - U.S. declares war on Japan, 8 Dec.
 - Japanese invade Philippines, 10 Dec.
 - Hong Kong surrenders, 25 Dec.
- 1942**
 - Japanese take Singapore, 15 Feb.
 - Battle of Java Sea, 27-29 Feb.
 - Netherlands East Indies falls to Japan
 - U.S. troops on Bataan forced to surrender, 9 Apr.
 - Doolittle bombing raid on Tokyo, 18 Apr.
 - Battle of Coral Sea, 6-4 May
 - Battle of Midway, 3-6 June
 - Japan seizes Atto & Kiska in Aleutians, 7 June
 - Guadalcanal Campaign, 7 Aug. 1942-9 Feb. 1943
- 1943**
 - Buna captured, 22 Jan
 - "Island hopping" in Solomon Islands begins, 30 June
 - Lae falls, 4 Sept.
 - Bougainville invaded, 1 Nov.
 - U.S. takes Tarawa & Makin, 20-23 Nov.
 - New Britain invaded, 29 Dec.
- 1944**
 - Operations on Kwajalein, 31 Jan-4 Feb.
 - Invasion of Eniwetok, 17-20 Feb.
 - Admiralty Islands invaded, 29 Feb.
 - Amphibious assault on Hollandia, 22 April
 - Invasion of Saipan, 15 June-9 July
 - Battle of the Philippine Sea, 18-19 June
 - Tojo resigns, 18 July
 - Invasion of Guam, 21 July-9 August
 - Invasions of Morotai & Palau Islands, 15 Sept.
 - MacArthur lands in Philippines, 20 Oct.
 - Battle of Leyte Gulf, 23-26 Oct.
- 1945**
 - Allies land on Luzon, 9 Jan.
 - Invasion of Iwo Jima, 19 Feb.-26 Mar.
 - Okinawa bombed, 24-27 Mar.
 - Invasion of Mindanao, 17 Apr.
 - Okinawa captured, 21 June
 - Atomic bomb dropped on Hiroshima, 6 Aug.
 - Atomic bomb dropped on Nagasaki, 9 Aug.
 - Japan agrees to surrender, 14 Aug
 - Japan surrenders aboard U.S.S. Missouri, 2 Sept

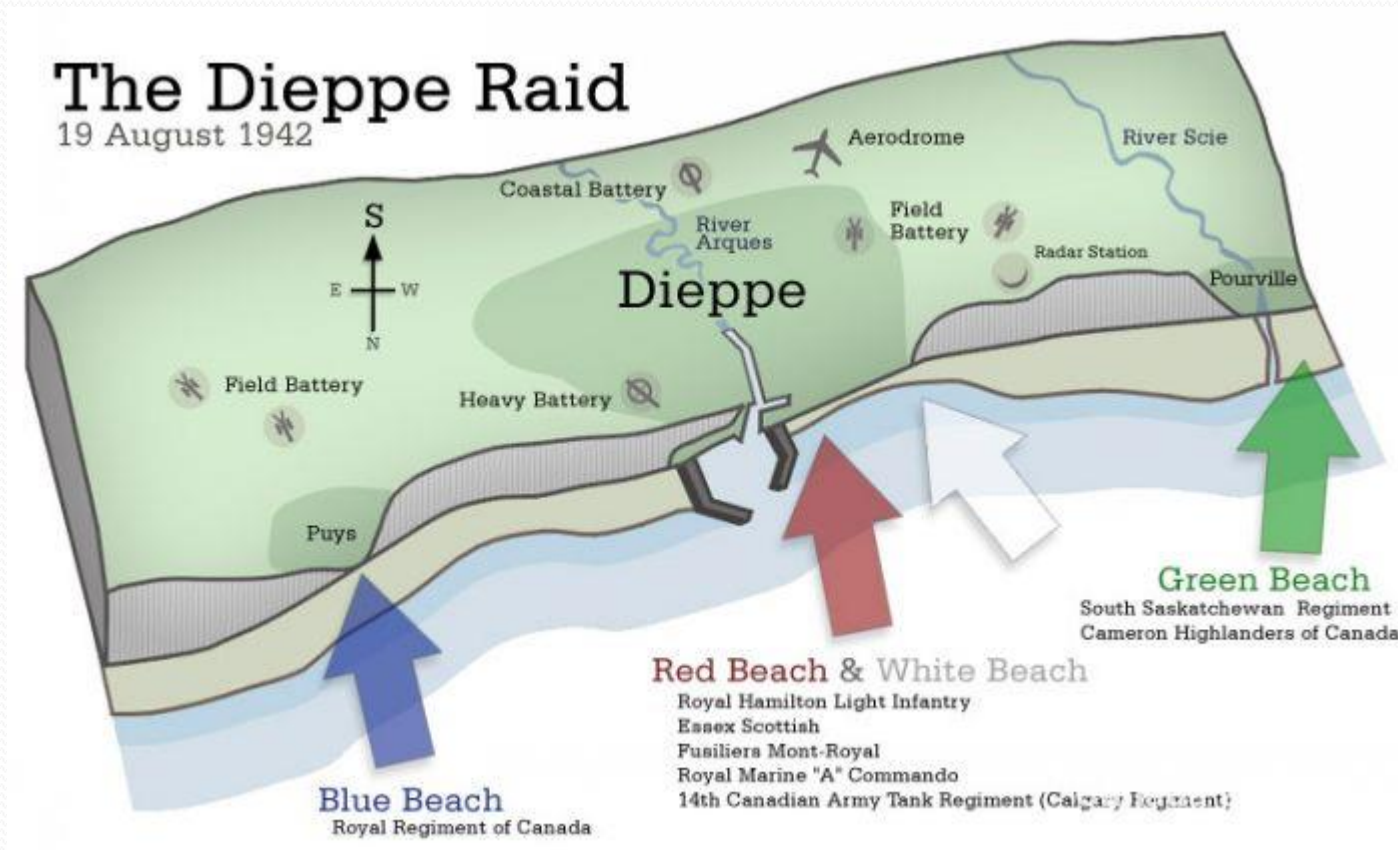
EASTERN EUROPE, 1941

OPERATION BAGRATION

Operations, 22 June - 19 August 1944



Dieppe Raid Aug 19, 1942







Canada at War
The March in the 90th Division



Canada at War
www.canadatwar.ca

Lessons

1. the need for preliminary artillery support, including aerial bombardment;
2. the need for a sustained element of surprise;
3. the need for proper intelligence concerning enemy fortifications;
4. the avoidance of a direct frontal attack on a defended port city; and,
5. the need for proper re-embarkation craft.
6. Will lead to Hobart's Funnies
7. Will lead to development of Mulberries
8. Unified Command Structure-Unity of Command

National Policy

Grand Strategy

Military Strategy

Operations

Tactics

National Policy

- The basic and supreme war aim of the nation.
- Unconditional surrender of the Axis
- Everything else subordinate and considered tools to achieving the all encompassing national policy.
- For the Allies- Final defeat of Germany, Italy and Japan.
- For the South separation and independence.
- Political in nature.

Grand Strategy

- The mobilization of a nations, political, military, social, cultural, religious, and economic forces to achieve the national policy.
- Military planning at its most basic- {a decision to invade Northwest Europe). Some overlap with military strategy.
- **Centers of gravity.**
- Center of gravity could be a geographical point or the enemy's army(ies). There can also be more than one.
- *Grand strategy includes such things as emancipation.*
- *While it identifies centers of gravity, it is less military in nature, as it includes all of the factors.*

Military strategy

- The more detailed planning and employment of military forces in an attempt to carry out the grand strategy and national policy.
- “Arrows on maps”
- For example- Operation Overlord.
- Military in nature- the importance of other aspects still present but diminishing.
- Concentration in time
- Concentration in space

Operations

- The planning and employment for a particular campaign.
- The management and organization of an army
- For example, the decision to invade at the specific beaches in Normandy.
- For Normandy- Divisional, corps to Army level

Tactics

- The employment of troops in a specific battle at all levels from Army to individual soldier.

Goals 1944

- German- defeat the Allied landing in Western Europe
- Hold Italy
- Until new weapons, in development, will turn the tide of war.
- Not logical, but...

Goals 1944

- USSR- Put heavy diplomatic pressure on the Western Allies so they keep the wartime promise of invading Europe.
- 1942- Sledgehammer broken promise
- 1943- Roundup broken promise
- 1944???
- The war is being won by the blood of the Red Army.
- Running low on manpower reserves.

Goals 1944

- USA- Invade Northwest Europe thus helping the Soviets
- Fastest and cheapest means of achieving national policy objectives.
- Avoid British entanglements in peripheral areas (Greece) other Med options (over commitment in Italy)
- Avoid forcing the USSR to seek alternative peace with Germany

Friction of War 1942 Considerations that effected Overlord

- US Navy and public want Pacific First
- US Army OPD- 1st priority to keep USSR in war as Allied power, Operation Sledgehammer, Roundup
- USSR- wants real 2nd Front Yesterday
- UK- Med or peripheral strategy
- UK- reasons for peripheral strategy
- Lack of US readiness
- Difficulty in maintaining large field armies
- Australia and NZ demand return of troops
- They demand US take up security

US Problems 1942

- Army planners
- “**Must haves**” Maintaining the UK and Soviet Union, and security of Middle East, India
- Subsidiary “highly desirable” security of Alaska and supply line to Australia, Burma
- Minimum of forces for the Pacific,
- Maximum effort in Europe
- Australia demands protection with bulk of active forces in the Middle East, India and Malaya, helps the Navy argument.
- American public wish for action against the Japanese
- First Army overseas forces go to Pacific

Global War affects Normandy

- Secondary Theater
- US Navy views as a Navy show, Army has Europe
- MacArthur
- Midway does not stop Japanese offensives
- Rough parity
- Keeping China communications open after close of Burma Road
- Jap move in Solomon Islands to cut off Australia, NZ
- US waiting for supremacy while first war ordered ships arrive (Essex Class carriers mid 1943)
- British are opposed to increasing US force and resource drain to the Pacific.

American Plans

- Army wants to buildup in Europe
- Sledgehammer 1942
- Roundup 1943
- Navy wants more resources for Pacific, at least to take limited offensives
- **Rainbow Five WPL-46**
- Current plan called for defense of Western Hemisphere. King modified to include loc to Australia

Battles within the US

- US Army vs US Navy/MacArthur- battle for resources. Each side doesn't hesitate to make political end run to get their wishes.
- The material advantages possessed by the US, that people see in hindsight do not exist until mid 1944
- Supplying British and Commonwealth, Chinese, Soviets as well as our own forces.
- Fighting a global war, for which we were not prepared.

Goals 1944

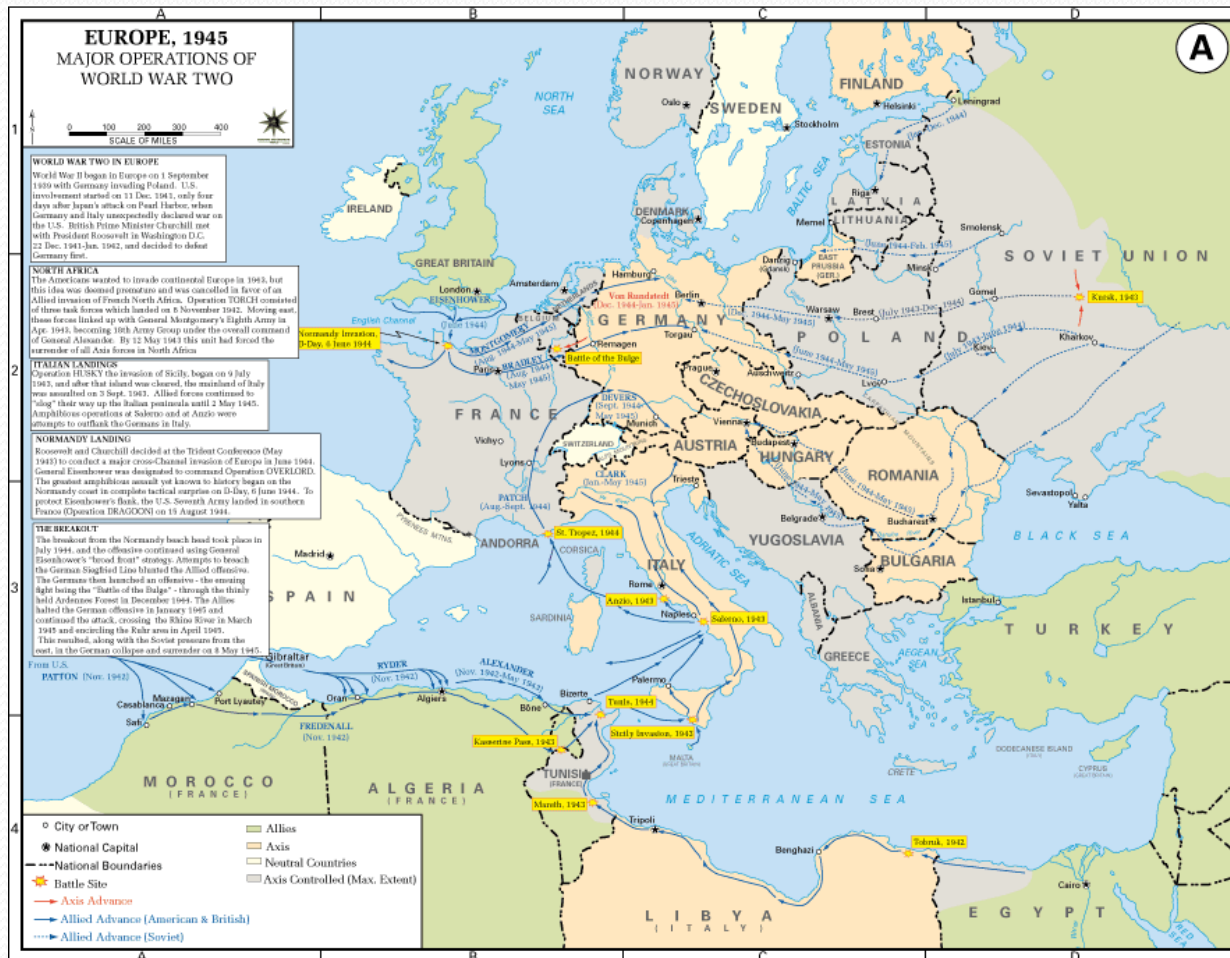
- UK- Maintain the Empire- India, Suez Canal, influence in the Balkans (Greece)
- Fear of what US withdrawal from Europe will mean after World War 2
- Rebuilt France
- The British could steer NW Europe invasion in 42 and 43 because they would have provided the bulk of the initial forces. Not so in 1944.

British Reluctance

- The Americans had to bully Churchill and the British Chief of Staff Sir Alan Brooke into the idea of invading Northwest Europe
- The British were becoming upset that they were no longer the drivers of Allied strategy
- The Soviets were demanding a second front since 1941.



British Alternatives



TIMELINE

- Sept. 1939**
 - Germany invades Poland, 1 Sept.
 - Great Britain & France declare war on Germany, 3 Sept.
- 1940**
 - Germany invades Denmark & Norway, 9 Apr.
 - Germany invades Low Countries, 10 May
 - Italy declares war on Great Britain & France, 10 June
 - France signs armistice with Germany, 22 June
 - Battle of Britain, July-10 Oct.
 - 1st peacetime draft law in U.S. history, Sept.
 - Wavell's 1st Libyan offensive, 8 Dec.-7 Feb., 1941
 - Rommel's 1st offensive, 31 March
 - Germany invades Greece & Yugoslavia, 6 Apr.
 - German airborne assault on Crete, 20 May
 - Germany invades U.S.S.R., 22 June
 - U.S.S.R. & Great Britain sign mutual aid pact, 13 July
- 1941**
 - Siege of Leningrad, 8 Sept.-Jan. 1944 700,000 deaths estimated
 - U.S. declares war on Japan after attack on Pearl Harbor, 8 Dec.
 - Germany & Italy declare war on U.S., 11 Dec.
- 1942**
 - Battle of Stalingrad, 23 Aug.-2 Feb. 1943
 - Battle of El Alamein, 23 Oct.
 - Allied troops land at Morocco & Algeria, 8 Nov.
- 1943**
 - Battle of Tunis, 7 May
 - Axis forces in N. Africa surrender, 13 May
 - Battle of Kursk, 4 July-1 Aug.
 - Allies land at Sicily, 10 July
 - Italians secretly surrender, 2 Sept.
 - Allies land at Salerno, 10 July
 - Allies land at Anzio, 22 Jan.
- 1944**
 - Allies invade Normandy, 6 June (D-Day)
 - Soviets push Germans into Poland, mid-July
 - Paris liberated, 25 Aug.
 - Polish Resistance revolts against Germans in Warsaw, Aug-Oct.
 - Battle of the Bulge, 16 Dec.-7 Feb. Last significant German offensive
 - Yalta Conference, 4-11 Feb.
 - Soviets launch attack on Berlin, 16 April
 - Hitler commits suicide 30 Apr.
- June 1945**
 - Germany surrenders, WWII in Europe ends, 7 May

Why?

- Britain was suffering from manpower shortages.
- Troops in the Med, India, and in Europe
- They were concerned about a repeat of World War One
- They did not think we were capable
- Britain almost always fought their wars on the periphery.
- Opposed early American plans for the cross channel invasion because they would have been mostly carried out with British troops
- Churchill's experience from Gallipoli.

Why no invasion in 42 or 43?

- Not enough troops
- Still fighting the Battle of the Atlantic
- We could not help supply the Red Army, fight the Japanese, supply the British, ramp up naval production, etc and create a force strong enough to stay on the continent.
- Our Army was not ready

American Perspectives

- Concerned about the British propensity for frittering away troops and resources in secondary theaters.
- Opposed to using US troops to prop up British imperial ambitions
- Operation Sledgehammer- 1942
- Operation Roundup- 1943
- Not so thinly veiled threats to shift resources to the Pacific

Tehran Conference 28 Nov to 1 Dec 1943



COSSAC- March 1943

- Planning Hq for proposed operations in Northwest Europe
- Frederick E Morgan
- Ray Barker



Planning

- Operation Cockade- will become Fortitude
- Operation Rankin- in case of imminent German collapse
- Operation Overlord
- Only 4 possible landing places
- Pas de Calais
- Normandy
- Cotentin
- Brittany

Normandy

- Why did the Allies choose Normandy? The Brittany coasts are too far away from England, the grounds in Holland are flooded and do not allow the installation of a solid beachhead, the currents of the Belgian coasts are very strong and thus dangerous, and the Germans await the Allies in the Pas-de-Calais area.
- The Norman coast is mostly composed of sandy beaches. The composition of the Norman beaches is relatively close to those that can be found along Western England. Thus, the soldiers can train on the other side of the Channel and they can even test the resistance of the tanks on this particular type of sand.
- Within air range, which would eliminate anything south of Brittany

Plans for Invasion

- Planning began under COSSAC British General Frederick Morgan, and American Brig Gen Ray Barker
- Only 4 possible sites- Brittany, Cotentin, Normandy, Pas de Calais. 1st 2 quickly rejected.
- Calais rejected as being most fortified and that terrain (rivers and canals) made exploitation more difficult
- They came up with a 3 beach plan. After Eisenhower takes over, Monty expands it to 5. At the expense that Southern France landing was made smaller and postponed for a month and half.

US Army OPD Study Dec 43

- US forces not strong enough at present to defeat Germany alone.
- USSR cooperation is necessary for defeat of Germany
- After the defeat of Germany, USSR will be in position to impose its will in Central and Eastern Europe.
- Russia needed to enter war against Japan to minimize losses of US and UK

Strategic Bombing Europe

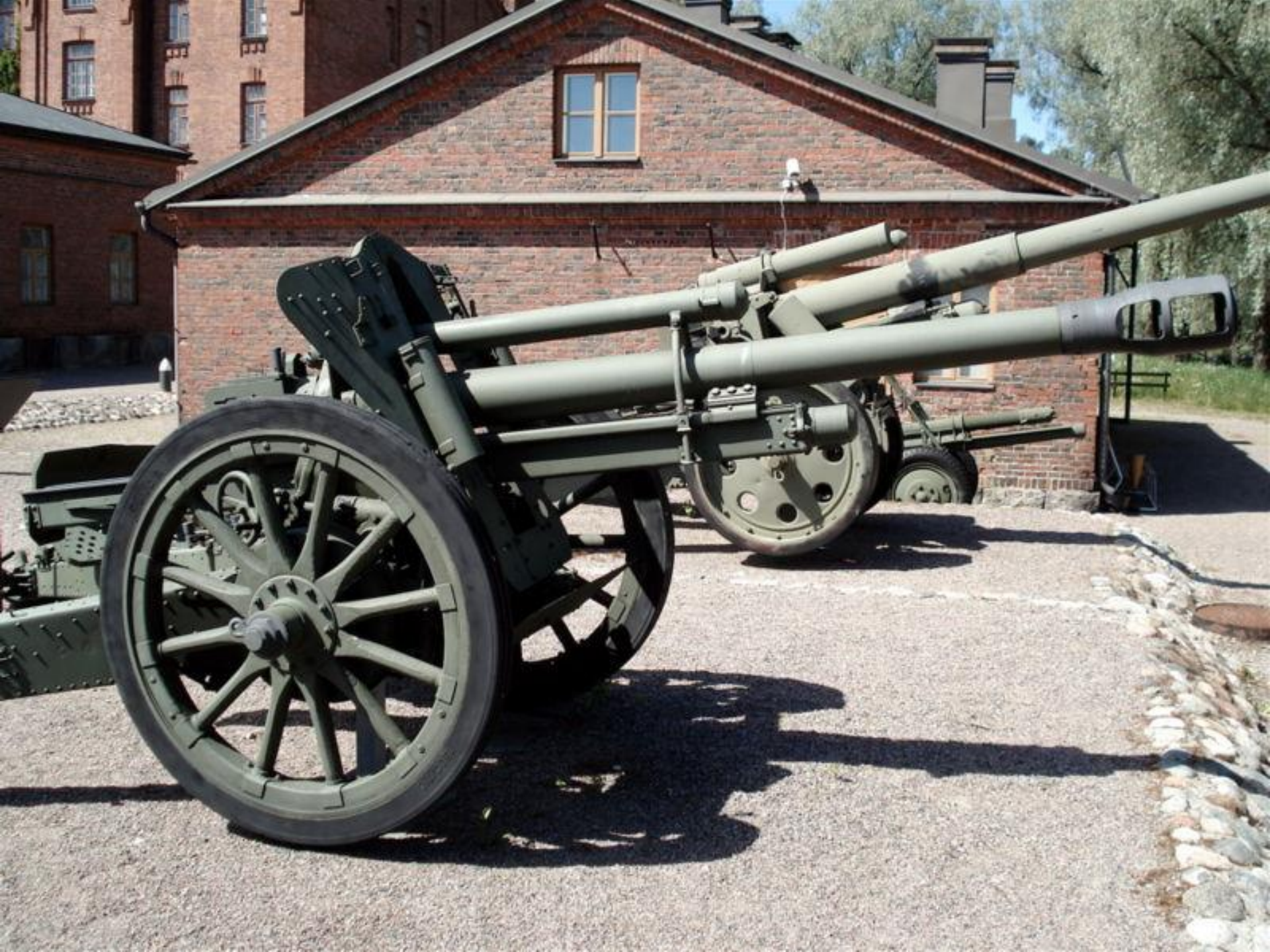
- British area bombing at night- designed to create fear among civil populace. Civil population was the target
- The ultimate aim of an attack on a town area is to break the morale of the population which occupies it. To ensure this, we must achieve two things: first, we must make the town physically uninhabitable and, secondly, we must make the people conscious of constant personal danger. The immediate aim, is therefore, twofold, namely, to produce (i) destruction and (ii) fear of death
- US- Precision Bombing during the day
- Only 20% actually hit targets
- Ineffective at hurting German industry
- Effective at disrupting oil production, but costly.
- Effective at disrupting transportation.
- Where it was very successful was in destroying combat power of Luftwaffe by direct confrontation.

Problems



German weapons

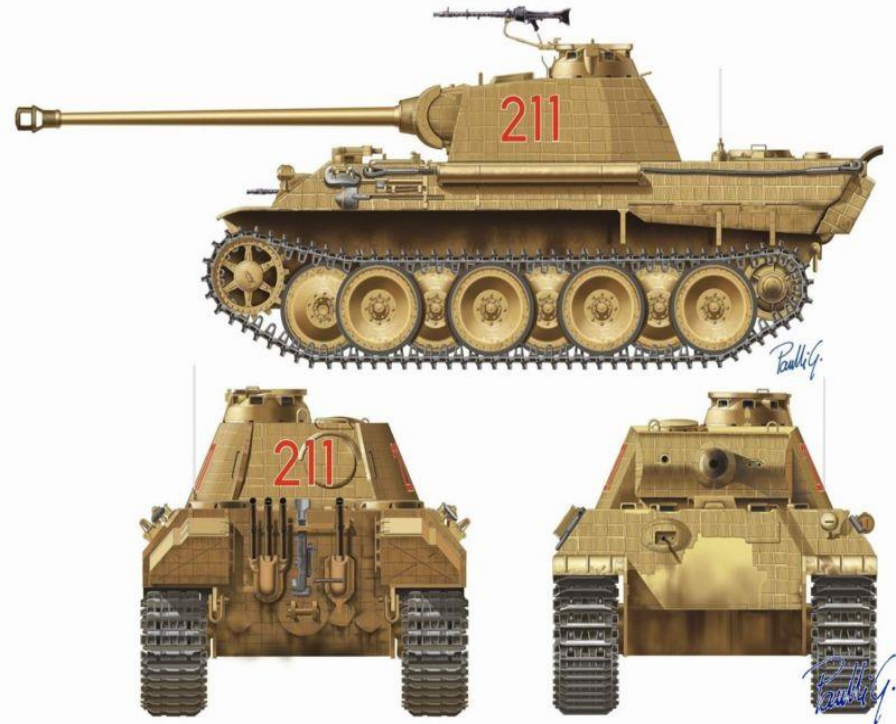








German Armor



German Armor





German Armor



German Armor



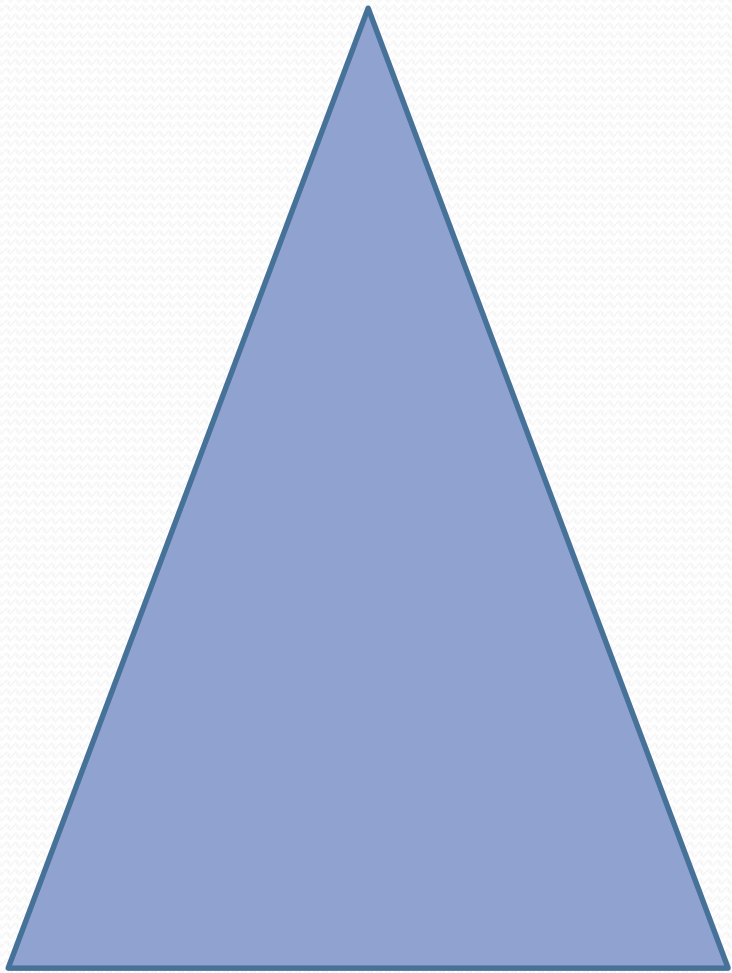
French tanks used by the Germans in Normandy



Allied AFV's



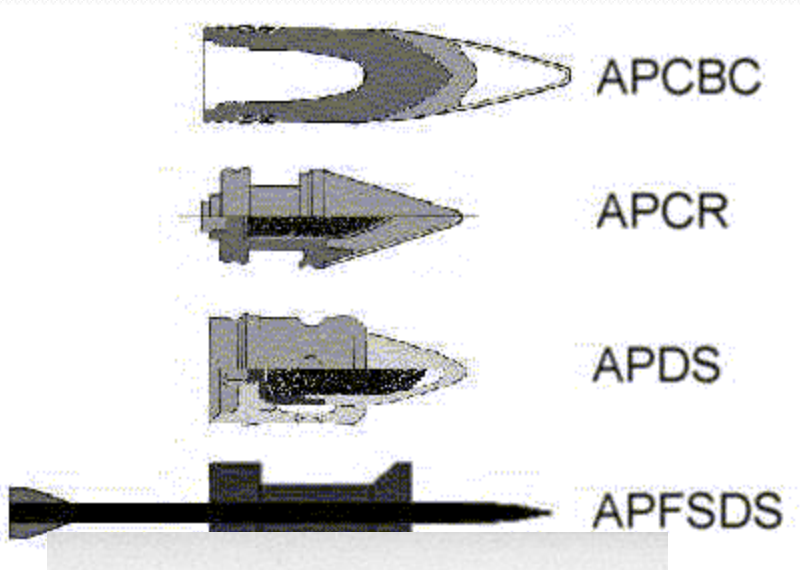
Firepower



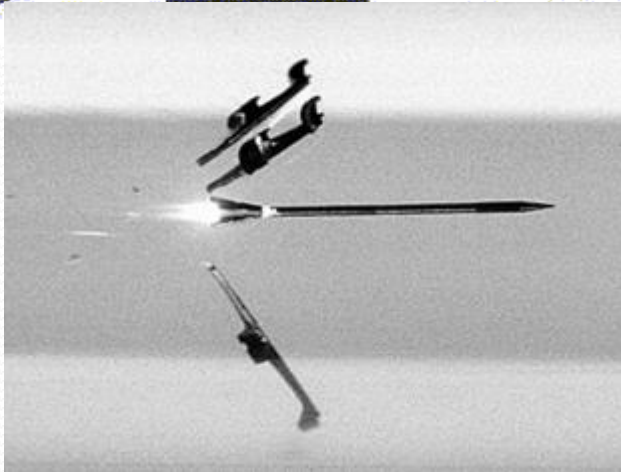
Armor

Mobility

Kinetic Energy Anti-Armor

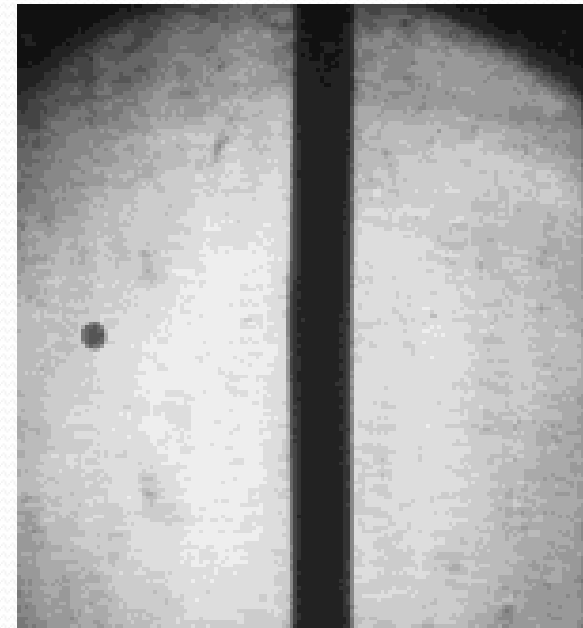
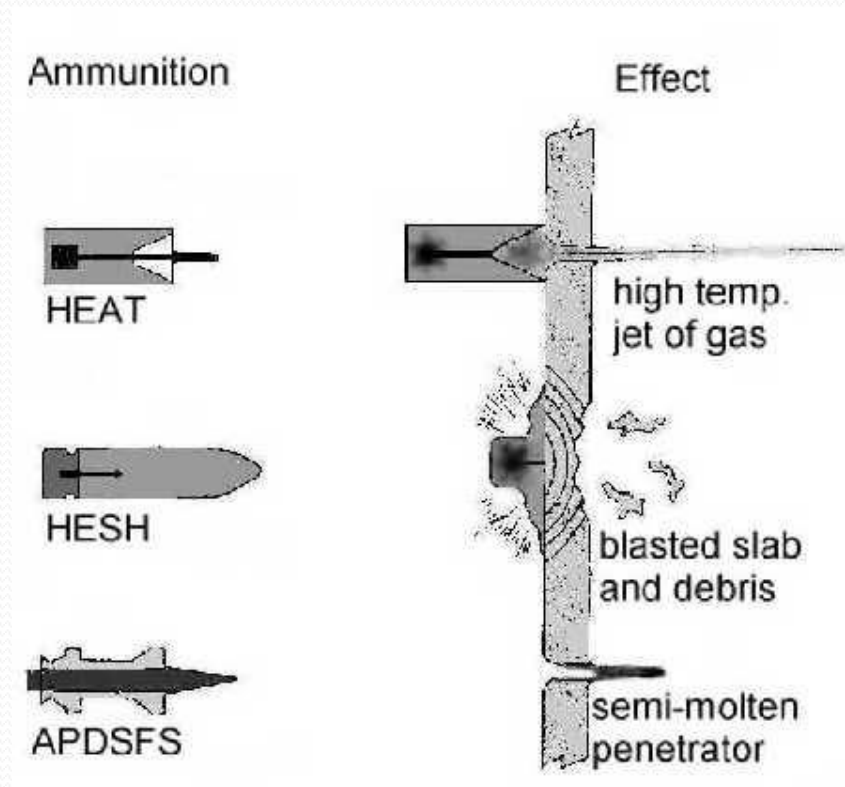


- APCR-US-HVAP
- Other types
- APC
- APCNC
- APHE
- Tungsten-Carbide
- German's primarily used APC and APCBC because of Tungsten shortages



Chemical Energy Anti-Armor

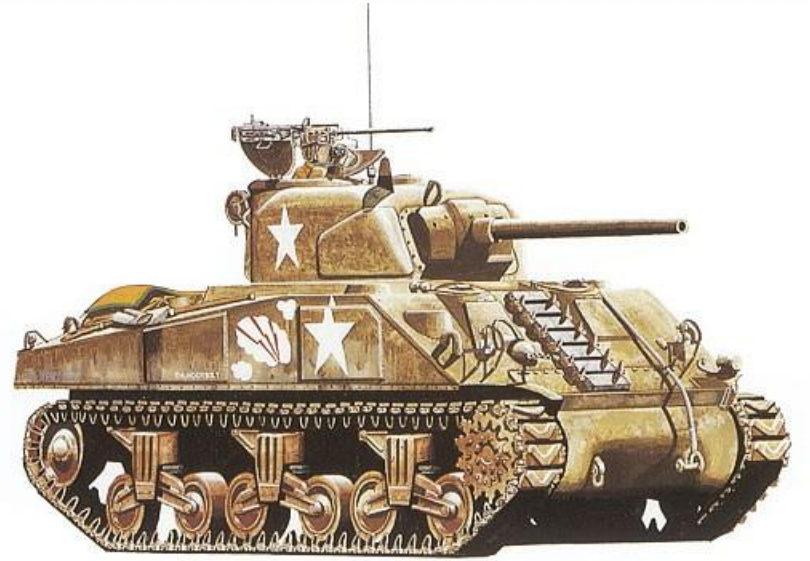
- Spalling



Increases in Armor Protection

- Sloping
- Face Hardened Armor
- RHA
- Spaced Armor
- Early use of Composite Armor in T-95-Fused Silica glass
- Molybdenum
- Tungsten
- German's =brittle armor-possible sabotage by slave labor?





US Armor Doctrine WW2

- Tanks- for exploitation role
- Tank Destroyer's-mobile formations of self propelled and towed anti-tank guns to be deployed en masse to stop enemy armor penetrations
- Reality
- Flawed concept
- Severe bureaucratic disagreements between Ordnance Corps, Army Ground Forces, Armored Force, and field commanders (especially from 1944 onwards)
- Failures of US tank design by 1944

Army Ground Forces

- Lesley J. McNair
- Army Ground Forces
- Roughly equivalent to
- FORSCOM
- Battle worthiness
- Battle need
- Tyranny of Time
- Wished to avoid Ordnance's "mad scientist disease"
- Artilleryman's bias
- Not forward thinking on Armored Warfare



Ordnance



- MG Gladeon Barnes
- Technical Division
- Limited experience with tank development
- Excellent with artillery
- Often would spend too much effort on pet projects such as the T-23
- Failed to organize organizational structure dealing with foreign technical developments that could organize and disseminate information to interested parties.

Armored Force

- Created 1940
- Jacob Devers
- Alvan C. Gillem
- Saw need for 76mm-90mm guns in early 43
- “British view”
- Downgraded by McNair 1944
- “best anti-tank weapon is a tank”
- Fought tanks being deployed in separate battalions



Tank Destroyer Force

- Andrew Davis Bruce
- Enamored with speed
- At the expense of firepower
- M18 Hellcat
- McNair towed tank destroyer
- Bruce –self propelled
- TD's vs Armor
- Tanks for exploitation
- Failed concept by early 1943



Units in the Field

- 1942 to June 1944- Sherman was adequate
- Not always privy to foreign technological intelligence
- Liked the 75mm for non anti-armor roles which was the most common tank function in practice
- After June 1944 wanted tanks with greater firepower and armor

Infantry

- Wished to armor for infantry support



Army Service Forces

- Roughly equivalent to CASCOM
- Did not favor supplying more than a few calibers of tank ammo
- Tank transmissions
- Fought increases in armor
- Fought tank armament increases

The British Army

- The most experience in dealing with German armor
- Largely ignored by elements in the US high command
- Saw the early need to improve firepower and protection

M4 Sherman

- Main variants
 - M4-M4a1-Continental
 - M4a2-Diesel
 - M4a3-Ford GAA
 - M4a4-Chrysler
-
- Incremental improvements from 1942-1944
 - Yet still essentially same tank until advent of 76mm



76mm gun armed Sherman & other developments

- Slow development (battle need) until 1944
- McNair viewed the 76mm as a TD weapon during all of 1942 and most 1943
- Lack of large scale combat experience until June 6, 1944
- Early Sherman's were prone to fire- improvements in ammo stowage
- Appliqué armor

Experimental US tanks



T28 (105 mm Gun Motor Carriage T95)

Super Heavy Tank Prototype (rather an Assault Gun)

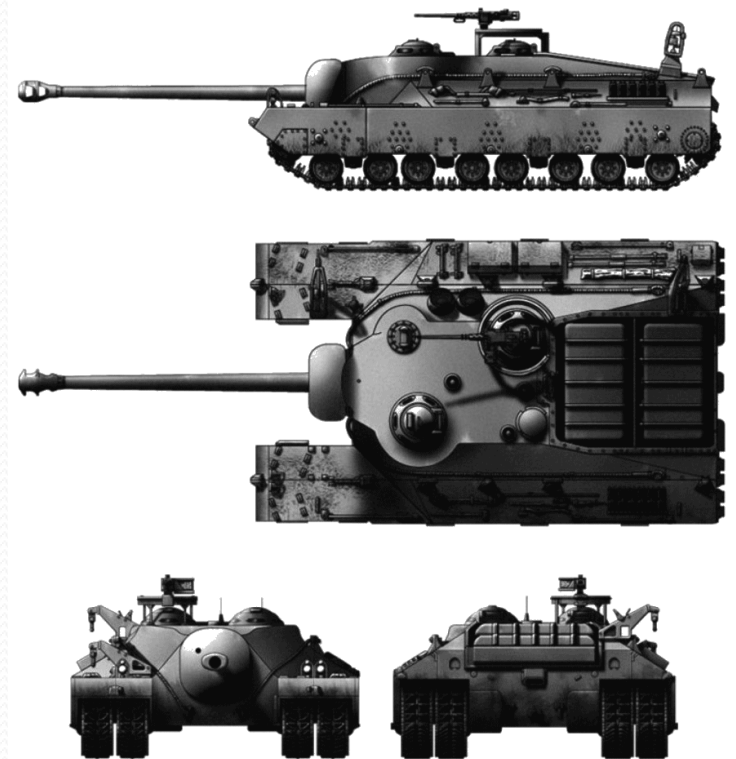


U.S. ARMY



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Jagdtiger
mit 88mm

A39 Tortoise

T28 Super
Heavy tank

US Tank Development until Dec 1944

- 1942-1943
- Sherman excellent tank design in 1942
- Tiger's were seen in few numbers
- Sherman Mechanically reliable
- Jacob Devers pushes for 90mm armed T-26
- McNair Rejects, he does accept battle need by end of 43 for 76mm Sherman
- Marshall overrules McNair
- Army Service forces tries in vain to kill t-26
- 1944
- TD Force to receive 90mm gun on m36
- 76mm Sherman begins production by early 1944, but is rejected by field commanders for immediate service
- US Army shocked by casualties after Normandy landings and vulnerability of the Sherman
- 76mm gun found inadequate with APC against Tiger and Panther, penetrated only with rare HVAP (APCR)
- 17 pounder found adequate
- After Cobra the vast majority of us tank encounters are with STUG III's and Pz 4's

US Tank Destroyers



Late war developments



US Army tank combat

- Ballistics Research Lab Reports
- Very few large tank battles
- Single most important factor was who fired first- when defender's fired 1st they inflicted 4.3 time the number of defender casualties
- Technical inferiority mattered less than who fired 1st
- The average engagement was 9 American tanks to 4 German
- There was 5 to 1 kill ratio in favor of Panther or Tiger (Belton Cooper)
- Up until Bulge the Pz 4, Stug III, and Pak 40 were the most numerous opponent
- White Report
- Questioned the Tank/TD doctrine
- Use of WP and maneuver
- American tankers "willingness" to take losses in order for maneuver to work

Final thoughts

- Sherman, by 1944 lacked firepower and protection. However, Sherman was not the death trap
- Sherman was inferior in firepower and protection to Tiger and Panther
- Most Sherman combat did not involve fighting tanks
- McNair's Battle need was too reactionary
- McNair's battle worthiness ensured a mechanically reliable vehicle in comparison to Tiger and Panther

British Solution



British Armor



German Infantry

- In comparison similar German units will have more machine guns, almost twice the number. More submachine guns, twice the number and heavier mortars.
- Man for man in comparison German formations had more firepower than their American opponent.
- German's, and later Allies, understood that a squad's firepower was its machine gun.

Selected Weapons Comparison

Rifles

American M-1 Garand

Specifications

Weight 9.5 **lb** (4.3 **kg**) to 10.2 **lb** (4.6 **kg**) **Length** 43.6 **in** (1,107 **mm**) **Barrel length** 24 **in** (610 **mm**) **Cartridge** .30-06 Springfield (7.62x63mm); **Action** Gas-operated, rotating bolt **Rate of fire** 16–24 rounds/min effective **Muzzle velocity** 2,800 **ft/s** (853 **m/s**) **Effective range** 500 **yd** (457 **m**) **Feed system** 8-round "en bloc" **clip** internal **magazine** **Sights** Aperture rear sight, barleycorn-type front sight



- German Karabiner 98K
- Specifications
- **Weight** 3.7–4.1 kg **Length** 1110 mm **Barrel length** 600 mm **Cartridge** 7.92x57mm Mauser **Action** Bolt-Action **Muzzle velocity** 760 m/s **Effective range** 500 m (547 yd) (with iron sights) 800+ m (875 yd) (with optics) **Feed system** 5-round **stripper clip**, internal **magazine**



Selected Weapons Comparison

Submachine guns

- American Thompson

- Specifications

- **Weight** 10.8 **lb** (4.9 **kg**) empty (M1928A1)
10.6 **lb** (4.8 **kg**) empty (M1A1) **Length** 33.5 **in** (851 **mm**) (M1918A1)
32 **in** (813 **mm**) (M1/A1) **Cartridge** .45 **ACP** (11.43 × 23 mm) or **9 mm Parabellum** (9×19mm) **Action** Blowback **Rate of fire** 600-1200 rpm, depending upon model **Feed system** 20 or 30-round detachable box **magazine**
50 or 100-round **drum**



- German MP-40

- Specifications

- **Weight** 4 **kg** (8.8 **lb**) **Length** 833 **mm** (32.8 **in**) 630 **mm** (24.8 **in**) w/stock folded **Barrel length** 251 **mm** (9.9 **in**) **Cartridge** 9×19mm Parabellum **Action** blowback, open bolt **Rate of fire** 500 rounds/min **Muzzle velocity** ~380 **m/s** (1,247 **ft/s**) **Feed system** 32-round detachable box **magazine** **Sights** Hooded blade front, fixed and flip-up U-notch rear



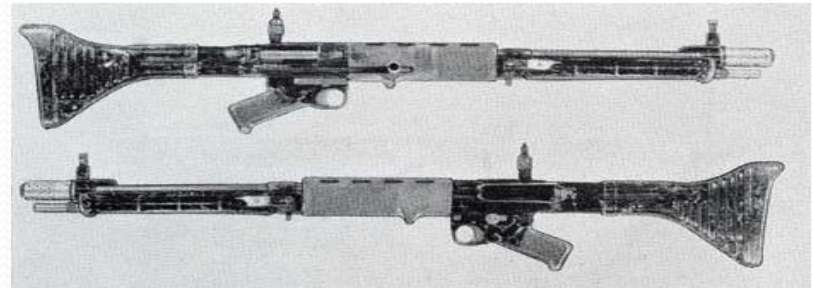
Selected Weapons

Light Machine Guns

- American BAR
- Specifications
- Weight 7.2–8.8 **kg** (16–19 **lb**)
empty Length 1,214 mm (47.8 in)
Barrel length 610 mm (24 in)
Cartridge .30-06 Springfield (7.62x63mm)
Action Gas-operated, open bolt
Rate of fire 300–650 rounds/min
Muzzle velocity 805



- German FG-42
- Used by the Fallschirmjager
- Specifications
- Weight 4.5 **kg** (9.9 **lb**) (Model I), 4.9 **kg** (10.8 **lb**) (Model II)
Length 937 **mm** (36.9 **in**) (Model I), 1,060 **mm** (41.7 **in**) (Model II)
Barrel length 502 **mm** (19.8 **in**)
Cartridge 7.92x57mm Mauser
Action Gas operated
Rate of fire 900 rounds/min (Model I), 600 rounds/min (Model II)
Muzzle velocity 760 **m/s** (2,493 **ft/s**)
Feed system 10 or 20-round detachable box magazine
Sights Diopter Open Sights, ZFG42 Scope (Model I & II),



Selected Weapons

Light Machine Guns Cont.

● American M1919

- **Specifications**
- **Weight**31 lb (14 kg) (M1919A4)**Length**
- 48 in (1219 mm) (M1919A4)
- 53 in (1346 mm) (M1919A6)
- **Barrel length**24 in (609 mm)**Cartridge**
- [.30-06 Springfield](#) (U.S.)
- [7.62 x 51 mm NATO](#) (U.S.)
- [.303 British](#)
- [8 mm Mauser](#)
- **Action**[Recoil-operated](#)/short-recoil operation**Rate of fire**400–600 [round/min](#)**Effective range**1,500 yd (1,370 m) (maximum)**Feed system**50-round [belt](#)



● German MG-42

- **Specifications**
- **Weight**11.57 kg (25.5 lb)**Length**1220 mm (48 in.)**Cartridge**[7.92x57mm Mauser](#)**Action**[Recoil-operated, roller-locked](#) bolt**Rate of fire**1200 rounds/min (varied between 900 and 1,500 rounds/min with different bolts)**Muzzle velocity**755 m/s (2,475 ft/s)**Effective range**1000 m (1,100 yd)**Feed system**50 or 250-round [belt](#)



Selected Weapons

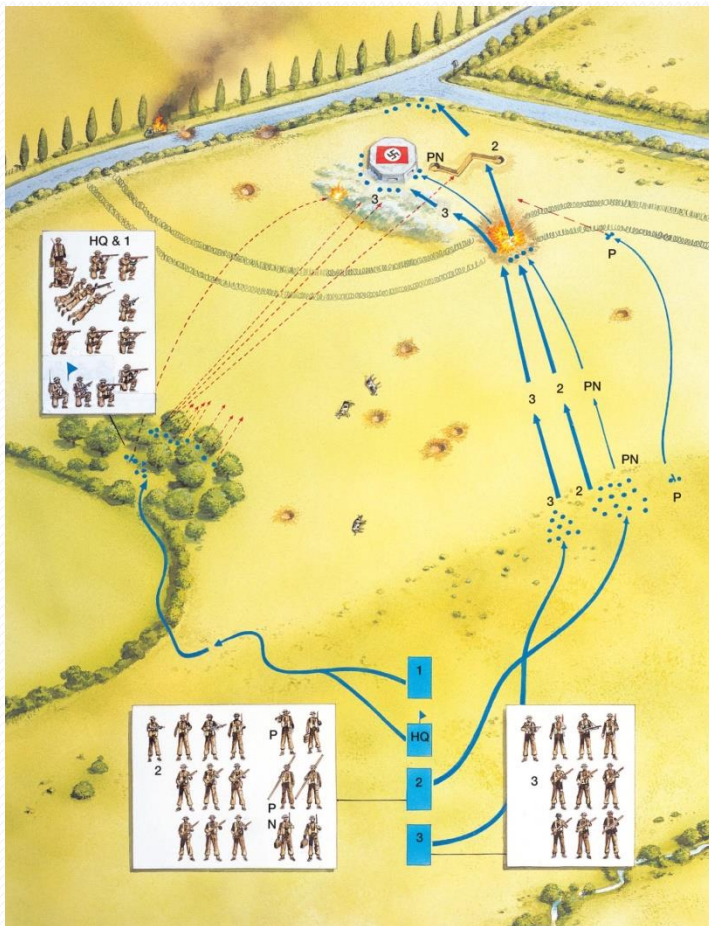
Misc.

- German Sturmgewehr 44, the 1st Assault Rifle

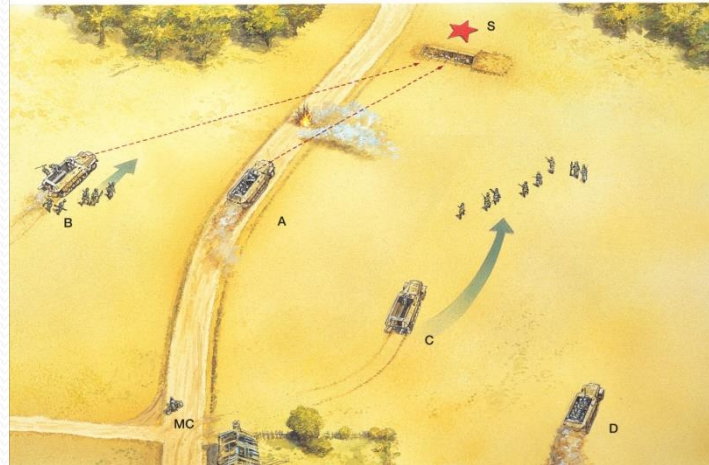
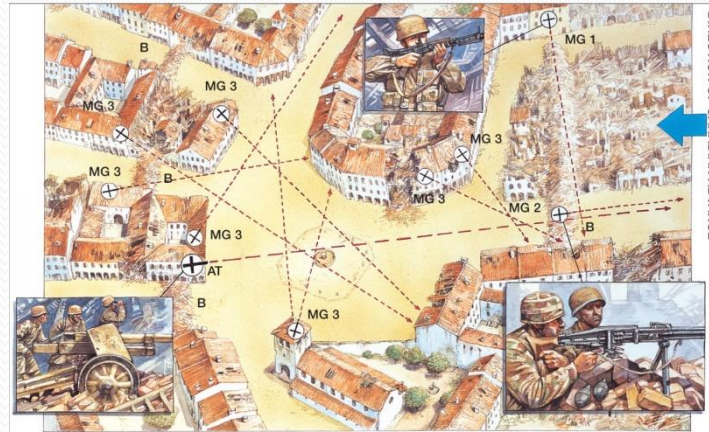
- **Specifications**
- **Weight** 5.22 kg (11.5 lb) **Length** 940 mm (37 in) **Barrel length** 419 mm (16.5 in) **Cartridge** 7.92x33mm Kurz **Action** Gas-operated, tilting bolt **Rate of fire** 500-600 rounds/min **Muzzle velocity** 685 m/s (2,247 ft/s) **Effective range** 300 meters **Feed system** 30-round detachable box magazine **Sights** adjustable 800meter sights with Rear: V-notch; front: ring with vertical post



Infantry in attack



Infantry in Defense and counterattack



Aircraft of the Normandy Campaign



British Aircraft

- Typhoon



- Tempest

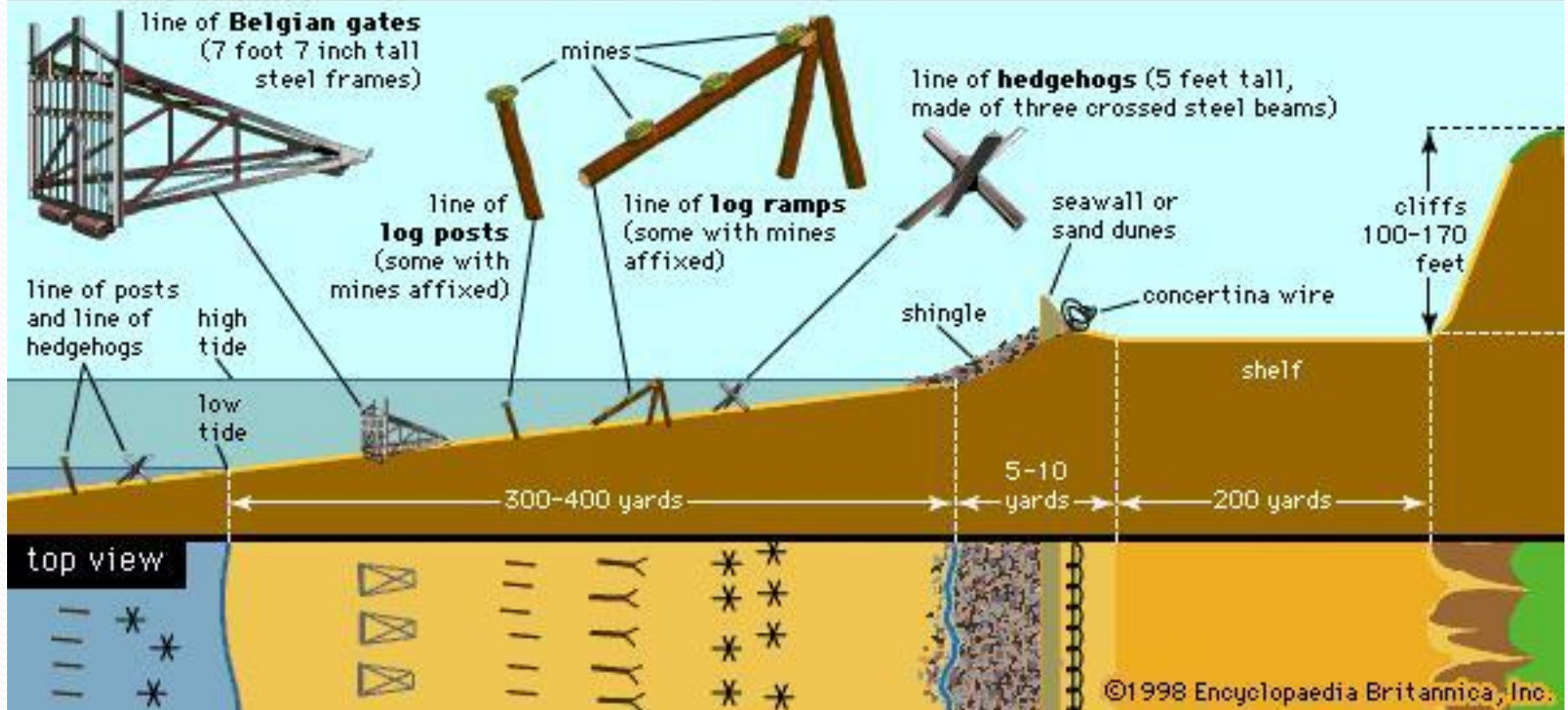


Atlantic Wall

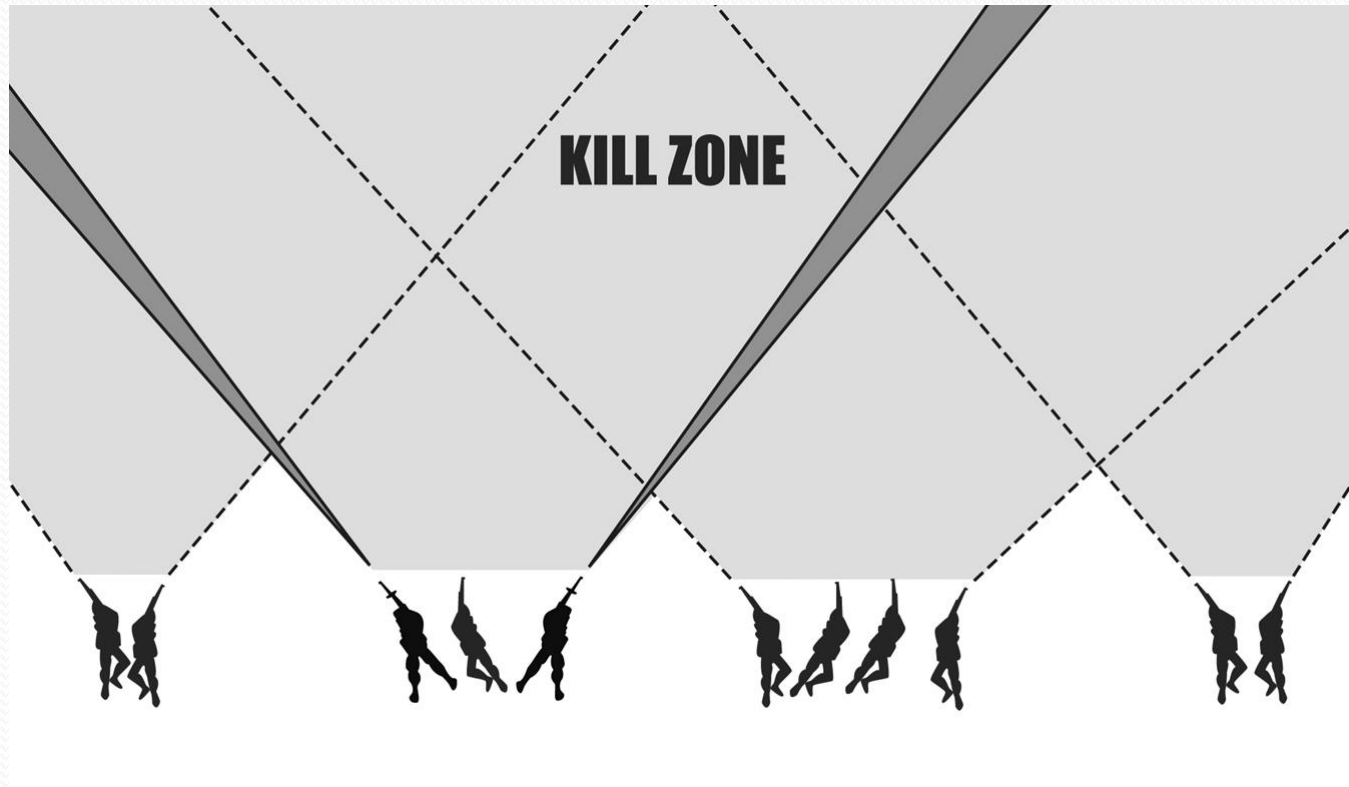




Omaha Beach - Typical Cross Section (not to scale)



Kill Zone



Operation Bodyguard

- **Operation Fortitude** (North and South)
- **Operation Quicksilver I – VI** (South) and **Operation Skye** (North)
- **Operation Ironside** IRONSIDE was the threat to the Bordeaux area during NEPTUNE.
- **Operation Titanic** (I – IV)
- Naval Deceptions: Operations Taxable, Glimmer and Big Drum
- **Operation Paradise** (One – Five) PARADISE was the dummy lighting of ports, beaches, and bridging operations on the English east coast in tactical support of NEPTUNE.
- DOUBLE CROSS
- **Operation Zeppelin**
- **Operation Royal Flush** ROYAL FLUSH was a Diplomatic plan, to provide for taking advantage of expected changes in Neutral attitudes after Operation NEPTUNE, by pressure upon Sweden, Spain and possibly Turkey.
- **Operation Vendetta** VENDETTA was a threat against Southern France from North Africa during NEPTUNE.
- **Operation Graffham** GRAFFHAM was a diplomatic threat to reinforce FORTITUDE NORTH, with negotiations for Swedish airfields and transport facilities.



Fortitude North

Trondheim

Graffham

Royal Flush

Fortitude South

Calais

Ironside

Bordeaux

Royal Flush

Gibraltar

Copperhead

Marseille

Vendetta

Ferdinand

Zeppelin

Royal Flush

Fortitude South-Quicksilver

- Patton to lead FUSAG



Buildup for Overlord

- Operation Sledgehammer - 1942
- Operation Roundup -1943
- Exercise Tiger, Slapton Sands, attack by a German E-Boat squadron during large scale maneuvers. April 28, 1944
- 638 men killed, most drowned
- 10 officers with D-Day knowledge were missing.
- 60 American Divisions
- 18 British and Canadian Divisions in UK



Landing Craft

LCVP-Higgins Boat aka LCA



Landing Craft Infantry- LCI



Landing Craft

Landing Ship Tank-LST



Landing Craft Mechanized-
LCM



GMC DUKW 353



Hobart's Funnies- ARC



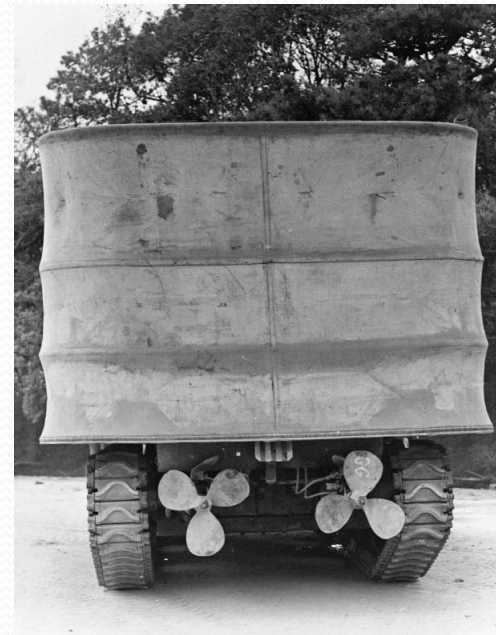
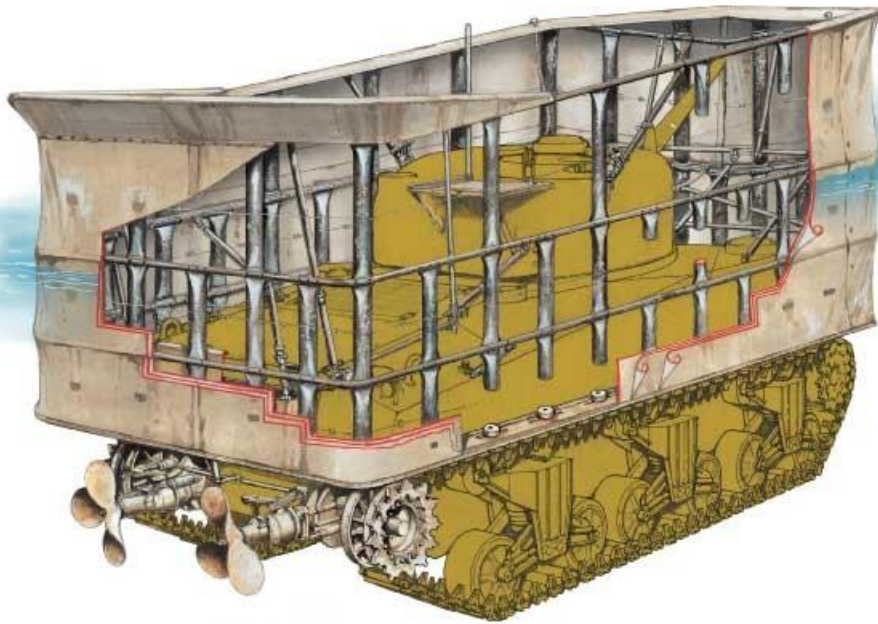
AVRE AV Royal Engineers & Crocodile



Sherman Flail or Crab



Sherman DD's

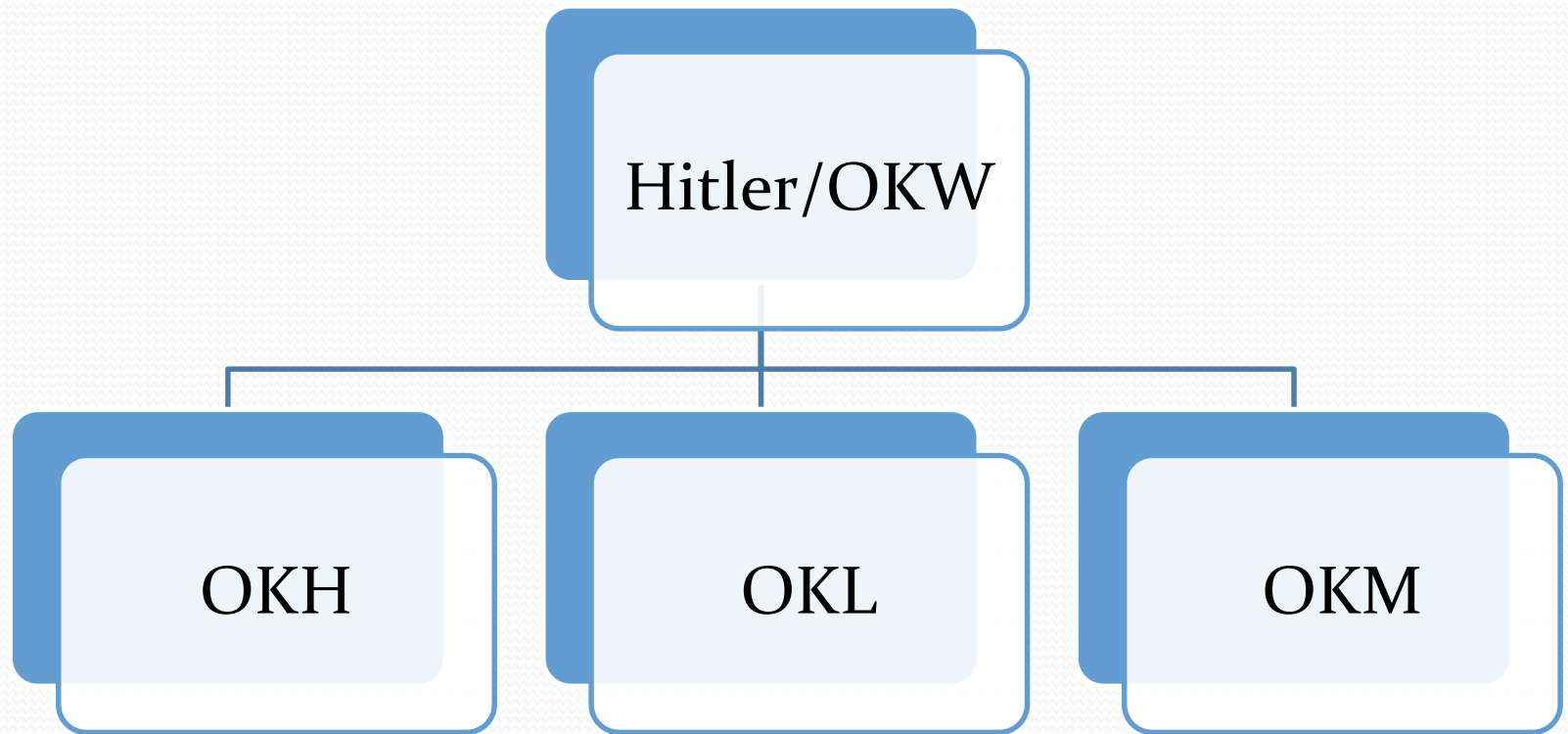




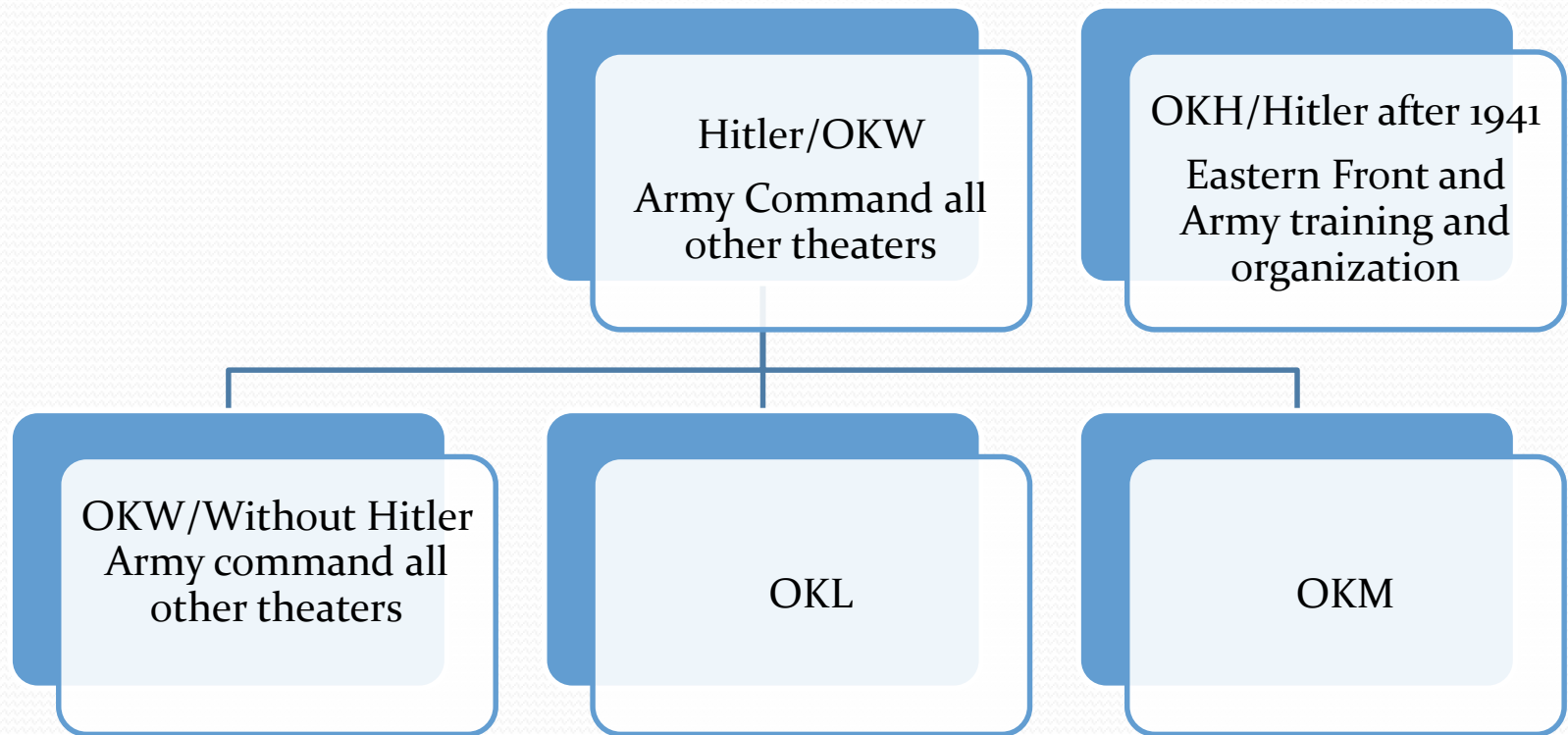
Hitler's style of governance

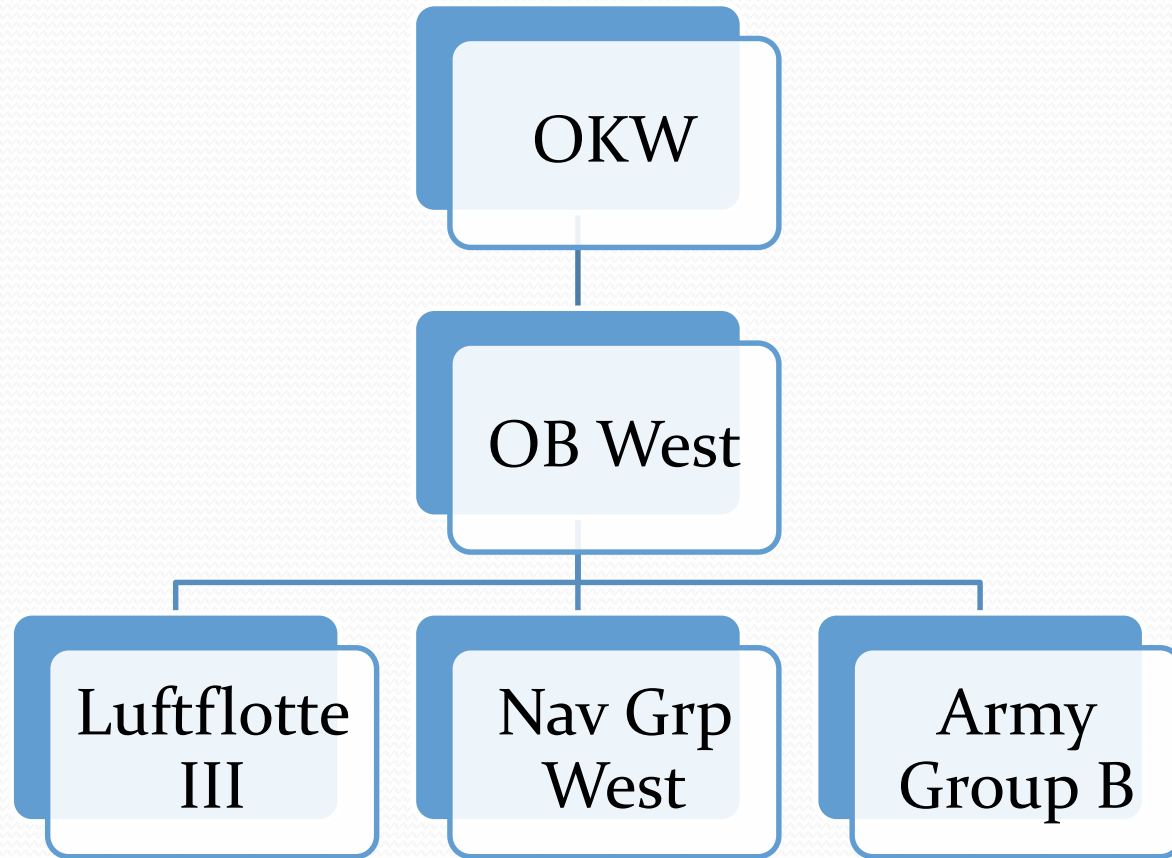
- Divide and rule- Hitler often goes against the normal flow or chain of command
- Will give authority to one department or person even if that task was originally in another agency or department.
- Duplication of effort
- Stupidity or Hitler was attempting to minimize the possibility that another individual would rival him in power.

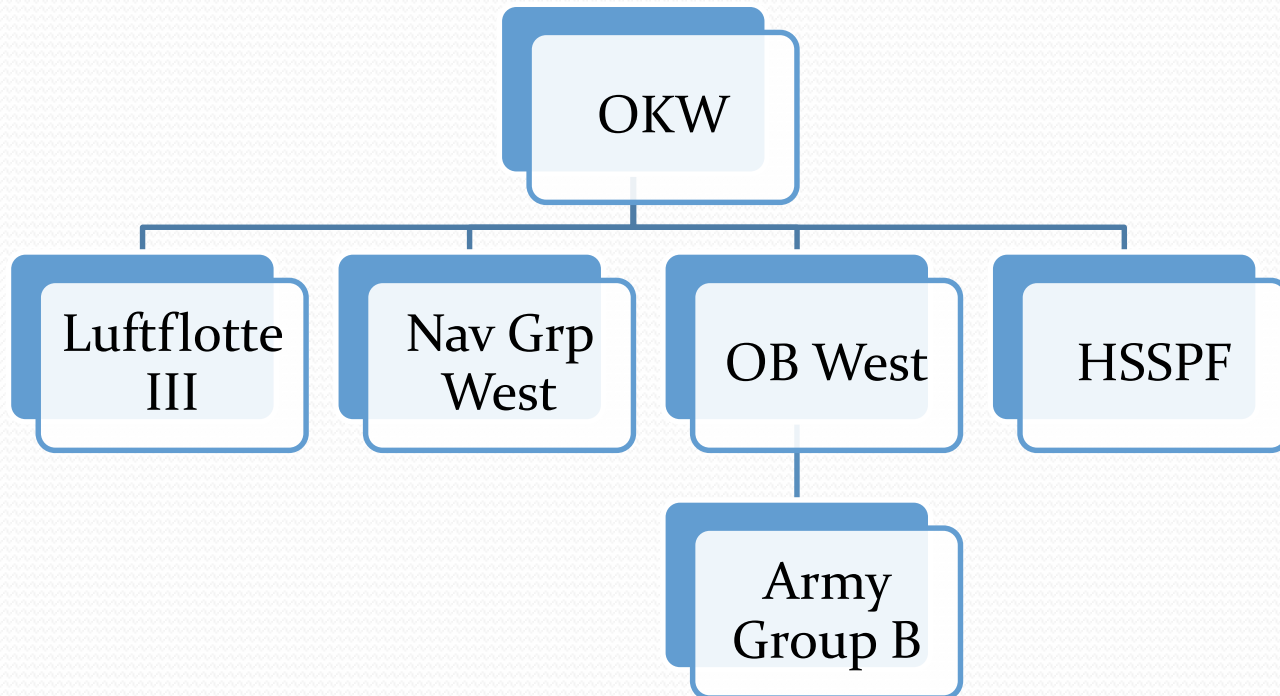
German High Command in Theory



German High Command in Practice



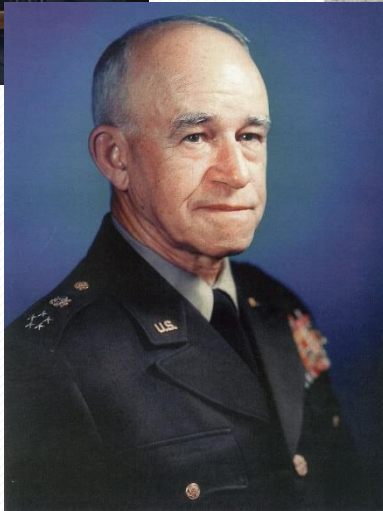






194399

Allied



German



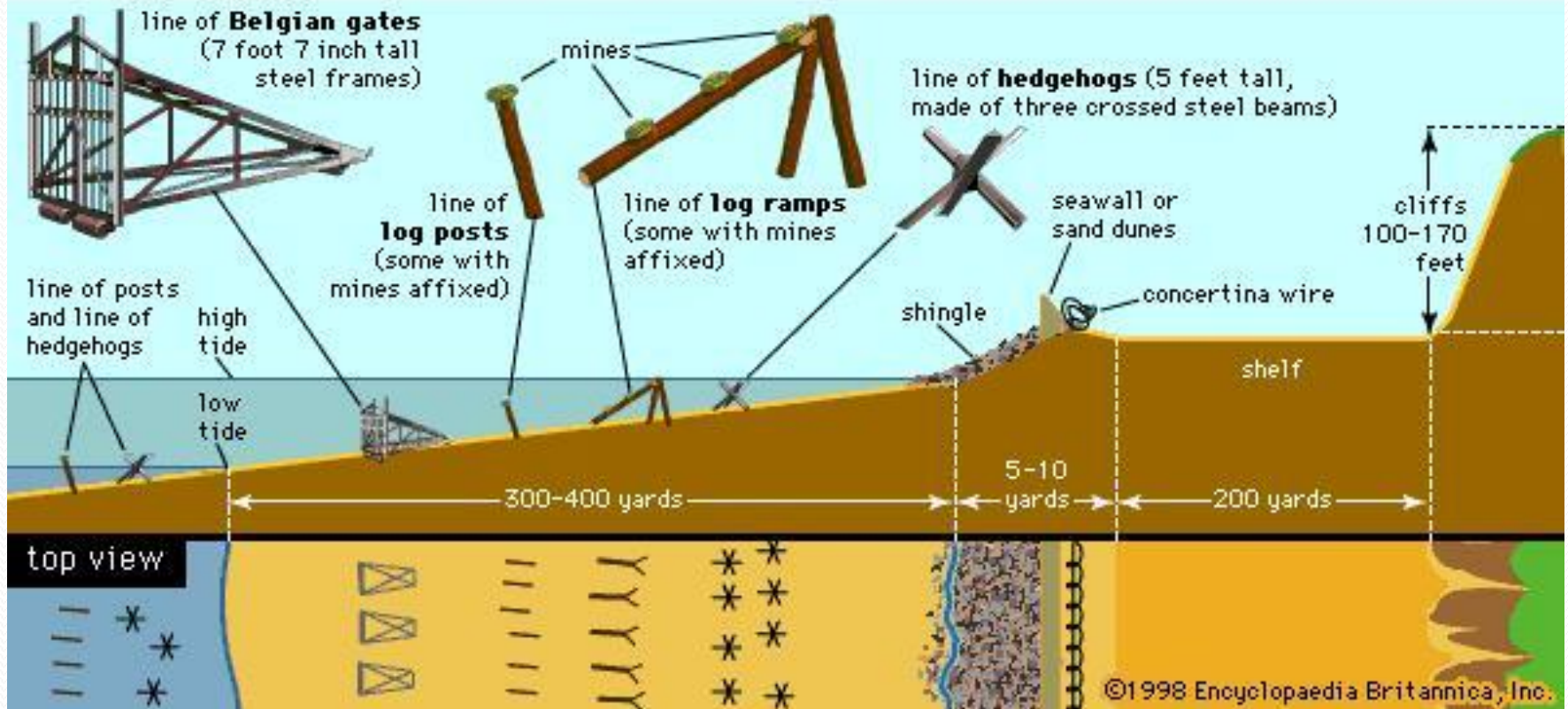
Sperrle
Kranke
Dollman

Atlantic Wall

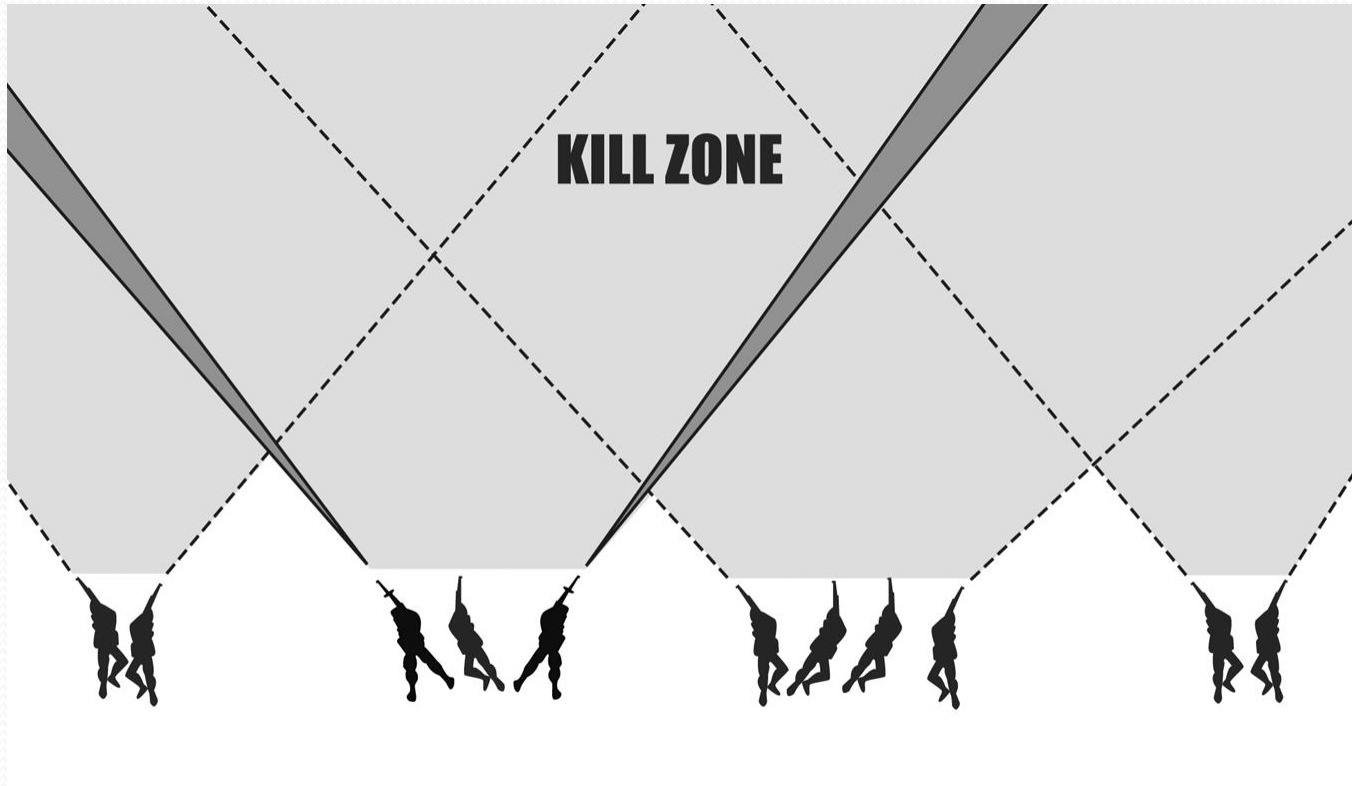




Omaha Beach - Typical Cross Section (not to scale)



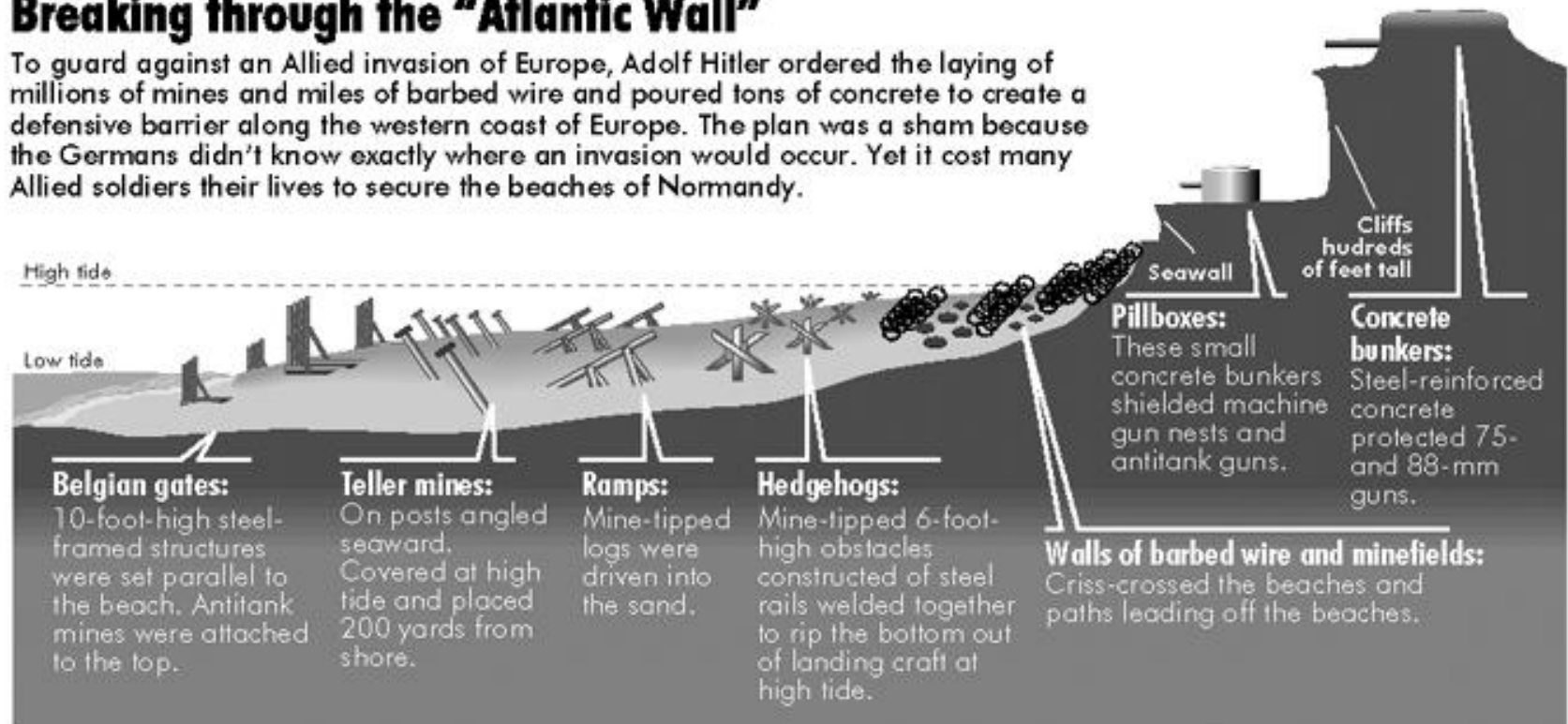
Kill Zone



Beach fortifications

Breaking through the "Atlantic Wall"

To guard against an Allied invasion of Europe, Adolf Hitler ordered the laying of millions of mines and miles of barbed wire and poured tons of concrete to create a defensive barrier along the western coast of Europe. The plan was a sham because the Germans didn't know exactly where an invasion would occur. Yet it cost many Allied soldiers their lives to secure the beaches of Normandy.



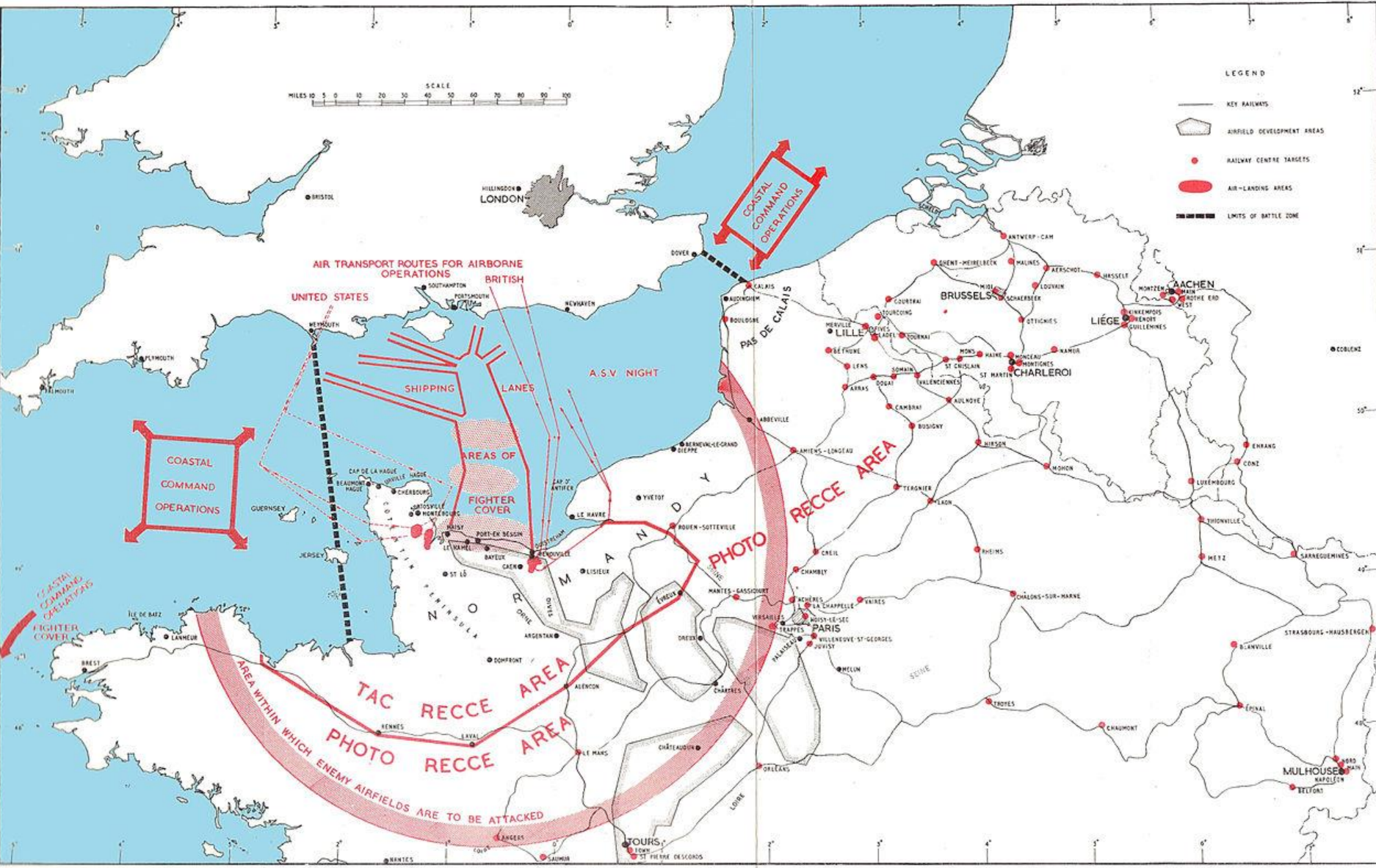
Ost Battalions

- Usually attached to a German formation



German Division Guide

- 700 series static divisions
- Panzer, Panzergrenadier Division, Luftlande, Fallschirmjäger usually 1st rate though 21st Panzer was not rated for Eastern Front
- All other German infantry divisions mixed
- German forces were long a source of replacements for Eastern Front



THE AIR PLAN FOR THE LANDINGS IN NORMANDY, 6 JUNE 1944

A word of caution

- Many US Army Armor enthusiasts misuse German Military History.
- Wehrmacht envy
- Used as a font of wisdom-”A storehouse to be looted to justify modern doctrinal concepts”
- An example- the use of the term “Auftragstaktik”- mission type orders- giving order for operations
- Not used by the German Army of World War 2
- Created by the postwar Bundeswehr

German Practice

- Loose command arrangement
- Commander's intent (Absicht)
- Nature of the task (Aufträge)
- Subordinate would use initiative to create a resolution (Entschluss)
- German subordinate's were given authority to abandon the task, but could never abandon his commander's intent. Higher HQ would be informed immediately by necessity.
- If done the subordinate accepted full responsibility
- System was designed to foster initiative and creativity

German Army

- No set doctrine, system or dogma existed, outside what is already mentioned
- Officer school system accepted the dialectic approach
- Improvisation
- German Army prior to 1945 never adopted set principles of war

Practical Applications

- Must appreciate the German system based upon the political, societal and cultural factors that created it
- Autocratic Prussian model
- National Socialism
- Is it possible to adopt in a more democratic society?
- German Army vs the German Wehrmacht
- Wehrmacht, as opposed to the Army (Heeres) was inefficient lacking unity of command.

US Beach Assault



US Beach Assault



Unit sizes and nomenclature

- US, British, Canadian infantry division in WW2 – 15,000 to 20,000 strong on D-Day
- Airborne divisions half that size
- German division less than 10,000
- Squad – 9 to 12
- Platoon – 3 or 4 squads – about 40
- 3-4 platoons to a company – about 125
- 3-4 companies to a battalion – about 500
- 3-4 battalions to a regiment – about 2,000
- Overlord
- Neptune



Pathfinders

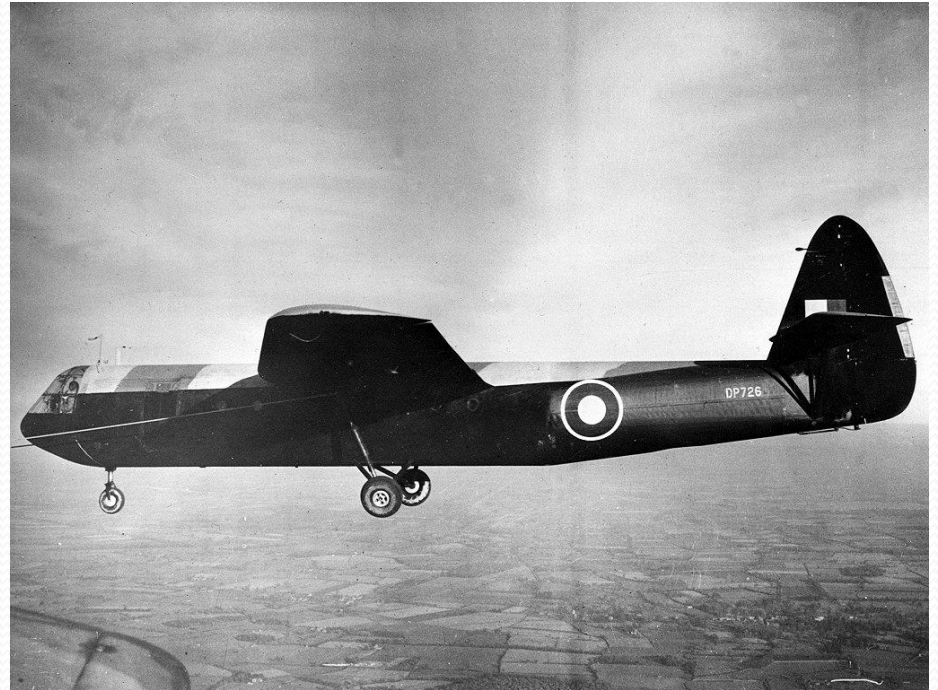






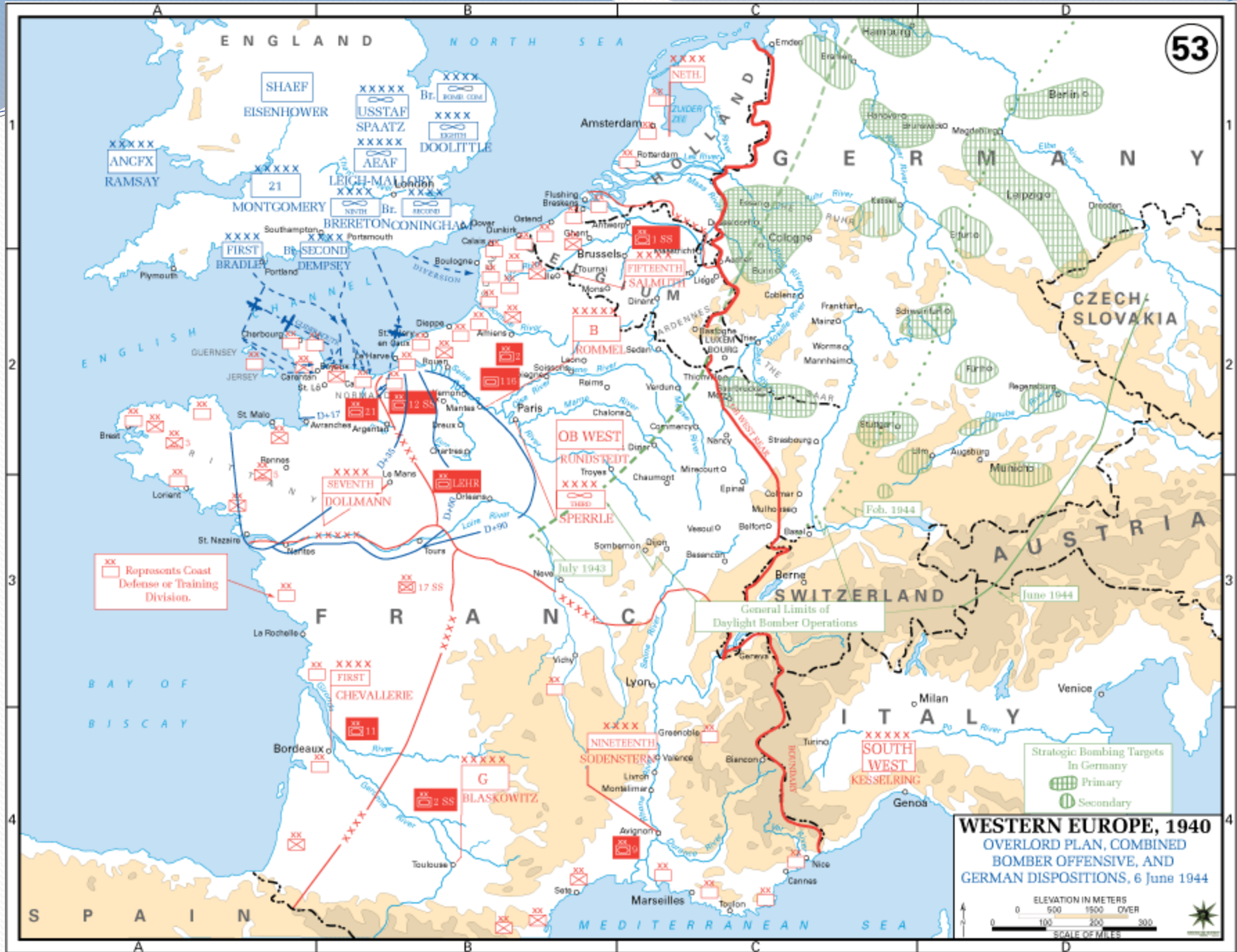
SPECIALIZED AIRBORNE WEAPONS
See text commentary for details

Air Assault (Glider)



D-Day

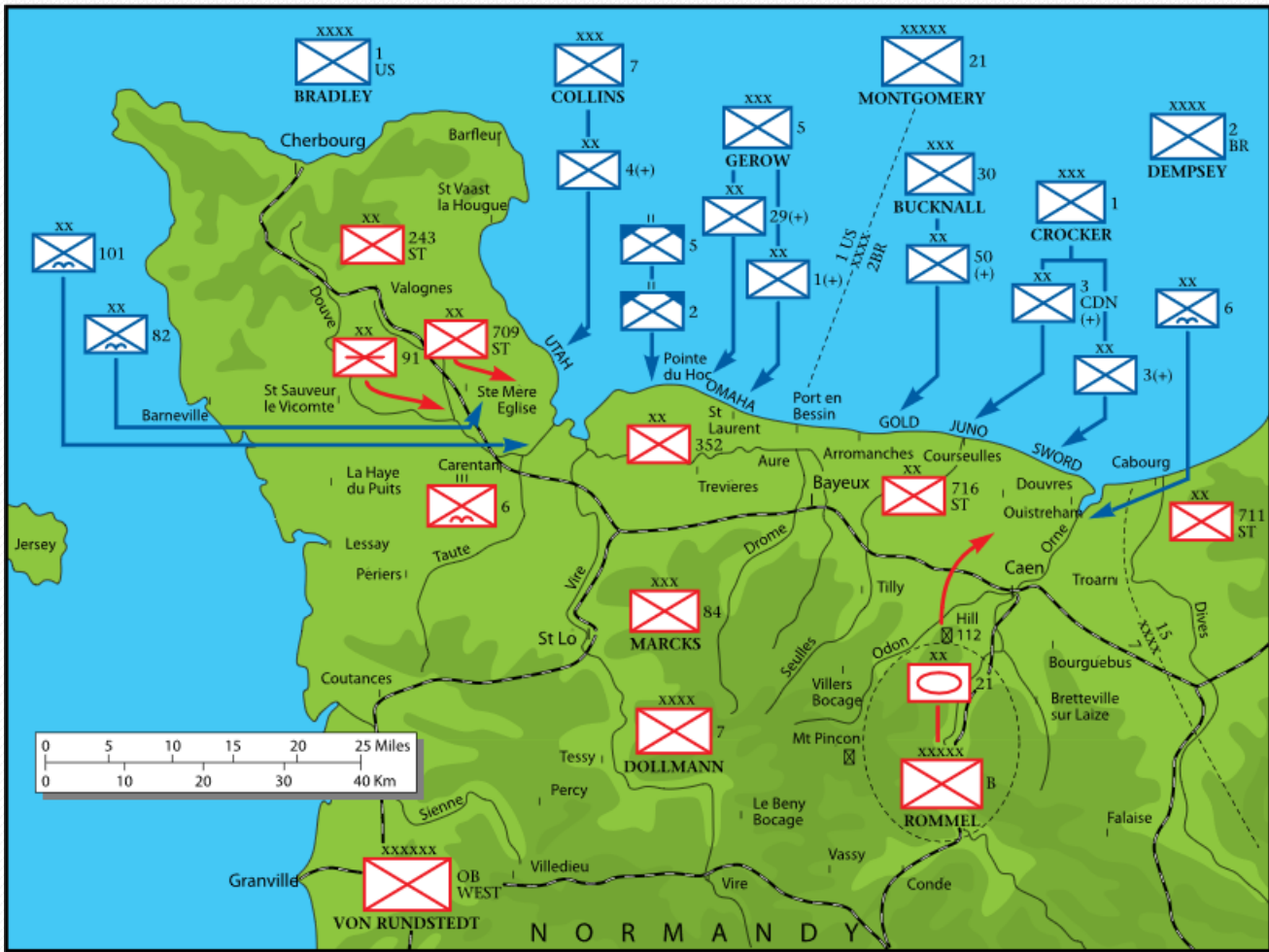
- Required a compromise Navy wanted low tide so that underwater obstacles would be visible
- Army wanted high tide-shorter beach
- Compromise 1-3 hours after low tide
- New Moon light
- June 5-6-7 only moon and tide conditions before July
- A break in the stormy weather allowed a brief window on the 6th.



WESTERN EUROPE, 1940
OVERLORD PLAN, COMBINED
BOMBER OFFENSIVE, AND
GERMAN DISPOSITIONS, 6 June 1944

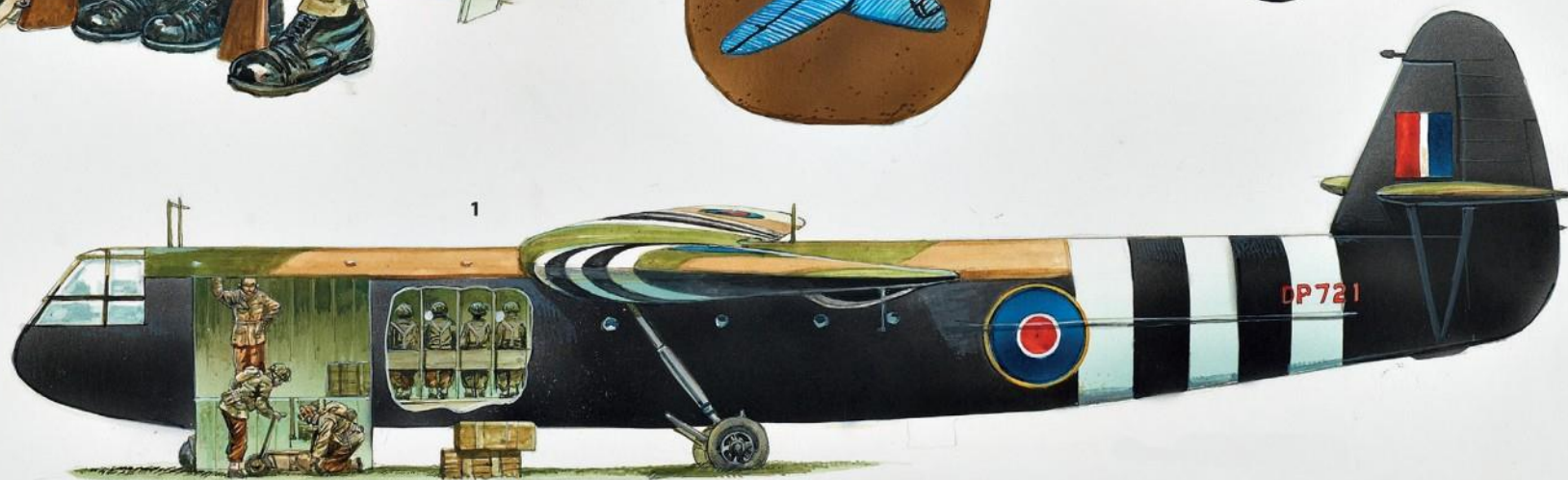
Strategic Bombing Targets
 In Germany
 Primary
 Secondary

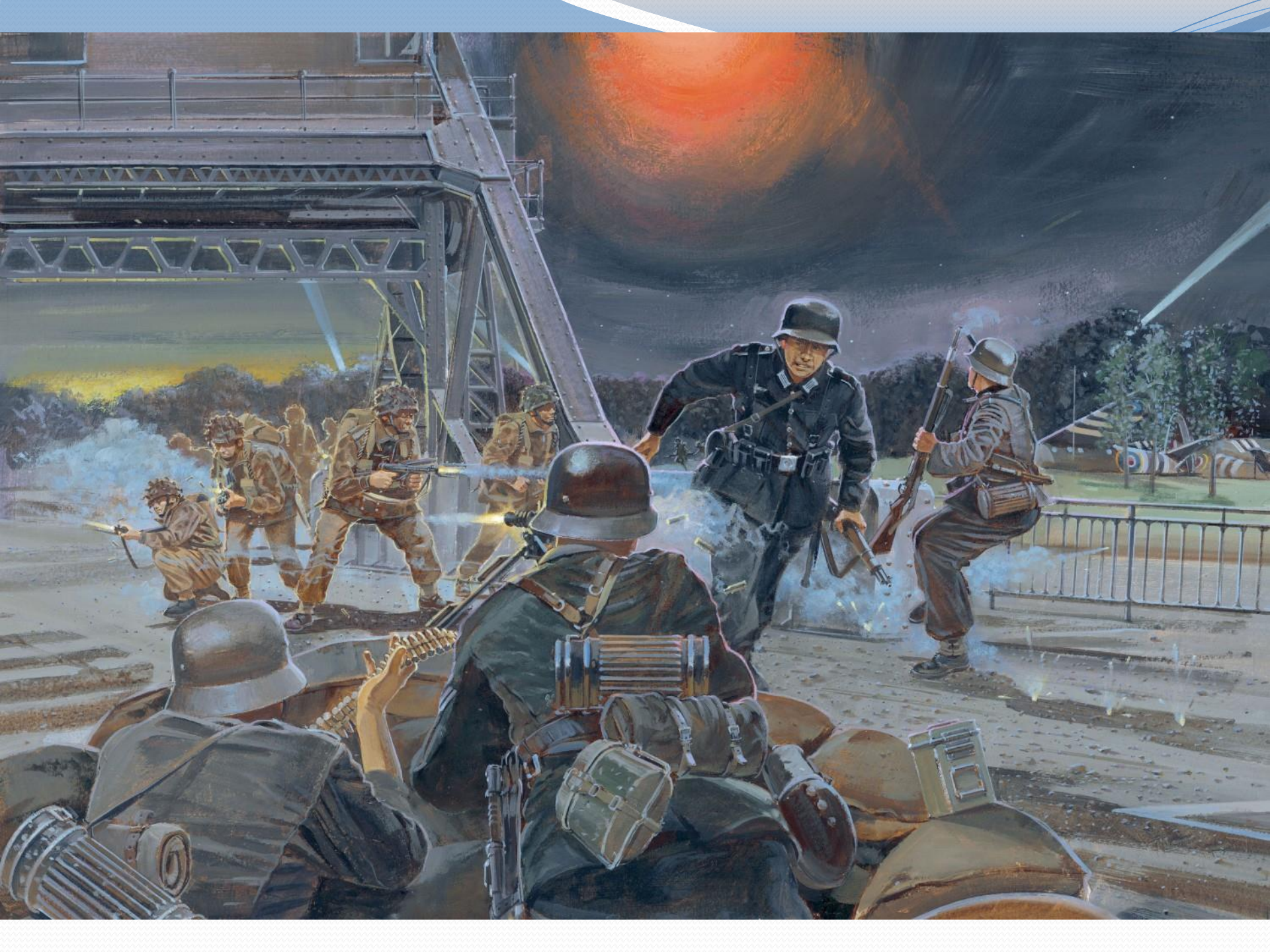
ELEVATION IN METERS
 0 500 1500 OVER
 SCALE OF MILES
 0 100 200 300



Operation Tonga

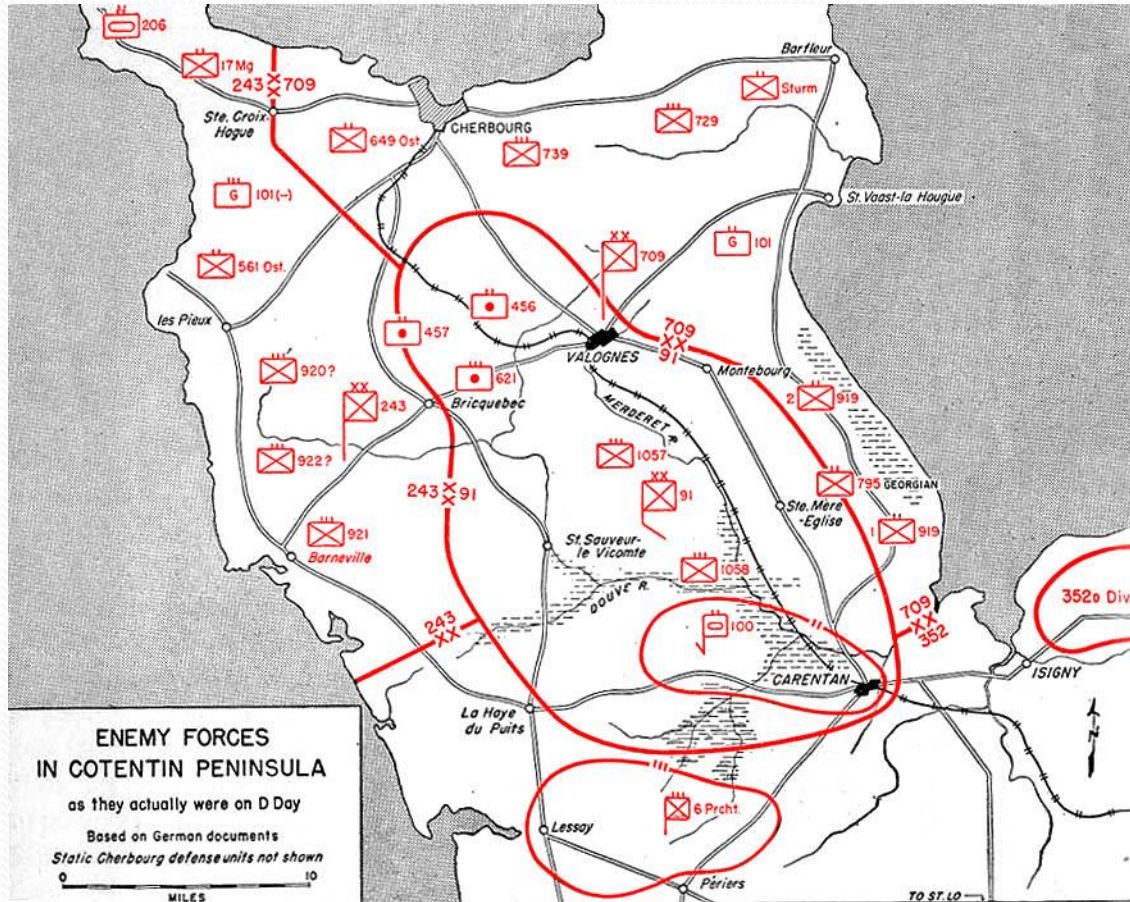
- British 6th Airborne Division -landings some by glider others by parachute.
- 12:11am Operation Deadstick-Target Pegasus Bridge over Caen Canal- Bridge over Orne River
- Blow bridges over Dives (pronounced Deeves) River to block German attacks from East
- Take our Merville Battery

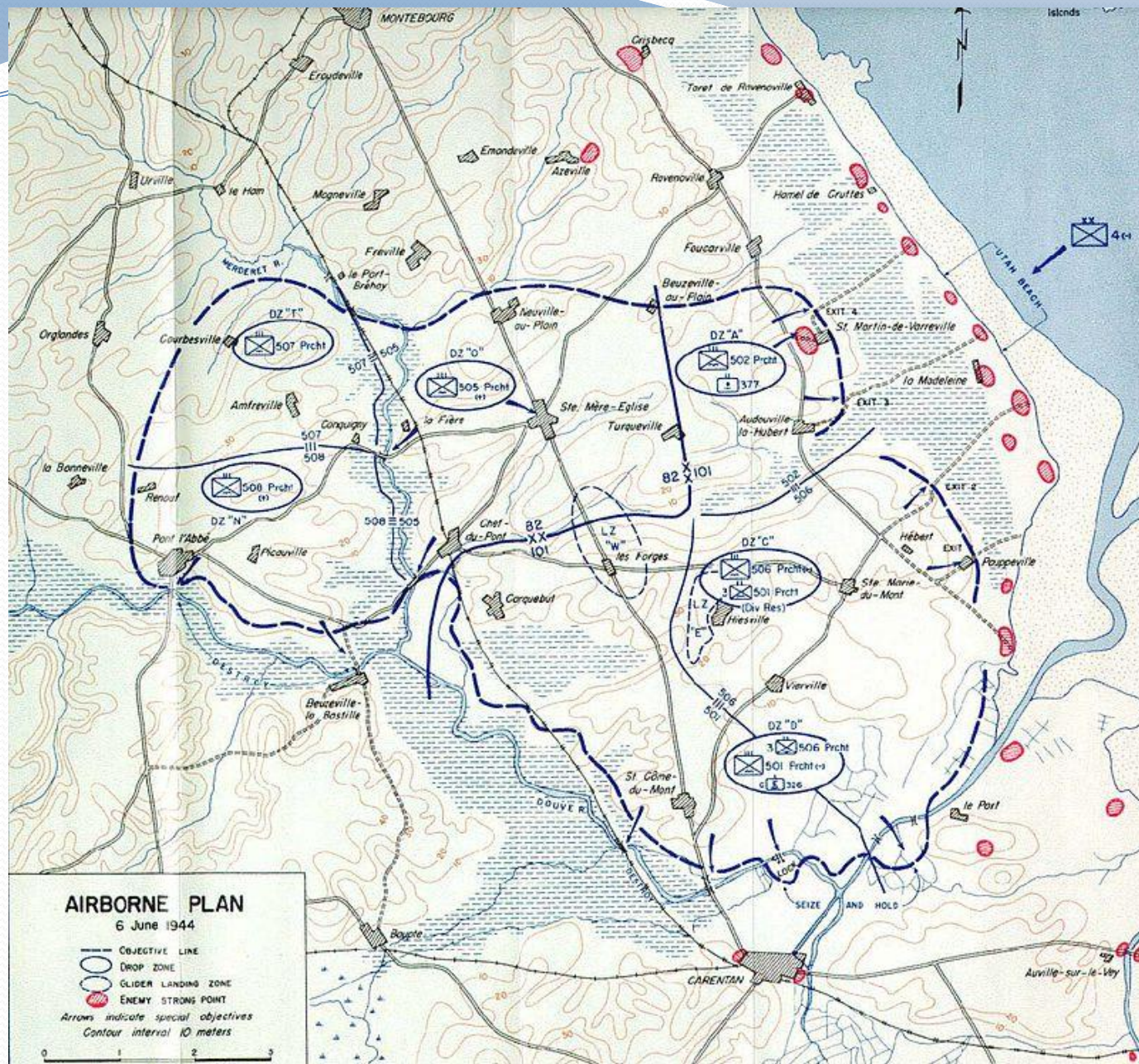




US Airborne

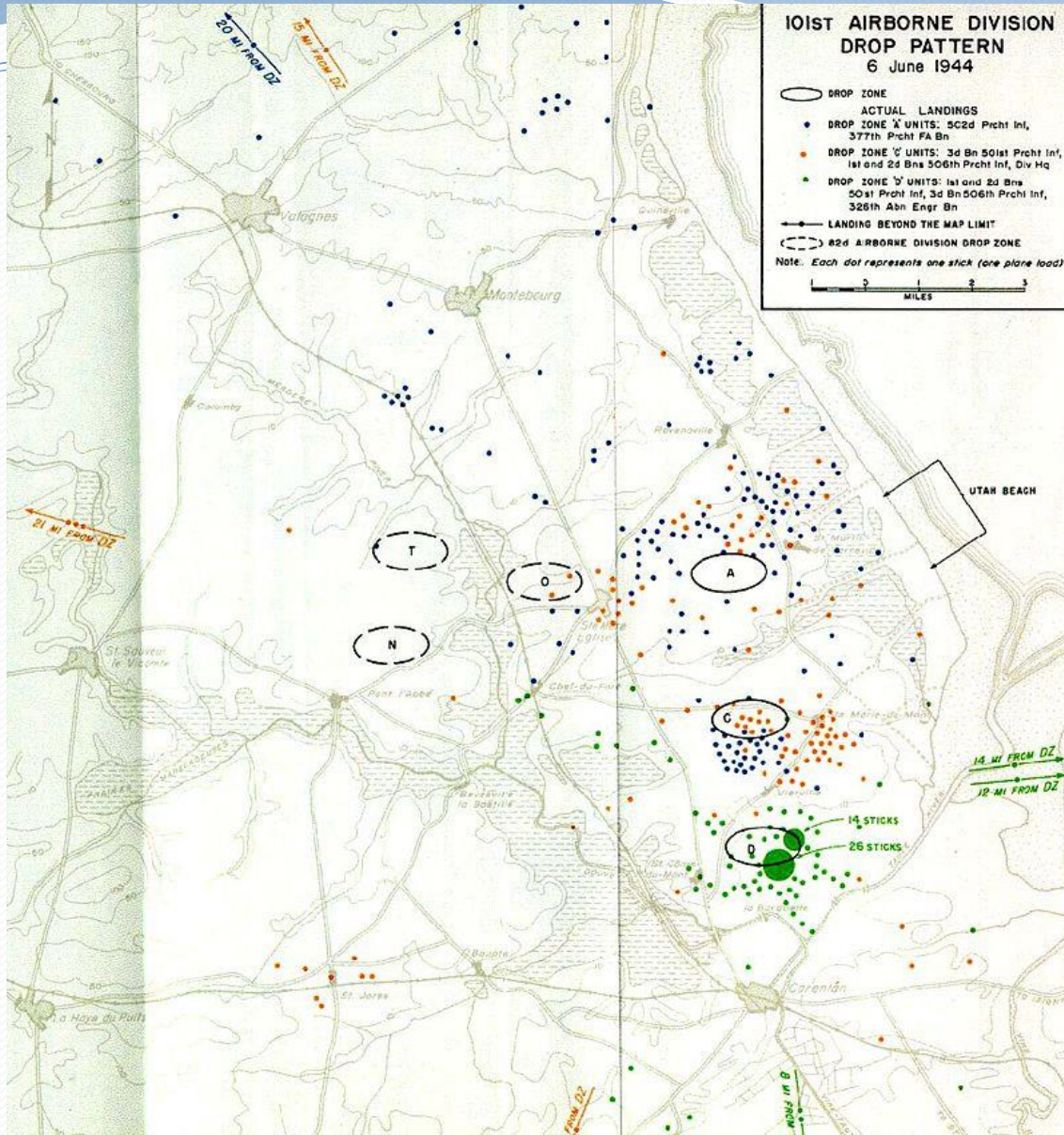
- 12:15 Pathfinders land
- Mission Albany 101st Airborne para
- Mission Boston 82nd Airborne para
- Mission Chicago 101st Airborne glider
- Mission Detroit 82nd Airborne glider
- Mission Elmira D-Day evening reinforcements

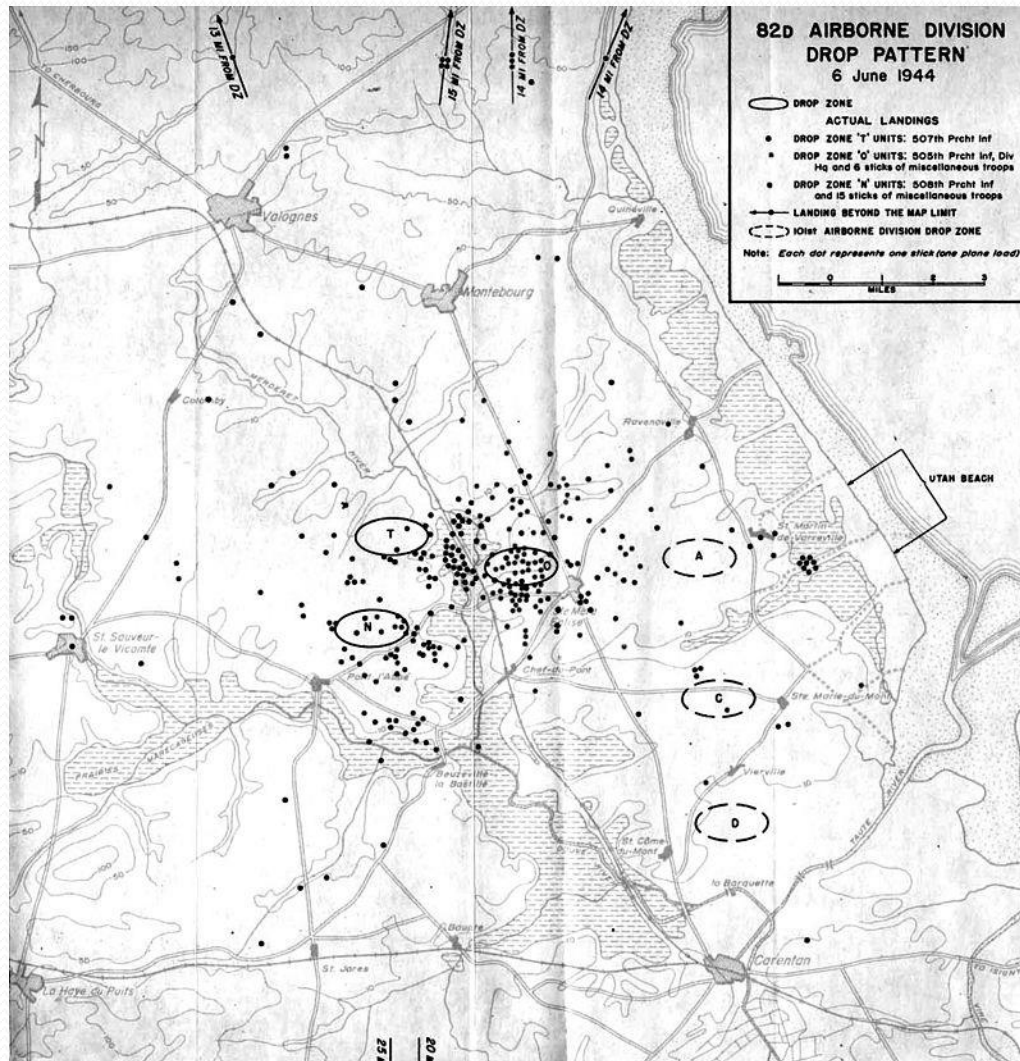




**101ST AIRBORNE DIVISION
DROP PATTERN
6 June 1944**

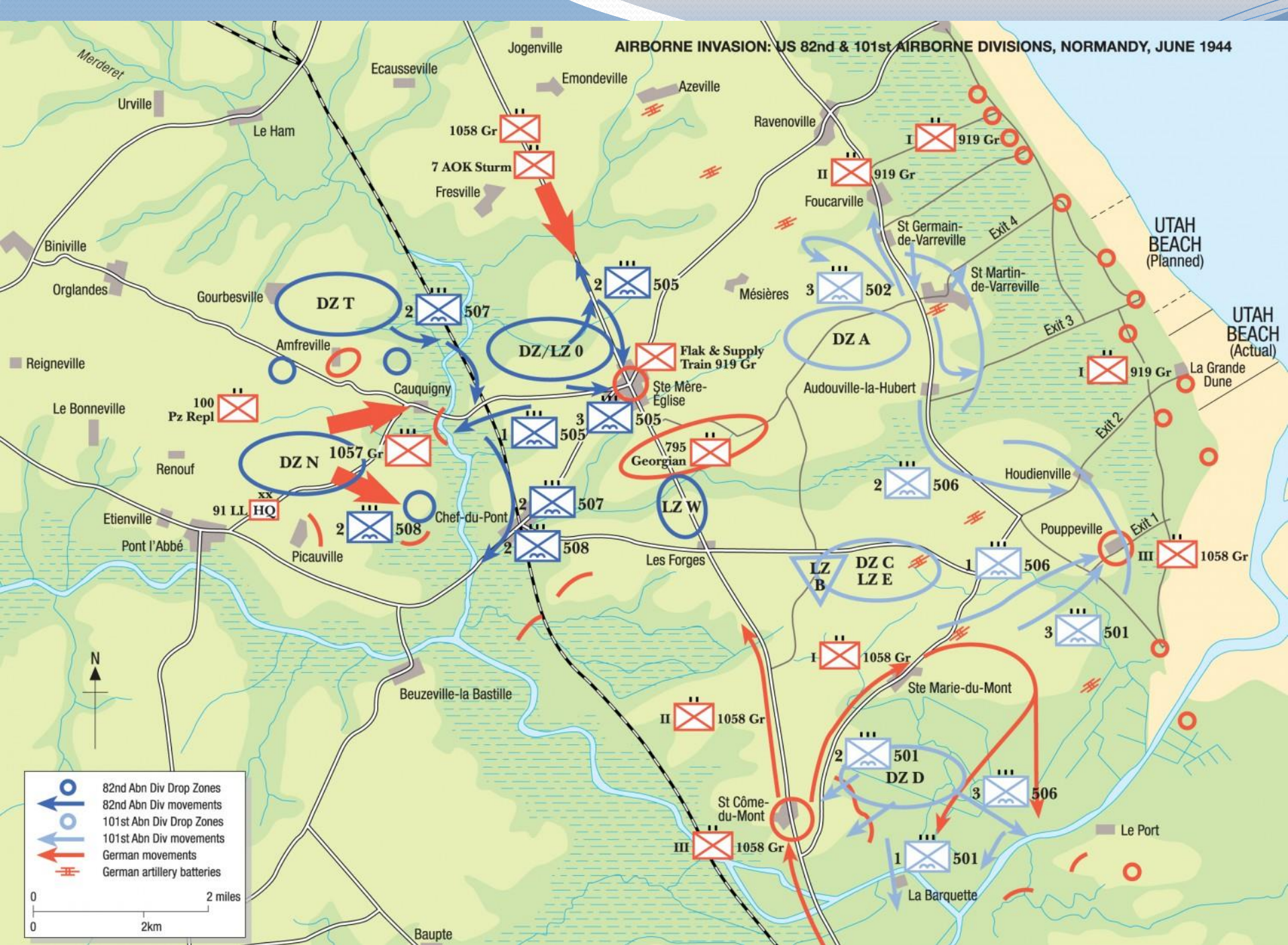
- DROP ZONE
 - ACTUAL LANDINGS
 - DROP ZONE 'A' UNITS: 5C2d Prcht Inf, 377th Prcht FA Bn
 - DROP ZONE 'C' UNITS: 3d Bn 501st Prcht Inf, 1st and 2d Bns 506th Prcht Inf, Div Hq
 - DROP ZONE 'D' UNITS: 1st and 2d Bns 501st Prcht Inf, 3d Bn 506th Prcht Inf, 326th Abn Engr Bn
 - LANDING BEYOND THE MAP LIMIT
 - 82d AIRBORNE DIVISION DROP ZONE
- Note: Each dot represents one stick (one plane load)
- 1 2 3
MILES







AIRBORNE INVASION: US 82nd & 101st AIRBORNE DIVISIONS, NORMANDY, JUNE 1944



	82nd Abn Div Drop Zones
	82nd Abn Div movements
	101st Abn Div Drop Zones
	101st Abn Div movements
	German movements
	German artillery batteries

0 2 miles
0 2km



Utah Beach 06:40

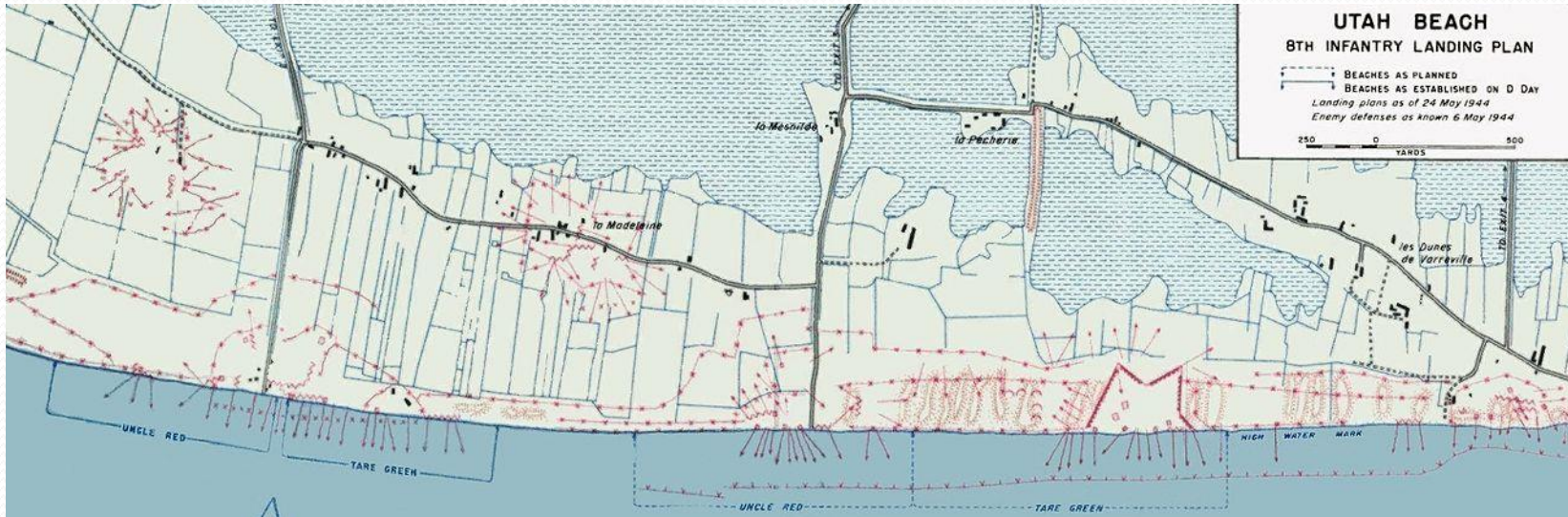


UTAH BEACH

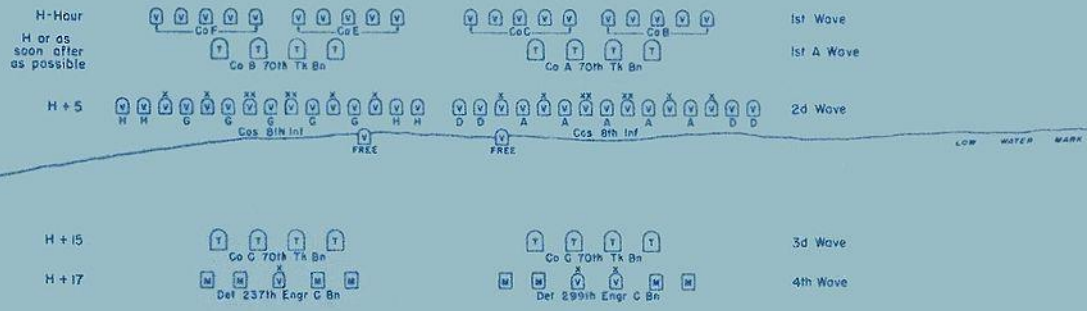
8TH INFANTRY LANDING PLAN

BEACHES AS PLANNED
 BEACHES AS ESTABLISHED ON D DAY
 Landing plans as of 24 May 1944
 Enemy defenses as known 6 May 1944

250 0 500
YARDS



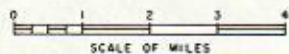
ACTUAL LANDING



UTAH BEACHHEAD, 1944

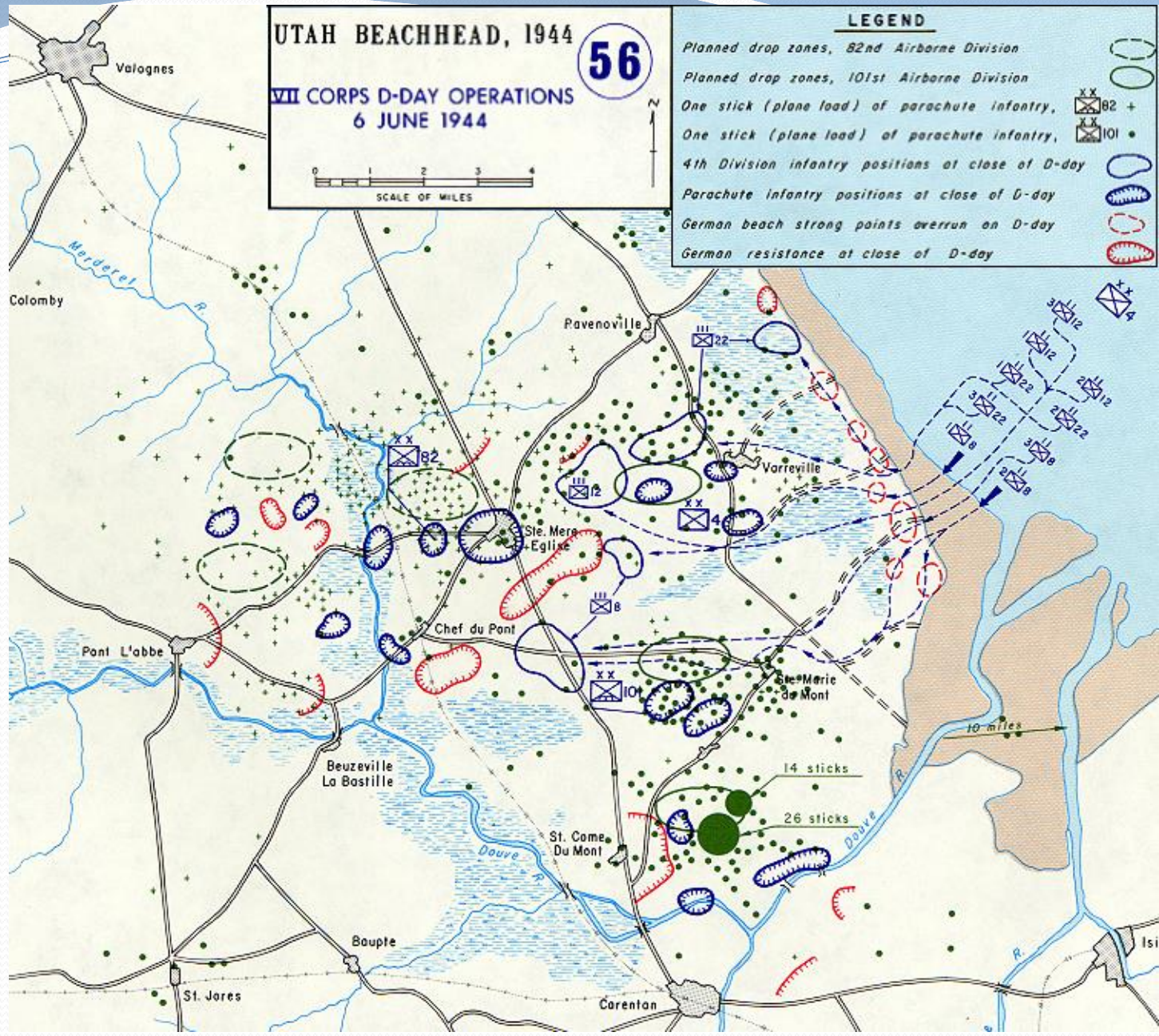
VII CORPS D-DAY OPERATIONS 6 JUNE 1944

56



LEGEND

- Planned drop zones, 82nd Airborne Division
- Planned drop zones, 101st Airborne Division
- One stick (plane load) of parachute infantry, 82 +
- One stick (plane load) of parachute infantry, 101 •
- 4th Division infantry positions at close of D-day
- Parachute infantry positions at close of D-day
- German beach strong points overrun on D-day
- German resistance at close of D-day



British and Canadian Beaches

- Gold Beach-07:25
- Sword Beach- 07:30
- Juno Beach-07:40







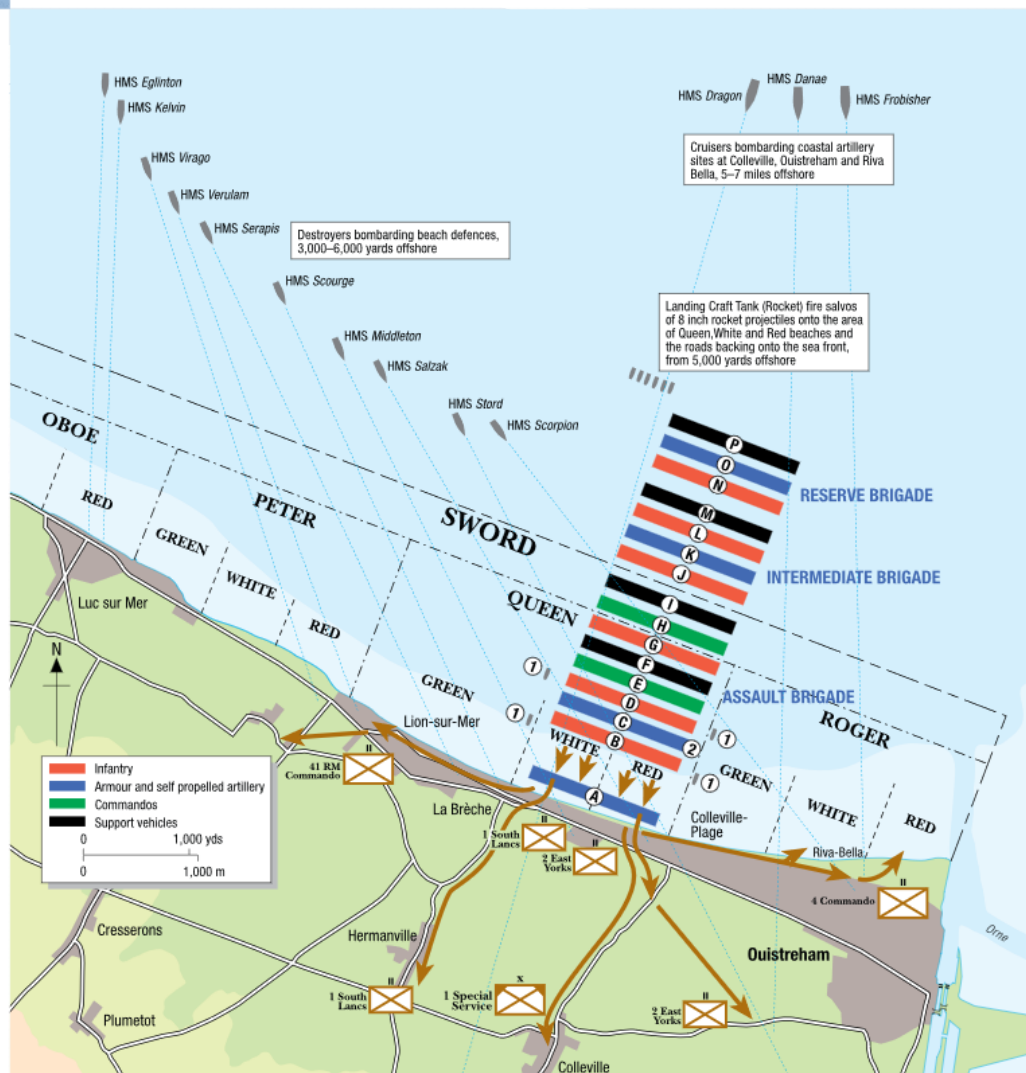


F: The HJ Division counterattacks near Caen, June 1944



Elizabeth Sharp





ASSAULT BRIGADE, landing from H Hour to H Hour + 120 minutes

- A. 13/18 Hussars (DD tanks), 27 Armoured Brigade
- 22 Dragoons, 79 Armoured Division
- Westminster Dragoons, 79 Armoured Division
- 5 Assault Regiment Royal Engineers, 79 Armoured Division
- B. Assault Companies, 1 South Lancs and 2 East Yorks, 8 Brigade
- C. 7 Field Regiment Royal Artillery, 3 Division (Self Propelled Guns)
- 33 Field Regiment Royal Artillery, 3 Division (Self Propelled Guns)
- 76 Field Regiment Royal Artillery, 3 Division (Self Propelled Guns)
- D. Follow-up Companies, 1 South Lancs and 2 East Yorks, 8 Brigade
- E. 4 Commando, 41 RM Commando
- F. 8 Brigade priority vehicles and 79 Division's wading tanks
- G. Reserve Battalion, 1 Suffolk Regiment, 8 Brigade
- H. Remainder 1 Special Service Brigade
- I. 8 Brigade priority vehicles and stores

INTERMEDIATE BRIGADE, landing from H Hour + 150 minutes to H Hour + 250 minutes

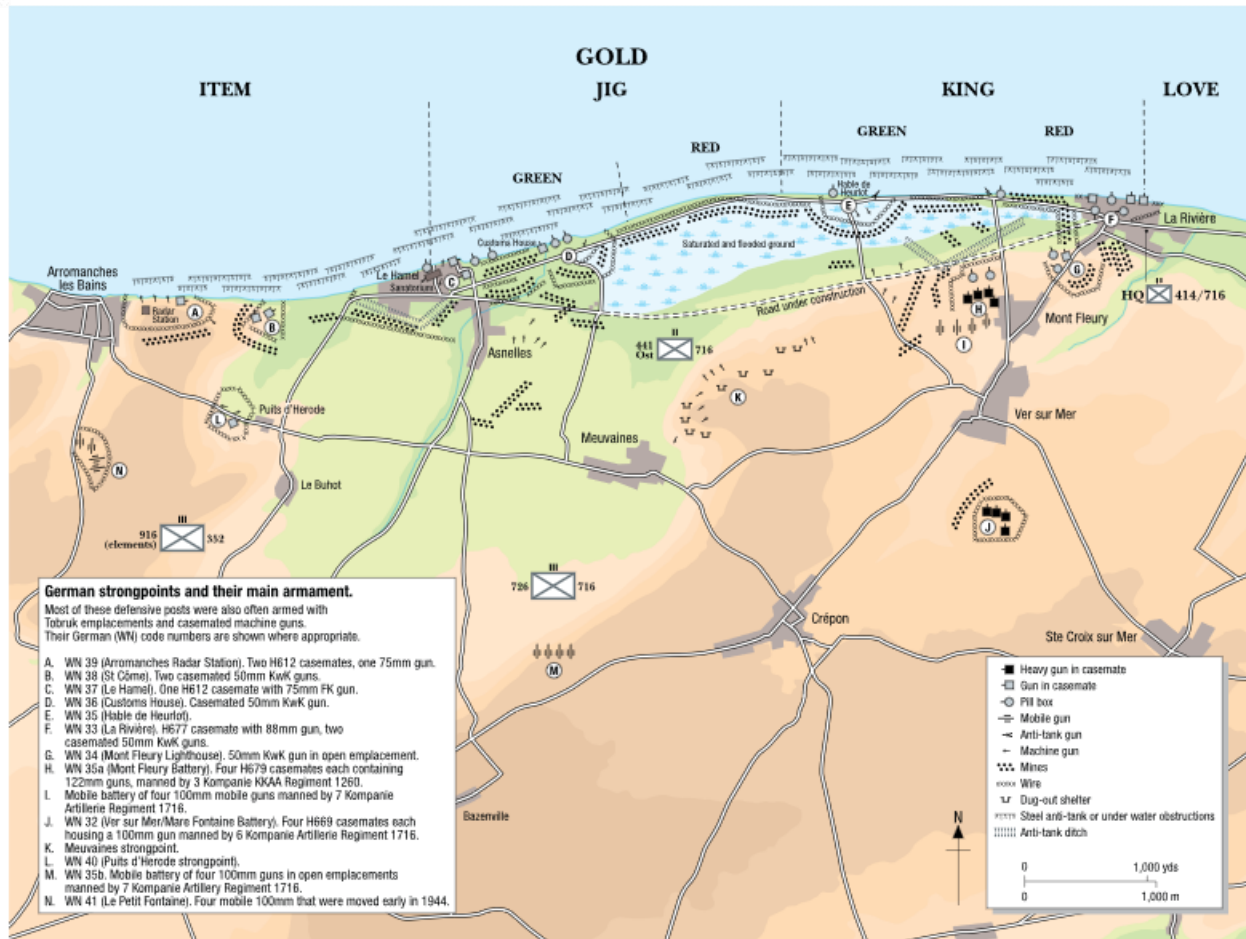
- J. 2 King's Shropshire Light Infantry, 185 Brigade
- K. The Staffordshire Yeomanry, 27 Armoured Brigade
- L. 2 Royal Warwickshire Regiment
- 1 Royal Norfolk Regiment
- M. 185 Brigade priority vehicles and stores

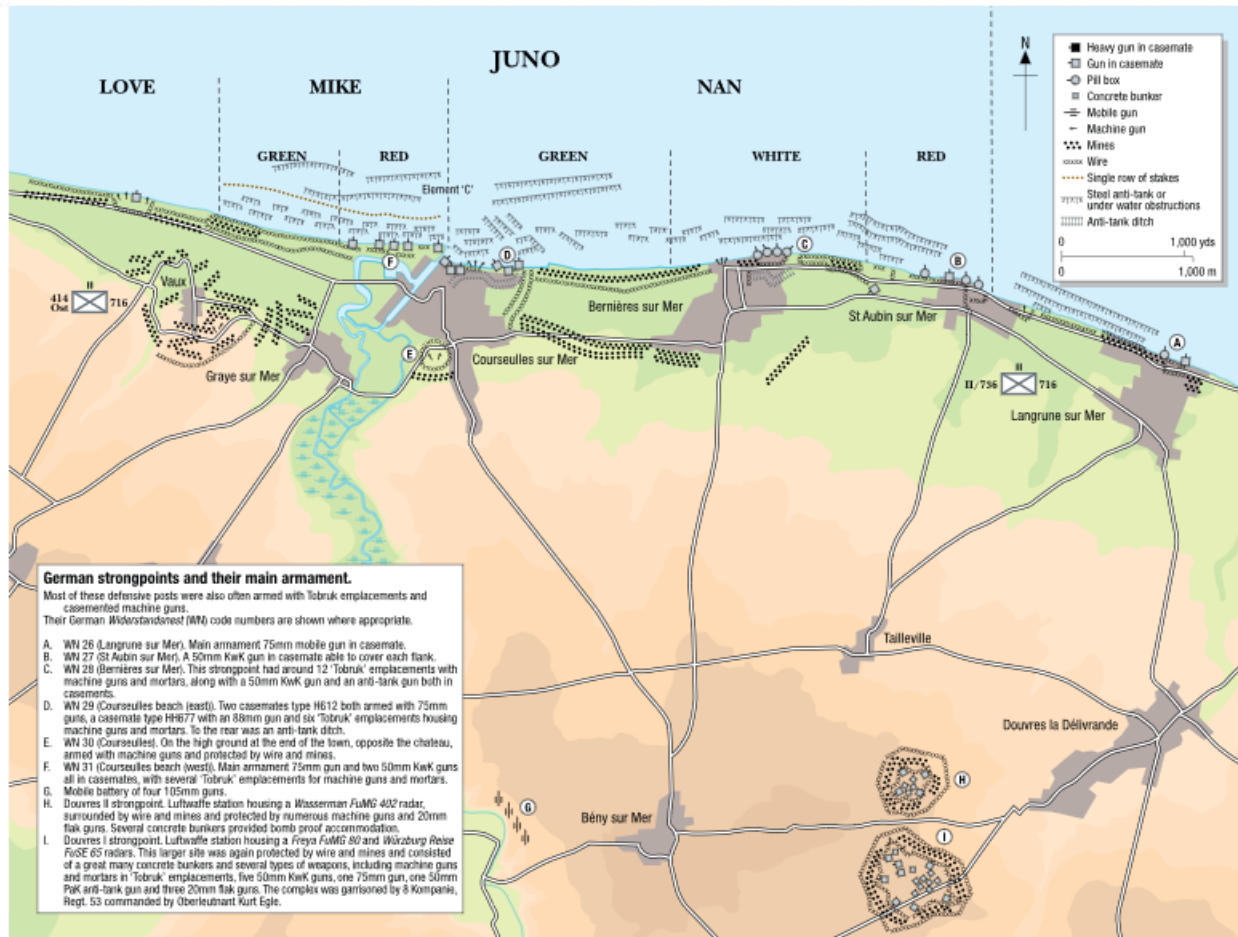
RESERVE BRIGADE, landing from H Hour + 270 minutes to H Hour + 360 minutes

- N. 2 Lincolnshire Regiment, 9 Brigade
- 1 King's Own Scottish Light Infantry, 9 Brigade
- 2 Royal Ulster Rifles, 9 Brigade
- O. 1 East Riding Yeomanry, 27 Armoured Brigade
- P. 9 Brigade priority vehicles and stores

Further bombardment provided from assault craft

1. Landing Craft Flak (LCF)
2. 3 Division's self-propelled artillery on board Landing Craft Tank (LCT)





A Word about historians

- Too many historians break the rules for historians by falling in love with their subjects and they lose objectivity.
- Ambrose downplays the ability of the Wehrmacht and overplays the abilities of the American soldier.
- The US and British Army found that if all things were equal the Germans won over 90% of the time in the period of 1944-1945.
- The British high command was well aware of their troops, including junior officers, inferiority to the Germans.
- One of the reasons for the hesitation for Overlord instead of Operation Rankin.

Col Trevor DuPuy US Army

On a man for man basis, the German ground soldier consistently inflicted casualties at about a 50% higher rate than they incurred from the opposing British and American troops UNDER ALL CIRCUMSTANCES. [emphasis in original] This was true when they were attacking and when they were defending, when they had a local numerical superiority and when, as was usually the case, they were outnumbered, when they had air superiority and when they did not, when they won and when they lost.

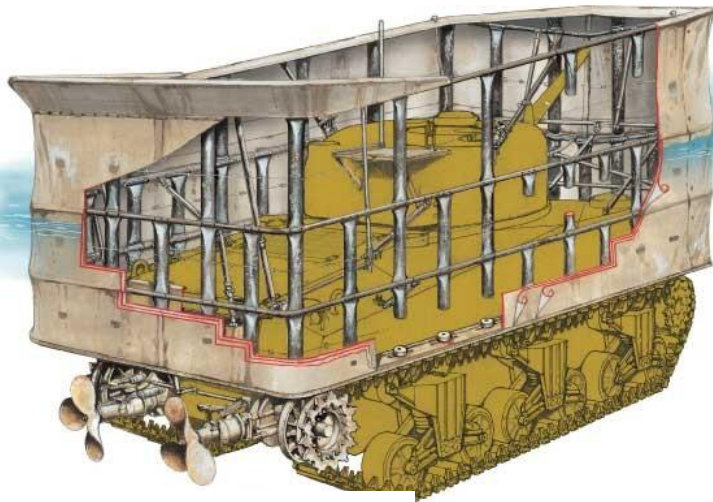
Operation Rankin

- Was the planning for an invasion, actually occupation, of Western Europe if the Germans showed signs of collapse on the Eastern Front.
- British preferred method of moving into Northwest Europe.

D-Day weapons Mk 1 Rocket Launcher aka Bazooka



Sherman DD's



Wading Sherman



German Forces at Grandcamps (Omaha or near)

- 7th Army
- LXXXVI Infantry Corps
- 352nd Infantry Division Bernhard Kraiss
- 914th Gren Rgt
- 915th Gren Rgt in reserve at St Lo.
- 916 Gren Rgt
- 726th Inf Rgt from 716th Div
- 439 Ost Btn from 716
- 352 Fus, Panzerjager, Art and Pioneer Btn's



US forces for Omaha

- 1st Army
- V Corps
- 1st Inf Div
- 29th Inf Div
- Force O
- 2 old BB's, 3 CL's, 15 DD's plus smaller support craft
- Rear Adm John Hall



Assault Plan

- Elements Force O to land in first wave
- 4 RCT's by noon
- Force B would land mid afternoon bringing total to 2 reinforced divisions
- Force O was 39,000 strong

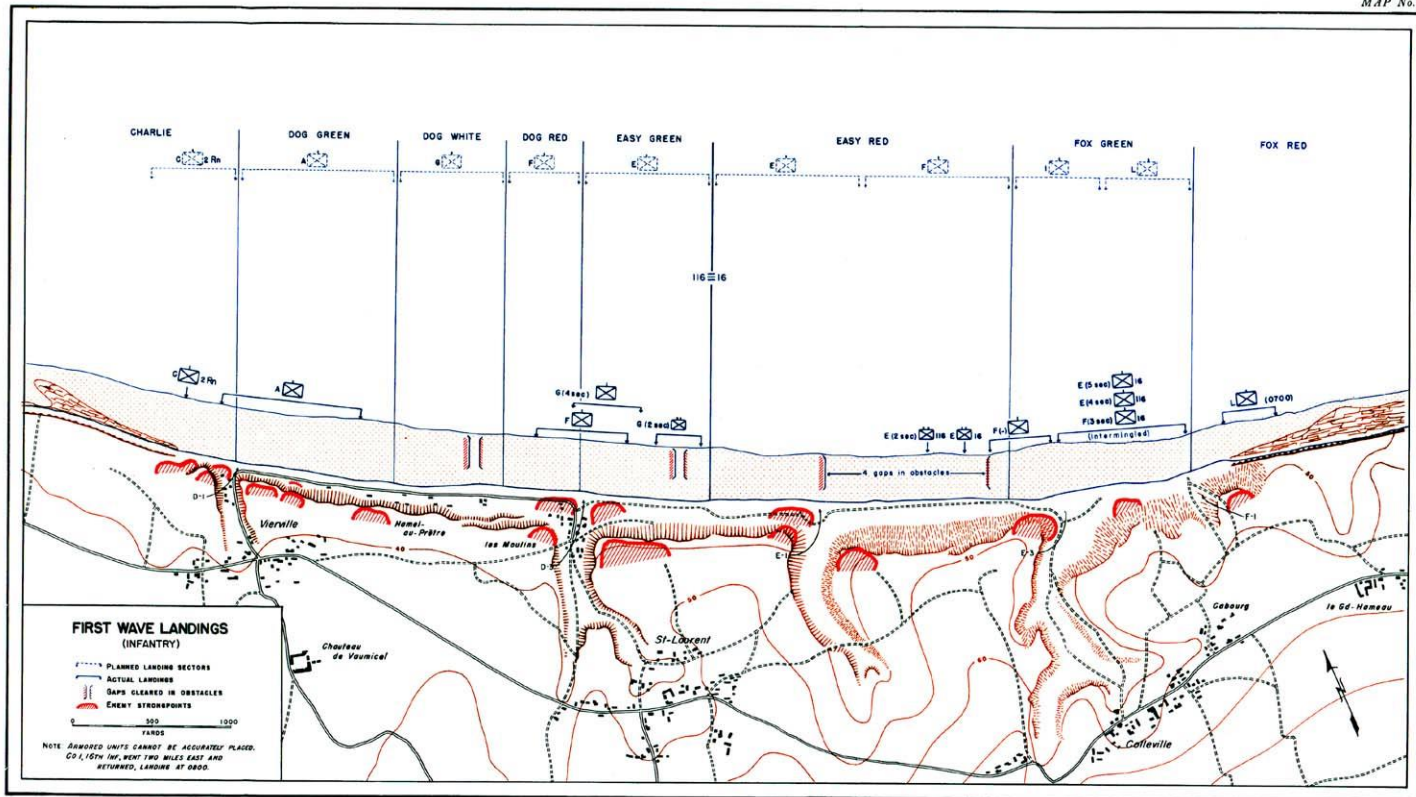
Assault Force O 1st Inf Div

- 16th RCT
- 16th Inf Rgt
- 741st Tank Bn
- Spec Eng TF
- 7th FA Bn
- 62nd Arm FA Bn
- 197th AA Bn
- 1st Eng Bn
- 5th Eng Spec Bde (-)
- 20th Eng Com Bn's
- 81st Chem Weapons Bn
- 18th RCT
- 18th Inf Rgt
- 745 Tank Bn
- 32nd FA Bn
- 5th FA Bn
- 5th Eng Spec Bde (-)

Assault Force O 29th Inf Div

- 116th RCT
- 116th Inf Rgt
- 2nd and 5th Ranger Bn's
- 743 Tank Bn
- Spec Engineer Task Force
- 58th Arm FA Bn
- 111th FA Bn
- 112 Eng Combat Bn
- 81st Chem Weap Bn
- 467 AA Bn
- 461st Amp Tuck Bn





US Army and the Funnies

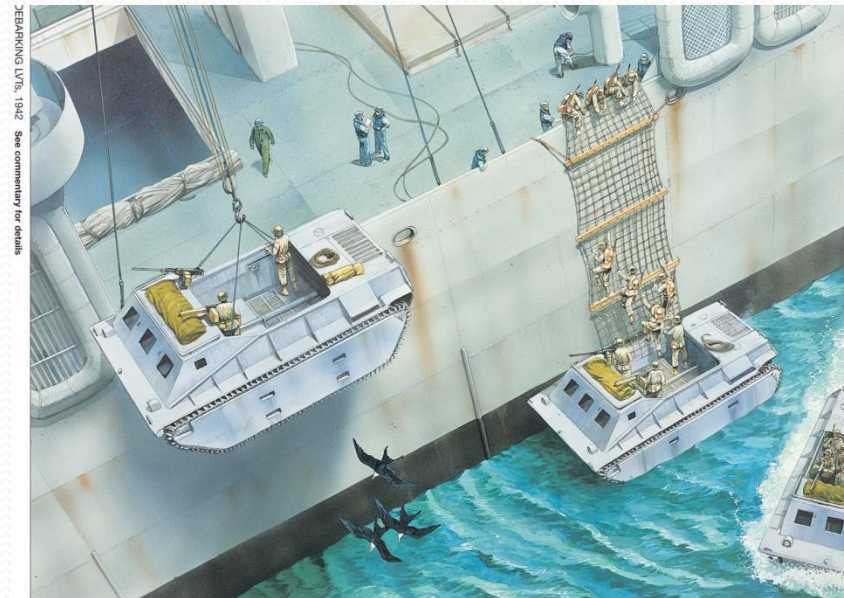
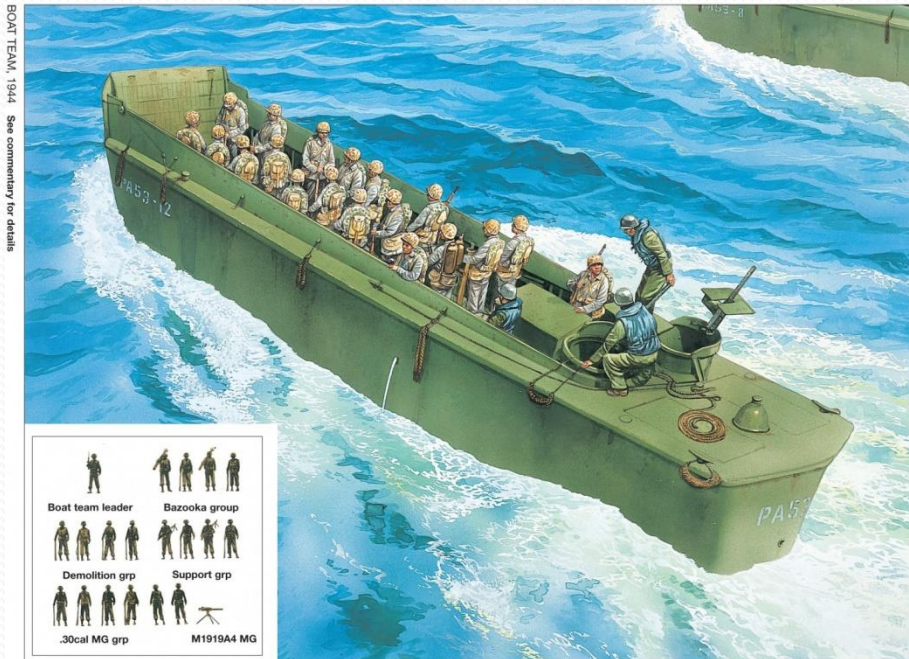
- Grudgingly accepted DD's though had grave reservations about them.
- Initially refused as they felt that the weight of the force would take the beach
- Belated order in Feb 44 for 25 Sherman Crab, 100 Sherman Crocs and unknown number of Sherman AVRE's too late
- Sherman Jumbo didn't arrive until Aug
- AMTRACS not present

Sherman Assault Tank aka Jumbo



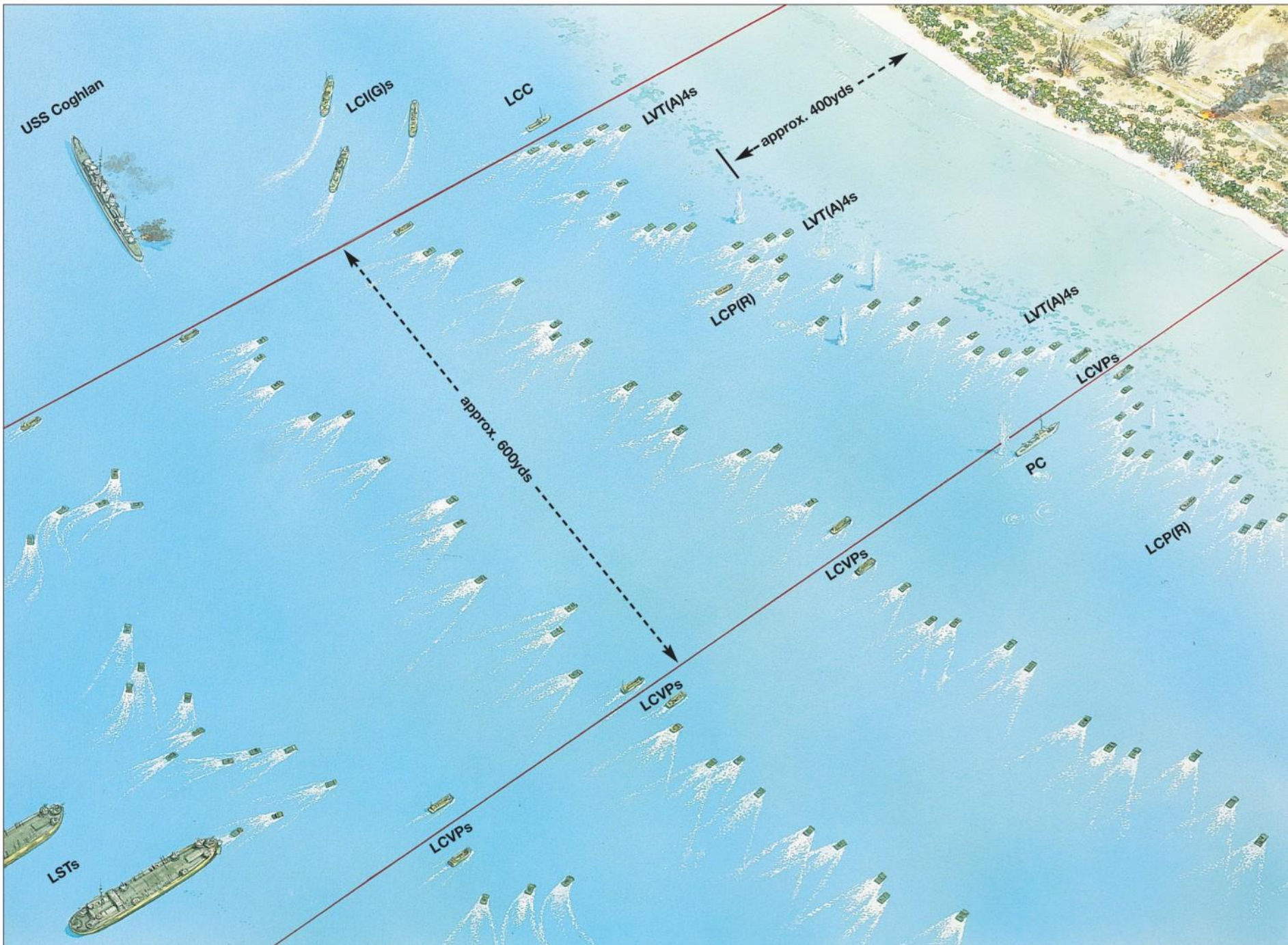
Neptune- Omaha

- US forces began embarking 12 miles out

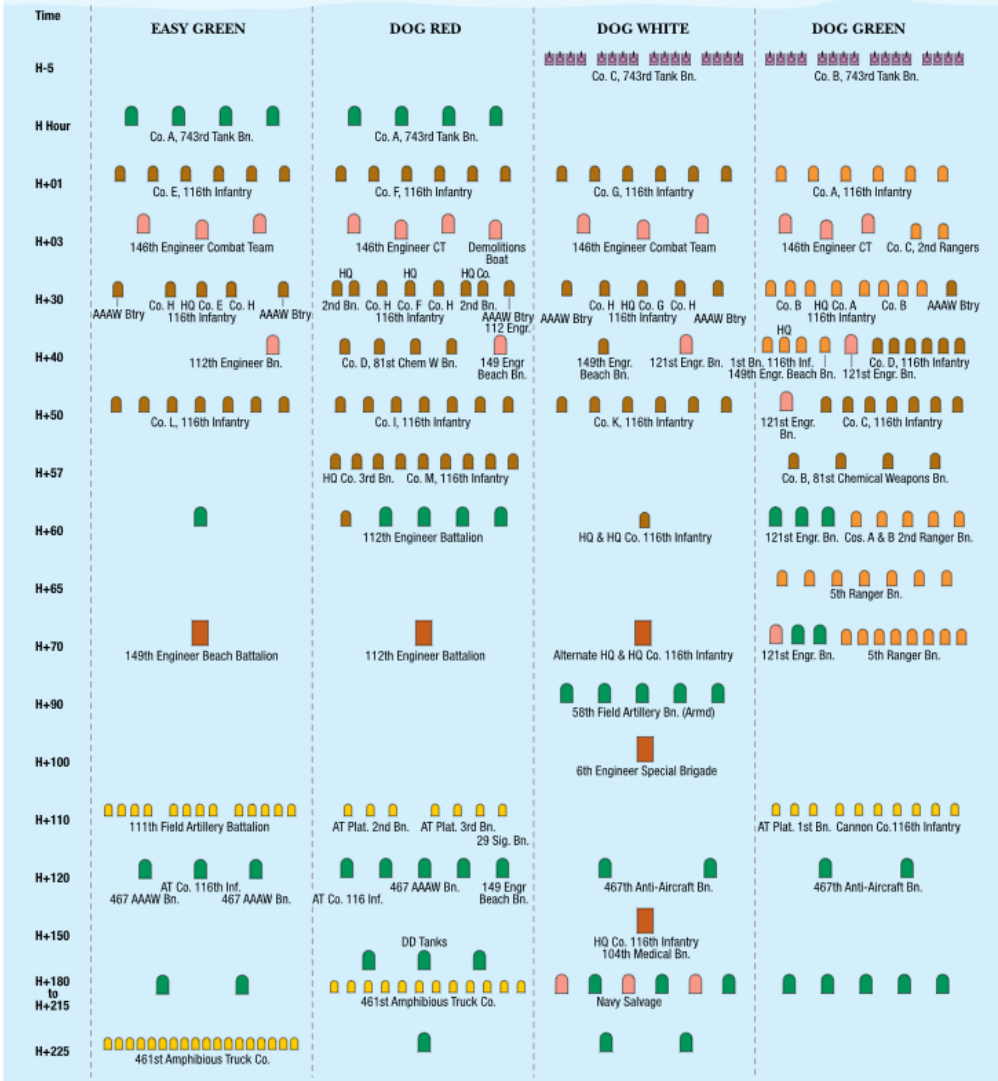


Neptune-Omaha

- Omaha would have shortest naval bombardment of 40 minutes duration
- 0558 Counterbattery fire begins
- H hour – 20 bomb moves to beach itself
- H hour bomb shifts to area behind beach



OMAHA BEACH (WEST)



- Landing Craft Infantry (LCI)
- Landing Craft Assault (LCA)
- Landing Craft Mechanised (LCM)
- Landing Craft Vehicle Personnel (LCVP)
- Landing Craft Tank (LCT)
- DD Tank
- DUKW

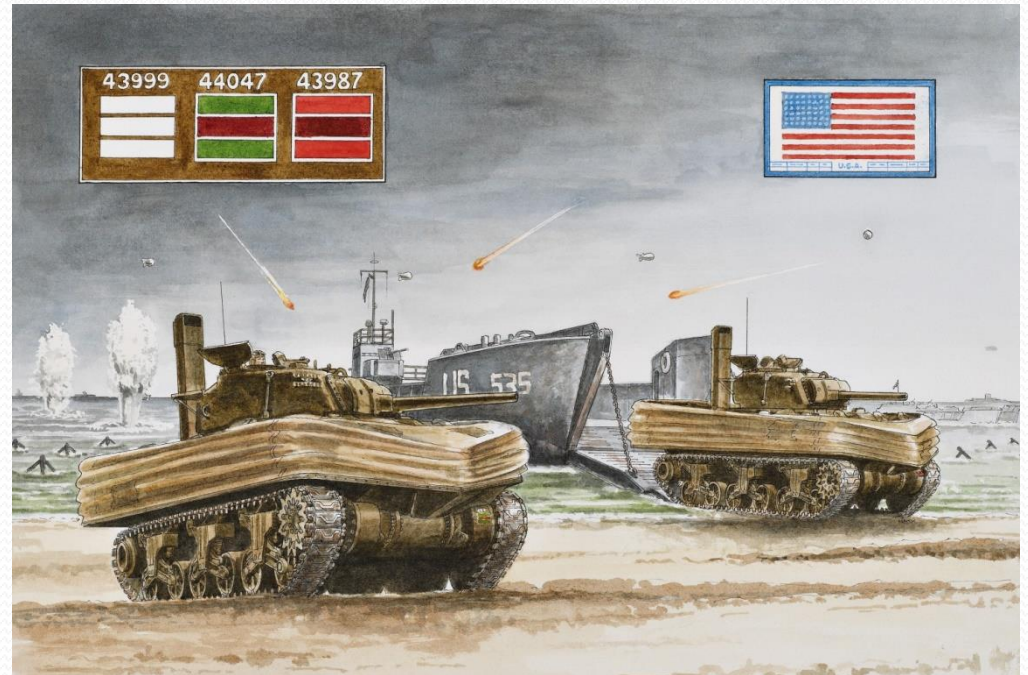
Omaha Beach

OMAHA BEACH, 6 JUNE 1944

1: Corporal, 116th Inf Regt, 29th Infantry Division

2: 1st Lieutenant, 116th Inf Regt, 29th Inf Div

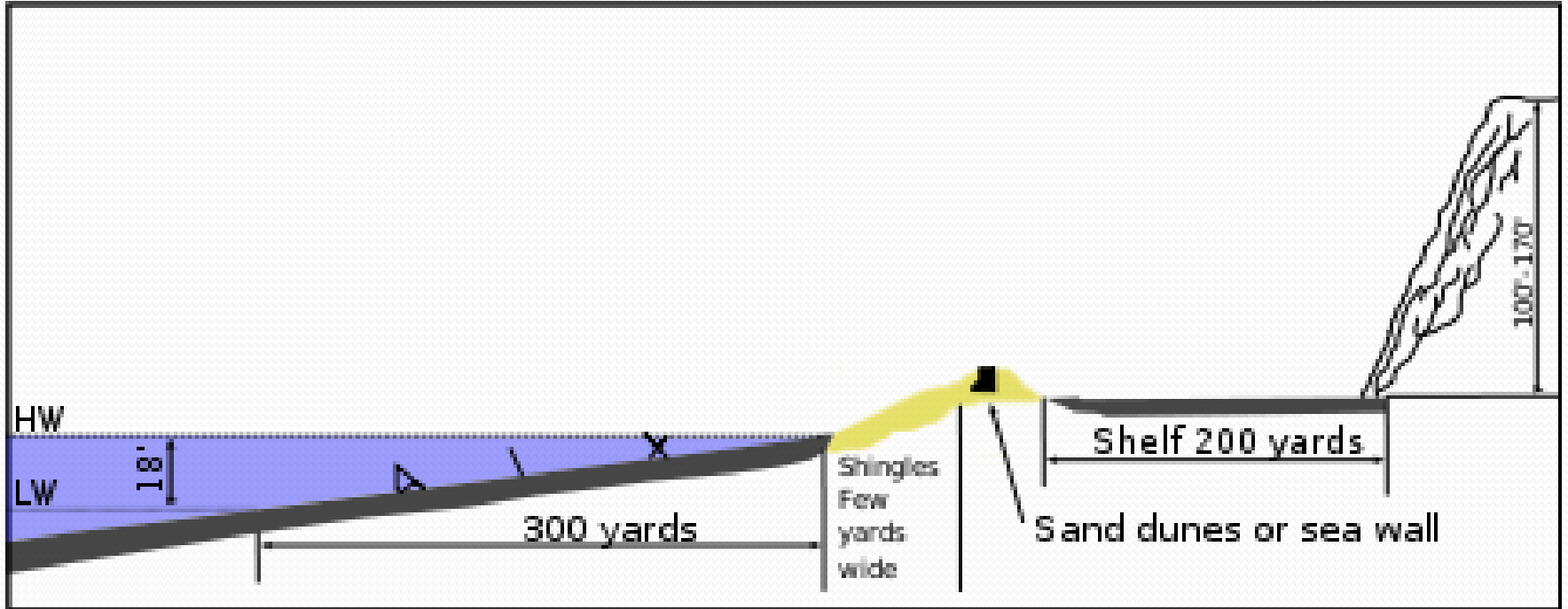
3: T/S, Engineers, 2nd Infantry Division



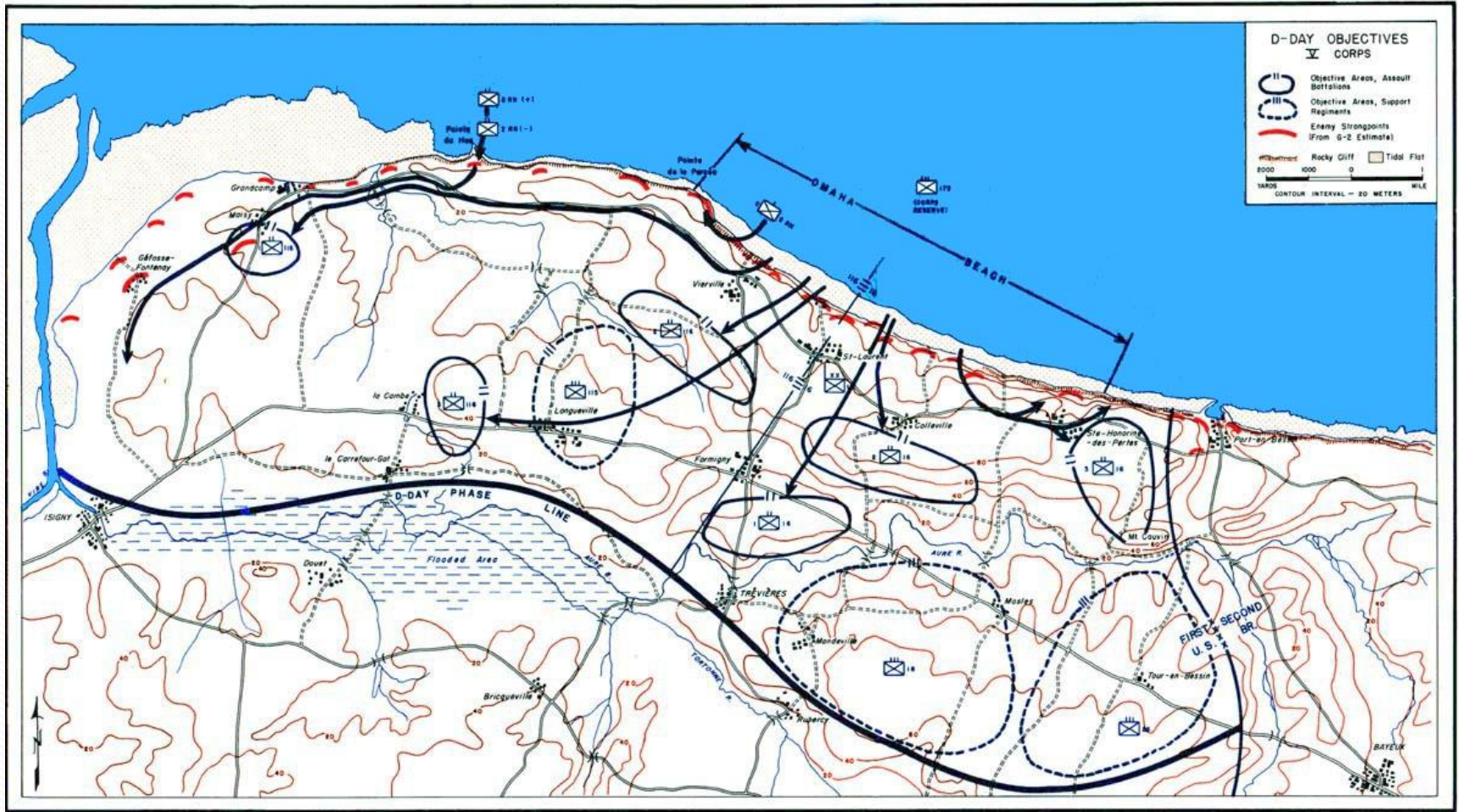
Omaha Beach

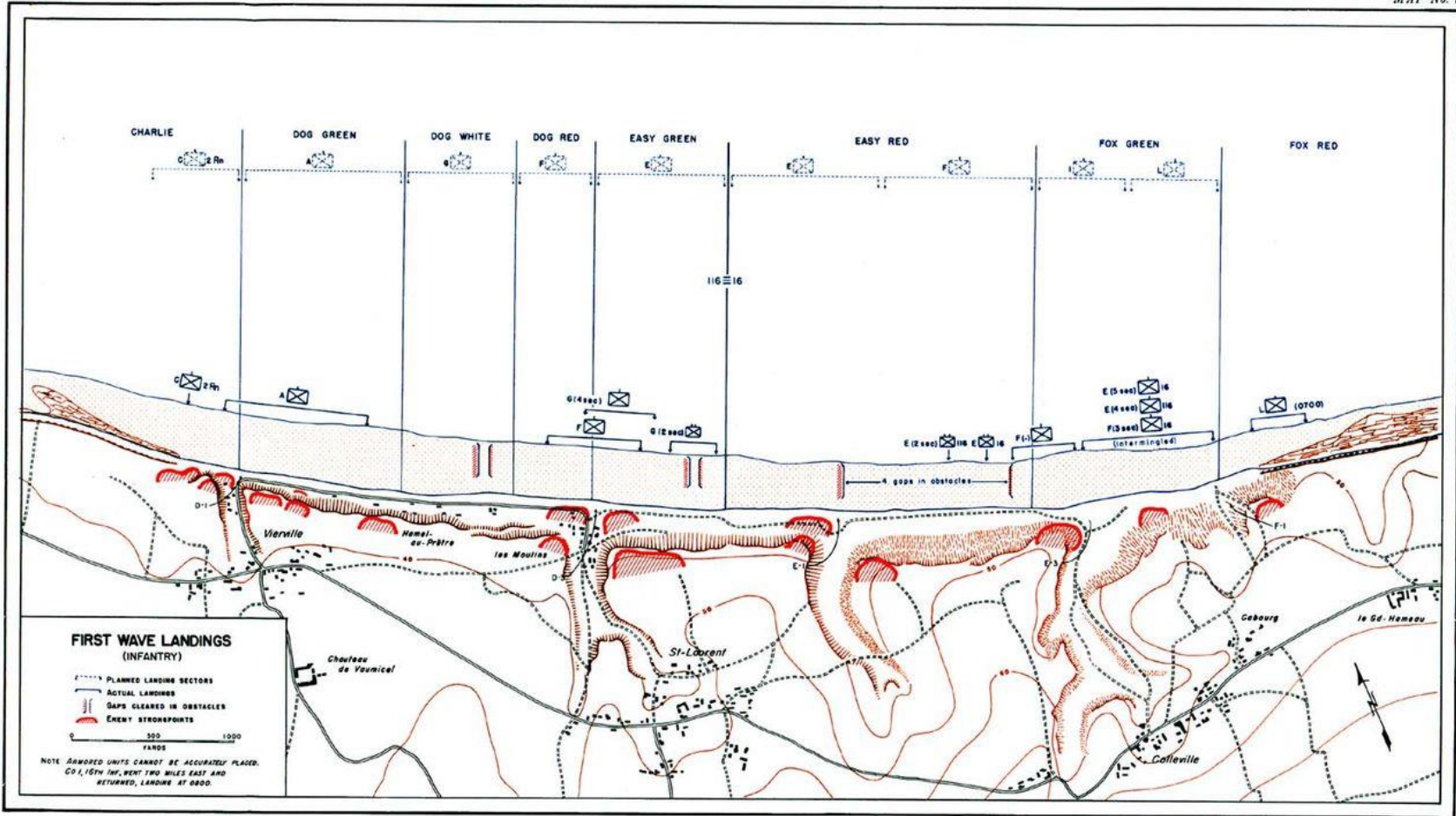
NORMANDY & NORTHERN FRANCE, 1944
1: Grenadier, Grenadier-Regiment 914; Omaha Beach, Normandy, 6 June 1944
2: Gefreiter, Panzergrenadier-Lehr-Regiment 901; Barenton, August 1944
3: Oberwachtmeister, Armoured Rocket-Launcher Battery; Normandy, June 1944









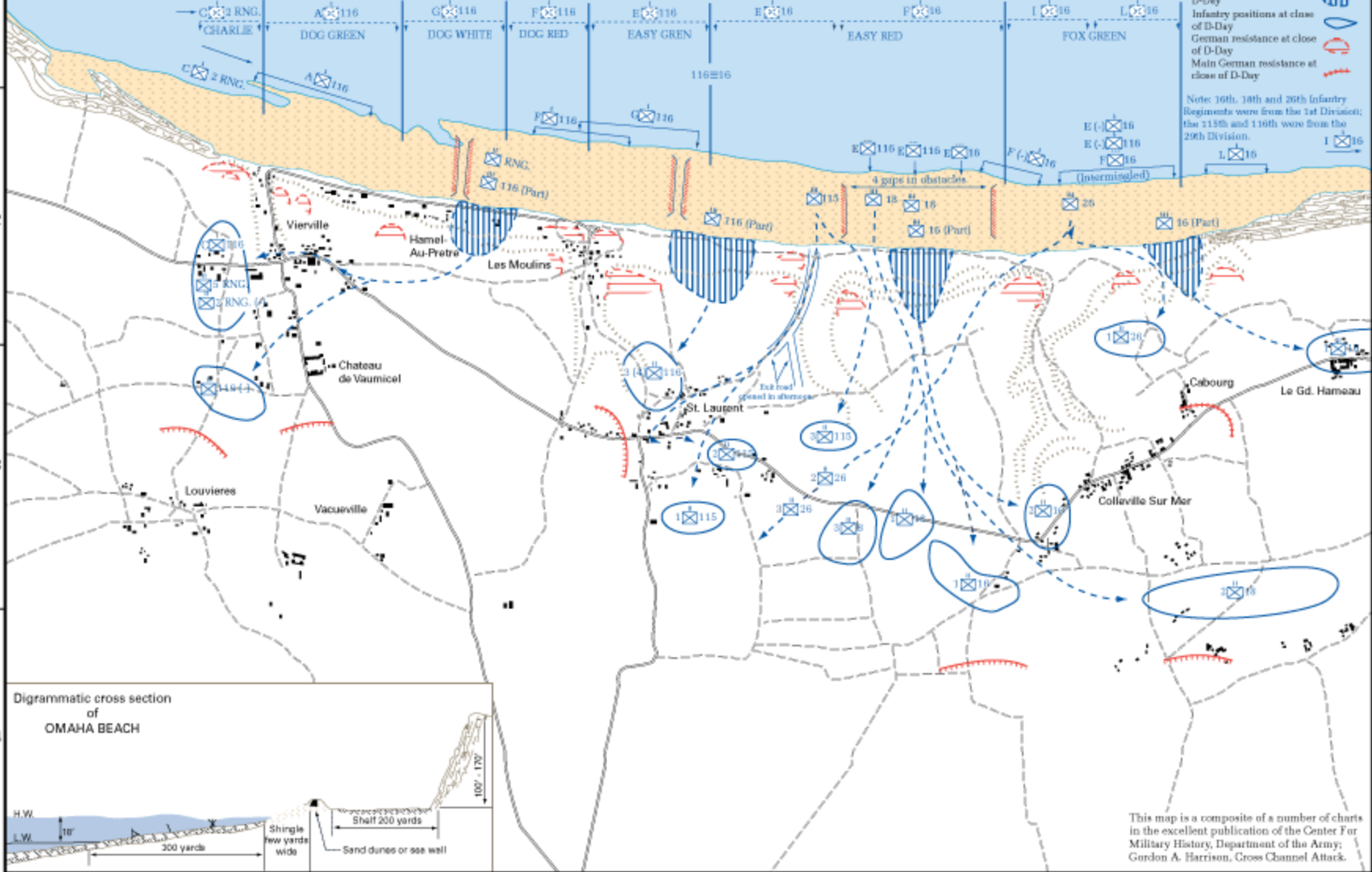


OMAHA BEACHHEAD, 1944
V CORPS D-DAY OPERATIONS,
6 June 1944

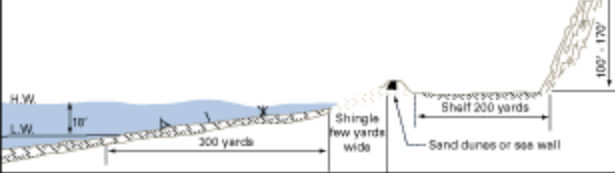


- Key
- First gaps in obstacles
 - Main positions at close of D-Day
 - Infantry positions at close of D-Day
 - German resistance at close of D-Day
 - Main German resistance at close of D-Day

Note: 16th, 18th and 26th Infantry Regiments were from the 1st Division; the 115th and 116th were from the 29th Division.



Diagrammatic cross section of OMAHA BEACH



This map is a composite of a number of charts in the excellent publication of the Center For Military History, Department of the Army; Gordon A. Harrison, Cross Channel Attack.