XI

Northern France

General Order of the War Department 1945 gives the "Northern France" combat recognition to soldiers serving in France and Belgium at any time from July 25, 1944 to September 14, 1944. Private Boyd and the 784th were in France during this entire period.

Unfortunately, I do not have a great deal of detail as to what he was doing during these 55 days.

Fortunately, many organizations across the country are collecting the personal recollections of World War II veterans. The "race is on" in this effort, since veterans are in their 80s, at least. Veterans are dying today at a far greater pace then they were dying during the war. Much of the results of these memorial projects have been placed on the Web and the information shared with others. I found several postings by AAA veterans, and a few by veterans of the 784th. When this is pieced together with Chester Boyd's photographs and some official records, the story begins to take shape.

Some of the personal recollections are surprisingly detailed as to places and dates. I suspect that diaries were kept, and consulted, for the personal histories. This gives them a bit more credence, since memory does play tricks on us all.

One problem with some personal recollections is that they often misspell virtually every town and village in France, Belgium, and Germany. This is not surprising, since few of the veterans speak French, Flemish, or German. But I spent a considerable amount of time looking at maps and searching for non-existent places. I then had to study the troop movements of units within the First Army and Third Army, and the locations of airfields of the Ninth Air Force. By studying these movements and locations, and comparing them with the personal recollections, I was able to figure out the towns and village referred to.

I hope that I have it all sorted out correctly. And so, we can begin the "St. Lô Breakout" and the "Dash Across France".

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Generals Eisenhower and Bradley (not to mention Winston Churchill) were growing increasingly frustrated at the slow advance in Normandy. They also greatly feared a protracted stalemate with the Germans. As well prepared as the Allies were for D-Day, they were unprepared for warfare in the *bocage*. To break the gridlock, the Americans put into action an offensive codenamed Cobra.

Prior to the offensive, units of the Third Army were moved from England to France in July (along with Private Boyd and the 784th), and General George Patton took command of the Third Army. General Bradley relinquished command of the First Army to General Hodges, and Bradley took overall command of both armies (as commander of the 12th Army Group).

The offensive began on July 25th with saturation, or "carpet", bombing by the Ninth Air Force of German positions immediately south of the Americans. The bombings were so close to the front lines that about 100 Americans were killed, and another 500 wounded, by the Ninth's bombing.

The effect of the carpet bombing was devastating to the Germans. The digging in of the infantry did not help. Dugouts and foxholes were smashed, and men were buried in the rubble. The same thing happened to tanks and vehicles.

In addition to creating heavy German casualties, the bombing had a tremendous shock effect. Many soldiers felt depression and a sense of hopelessness, and surrendered, deserted, or escaped as fast as they could.

While the smoke had yet to clear from the bombing, and as the German defenses crumbled, elements of the First Army pushed hard between the Periers and Lessay (near the Cotentin Peninsula's Atlantic coast), and immediately west of St. Lô. By the 26th, the First Army created a three mile gap in the German lines. While the First held the gap open, the armored and motorized infantry units of the Third Army poured through.

By July 30th, advance elements of the Third reached Avranches. Patton himself went through Avranches on August 1st. (There is a monument to Patton and a war museum in the town square at Avranches today.)

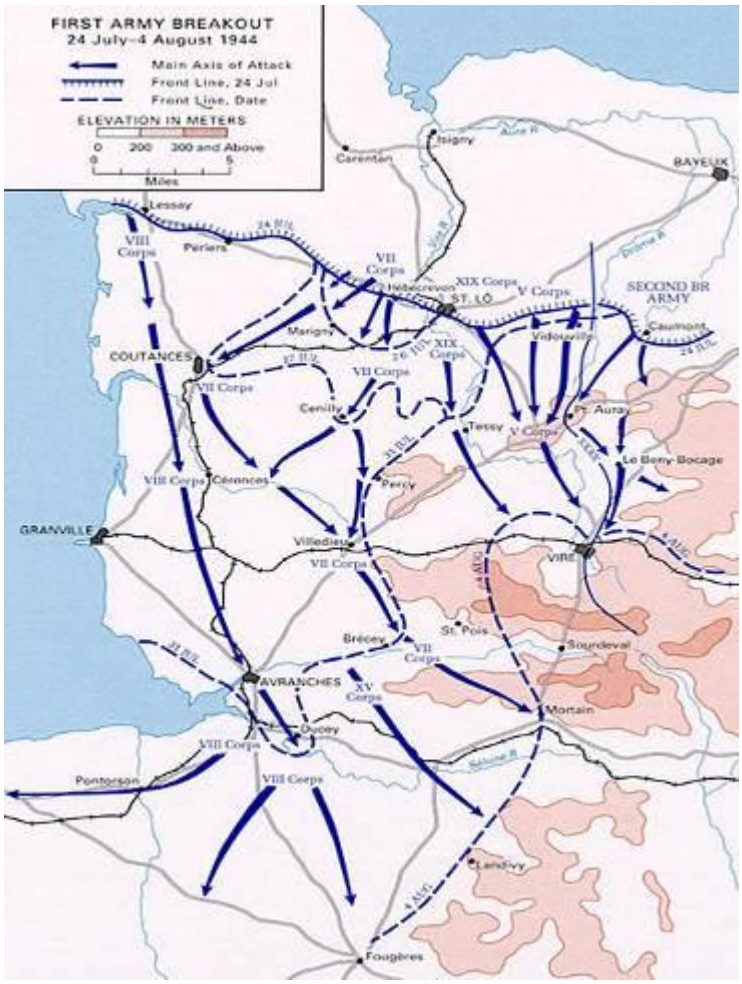
From Avranches, Patton left elements of the Third Army to head west and fight German forces in Brittany. The rest of Patton's Third Army headed east into the Loire Valley towards Paris. (This created an interesting scenario, in which the

Third Army was advancing in opposite directions.) Meanwhile, the First Army advanced south, and then east toward Mortain, and the British took Caen.

With the Allies advancing rapidly on all fronts, fearful German troops began to retreat in a disorderly jumble. Large German units became totally isolated from one another. In fact, both armies moved so fast that it was extremely chaotic on both side. (There is a scene in the movie *Patton* in which Patton steps in to act as a traffic cop to untangle American tanks going in different directions. There were many factual errors in the movie, but Patton was involved in untangling a similar traffic jam near Avranches.)

In less than a week, the front at Normandy changed from a stalemate to a major breakthrough for the Allies.

This next map shows the rapid American advances during the last few days of July, and first few days of August, 1944.



In the second week of August, the resilient Germans were able to reorganize its defense. The Germans even launched a counterattack towards Mortain and Avranches. Additional German troops, and another 2,000 fighter planes, were brought into this region. This was an attempt to split the American First and Third Armies. The First Army met the counterattack (although the Germans retook and occupied Mortain for about four days). Patton's Third Army, though, ignored the counterattack by going around it – continuing east to Paris.

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While this was all going on, Private Boyd and the 784th entered Avranches. For this advance, and for the next several weeks, the 784th was attached to the Third Army.

In early August, the 784th moved into the small village of Ducey, a few miles south of Avranches. Its first task at Ducey was to protect vital railway and highway bridges. These bridges were, for a while, the only supply line for the Third Army in its move east. And, at the pivotal junction between Normandy and Brittany, it was the only supply line for the Third Army for its advance west into Brittany.

I saw one report that the Ducey bridges were the second highest priority of AAA units at the time (with the port at Cherbourg being the first). I'm not sure who made this statement, or whether AAA responsibilities are ranked this way. But clearly, Ducey was of vital importance.

Private Boyd would have traveled on this road entering into Avranches. Note the abandoned German equipment litters on the shoulders.

Some of the heaviest fighting of the war occurred in mid-August within the triangle of Mortain, Falaise, and Argentan. These three cities, and Avranches, are shown on the next map.

From its initial position at Ducey, the 784th moved several times in the direction of Mortain. The First Army halted the German counterattack and retook Mortain. At

that point, the Germans began a retreat. The Allies almost caught the Germans in a "pocket" (from that point on, referred to by participants and historians as the "Falaise Pocket"). As the First Army pushed west, the British and Canadians took Falaise and the areas around it and pushed south, and the Third Army took Argentan and pushed north. When the British and Canadians met the Americans from the Third Army, all of the Germans between them and Mortain were trapped.

Over 50,000 Germans were taken prisoners in the pocket. Unfortunately, about 100,000 escaped in the gap before it was closed.

The area within the pocket was a killing field. General Eisenhower, traveling by foot over a portion of this battle area, was quoted as saying: *"It was literally possible to walk for hundred of yards at a time, stepping on nothing but dead and decaying flesh".*

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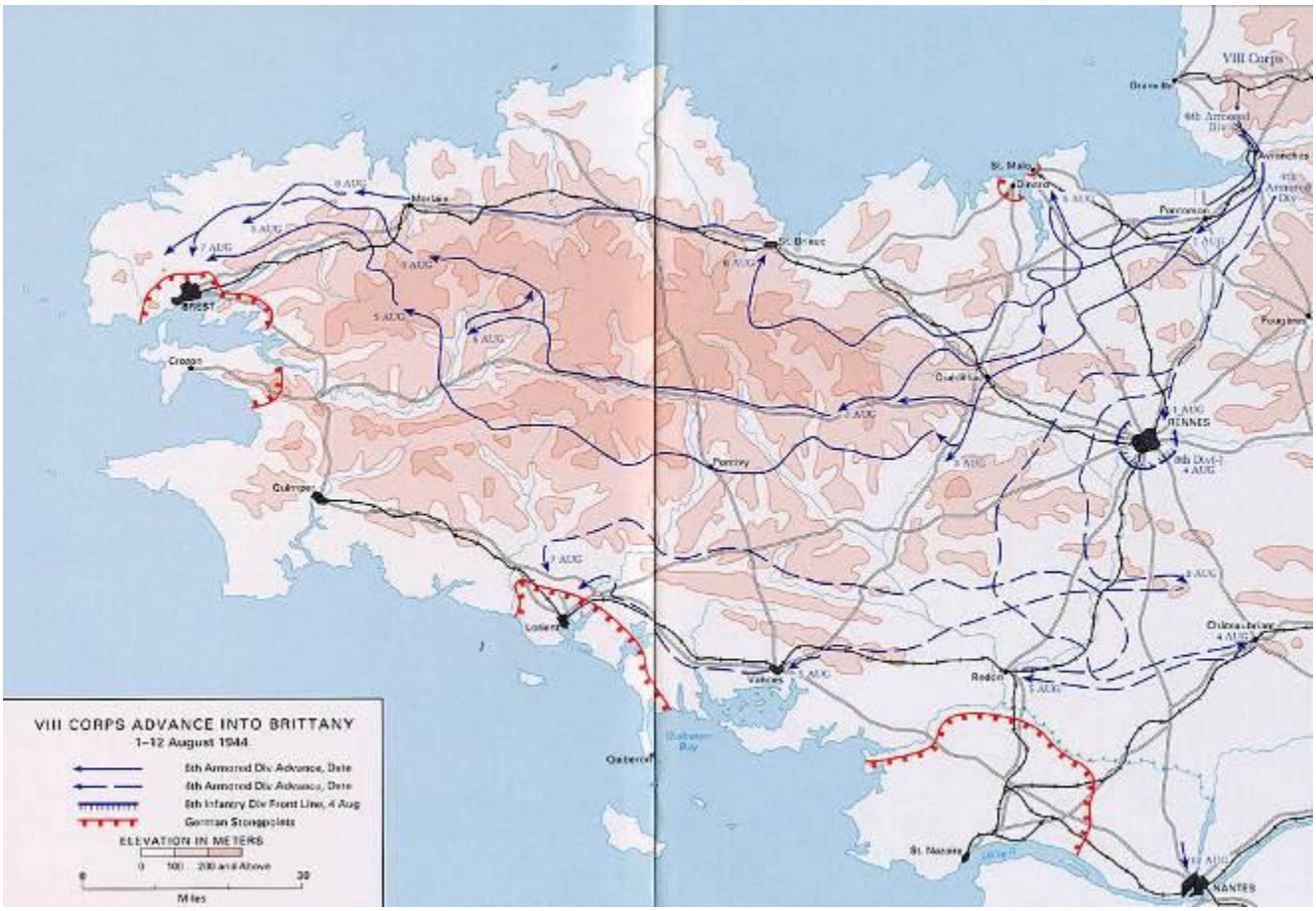
Meanwhile, fighting was continuing on another nearby front. The fighting in Brittany was not as well remembered as that in Normandy, but the struggle was intense nevertheless. The Allies finally took control over most of the peninsula by August 20th. The fortresses at Brest and other coastal towns were not taken by the Allies until mid September.

This is a map of Brittany, with the Third Army troop movements and rough timeline. Avranches is at the upper right-hand corner of this map. The town was a crucial junction between Normandy and Brittany.



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The next three pictures show typical Normandy towns and villages, and how they looked in the Summer of 1944.

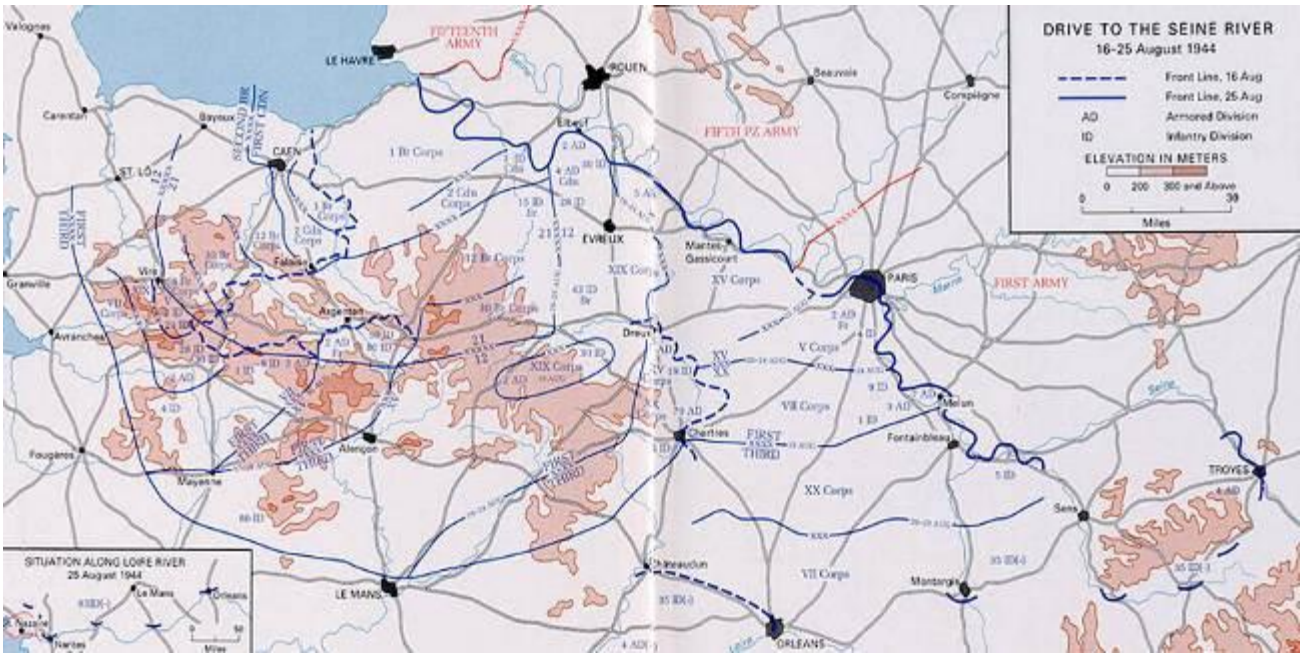
This is St. Lô after the breakthrough.

This is a photo of St. Lô taken on August 5, 1944.

This photo was also taken in August, 1944, in Falaise, Normandy. The soldier in the street is a Canadian sergeant.

Around the fourth week in August, the German army began to crumble. And all the while, the Allies pressed east. By and large, the fight through France towards the end of August was a matter of Allied units chasing the retreating Germans. The Allies proceeded so rapidly that the campaign has been referred to as the "Dash Across France".

The next map of Northern France shows the rapid progress made.

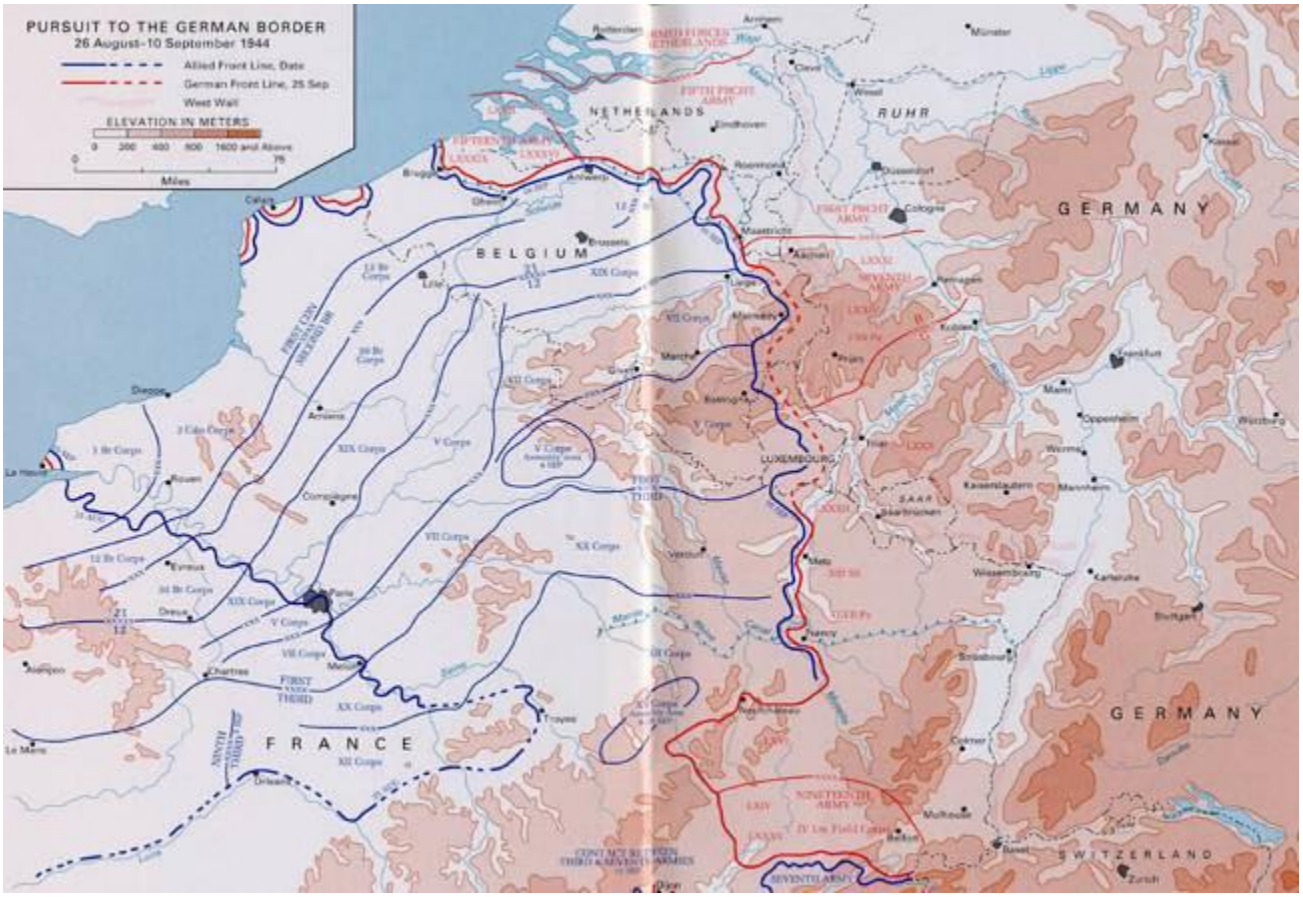


Units of Patton's Third Army reached, and crossed, the Seine River at Fontainbleau, South of Paris, on August 19th. At the same time, the First Army and the British 12th pushed east equally hard.

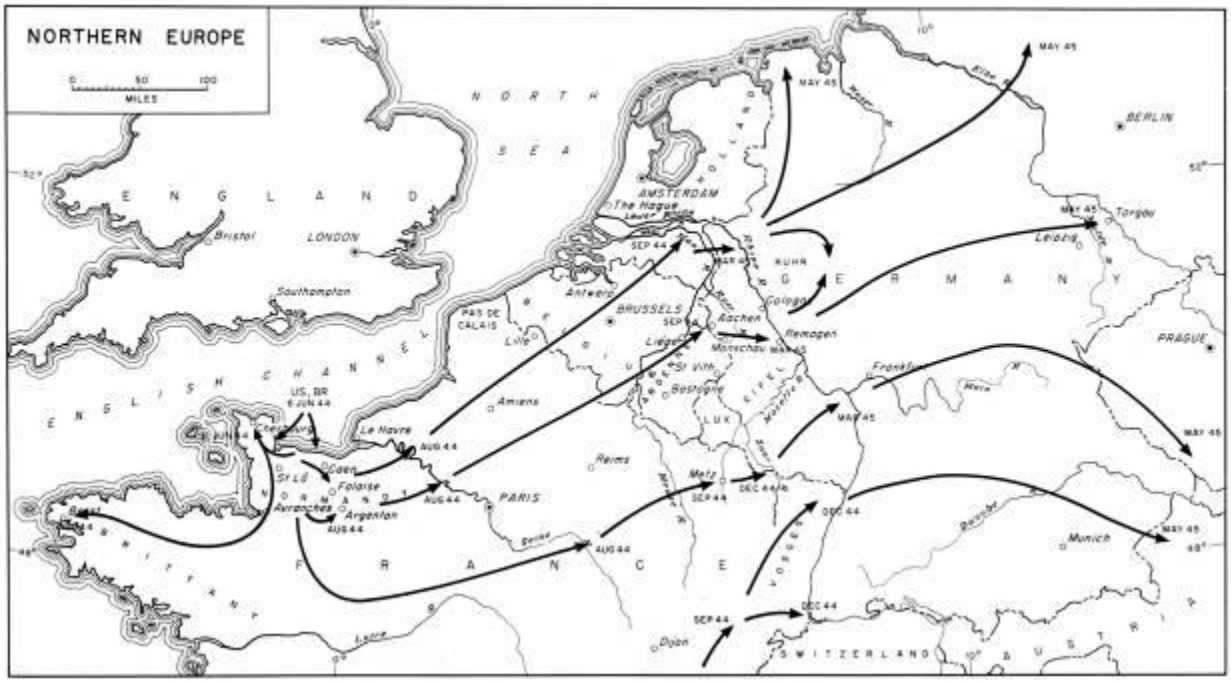
On August 25th – D-Day plus 80, Allied troops entered Paris.

Although the Allies were getting far beyond their sources of supply at Normandy, the armies continued to push eastward, well beyond Paris.

As noted on the next map, the Allies reached well into Belgium, and even across the German board, by early September.



These next two maps likewise show the progress made by the Allied advances through August and September, 1944. (On the second map, avoid paying too much attention to the right half of the map, so as not to jump too far ahead of the story.)



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Advanced elements of the 12th Army Group moved rapidly away from the 784th's position near Ducey and Mortrain. But there remained intense *Luftwaffe* activity as part of the Avrances/Mortain counterattack, and part of the defense of Brittany. Since the Allies gained superiority over the Germans in the air, these *Luftwaffe* attacks were typically at night. This continued through at least the third or fourth week of August, 1944. I've seen some writings that stated that the XIX Tactical Air Force (the unit of the Ninth Air Force assigned to work with Patton's Third Army) was not equipped with night fighters, and that the job of defending Avranches against air attacks was given to the AAA units.

But by the end of August, the war had moved away from the 784th, and it was time to move on.

In mid September, the 784th began is 260 mile journey due east, to the area of Laon, Guignicourt and Soissons. The battalion was reattached to the Ninth Air Force, and its new task was to protect the new American airfields in that area.

And so, the 784th began its "Dash Across France", a bit behind many of the infantry units of the 12th Army, and considerably behind the most advanced of the armored units. Keep in mind that as a semi-mobile AAA unit, the 784th was not equipped to keep up with the more mobile units of the 12th Army Group.

This map identifies some of the major cities in France which are mentioned in this history. The line also links the destinations of Private Boyd and the 784th. – from Southampton in Southern England to the Normandy coast to Avranches to Laon. These are drawn as straight lines, only because I do not know of the zigs and zags and stops along the way.

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Before we move on, a few words about bridges. The bridges in western Europe at the time were an interesting irony. A major focus of any army is mobility –

moving troops and supplies from Point A to Point B as quickly as possible, and preferably quicker than the enemy. River crossing pose a special problem in mobility, which can only be cured with bridges – an adequate number and of adequate size. Engineers during the war were pretty good at repairing damaged bridges, and building temporary bridges, but the process still took time.

One of the primary missions of the Ninth Air Force before and shortly after D-Day was the destruction of bridges throughout Normandy. The object was to make it difficult for the Germans to move reinforcements and supplies across rivers to and through Normandy. The same mission continued after Operation Cobra, for the destruction of bridges throughout Northern France. After the Breakout at St. Lô, there was another element to the strategy. And that is, the destruction of bridges behind German lines impeded the German retreat, and allowed the destruction of unreinforced and stranded German units.

The irony, though, is that the destruction of a bridge not only impaired German reinforcements moving west, and German forces retreating east. It also impaired American advances moving east. While the 12th Army Group pushed east as fast as it could, it could not move efficiently without standing bridges. And, most of the bridges were already destroyed by the Ninth Air Force.

An added irony is that the Americans and the Germans sometimes saw the same situation differently, in strategic terms. For example, the Americans might see a particular bridge as possible escape route for retreating Germans, or as a possible route for German reinforcements. The Germans, at the same time, might see the same bridge as a possible route for the advancing Americans. Thus both armies might try to destroy the same bridge at the same time. (Perhaps you can picture American planes bombing a bridge, while a German demolition team is wiring the same bridge for demolition.)

The final irony is that one of the primary responsibilities of Ninth Air Force antiaircraft units, like the 784th, was to defend the bridges across France which were not already destroyed by the Ninth Air Force.

Shortly after the breakout, the Ninth Air Force and the 12th Army Group began to coordinate their efforts more closely. The Third Army, in particular, began to identify, well in advance, the bridges it intended to cross, and the Ninth proceeded to attack the remainder.

The 784th had "bridge duty" in Normandy until the end of August, and would have bridge duty again later in Belgium and Germany. But in its September journey through France, the 784th's only job was to get to Laon.

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The trip across France may not have been under heavy pressure. I say this, in part, because of the next photograph.

This is a photograph of a quad .50 caliber machine gun, which appears to be towed. I am not quite certain, but from the markings on the half-track in the background, this appears to be a machine gun from an AAA unit attached to the Ninth Air Force. Since these soldiers have taken off their shirts, I suspect that this photo was taken during August, 1944, in the "Dash Across France." From their smiles, it may be that the war had moved away from them as well.

Chester also had some postcards which suggested that he may have made a few detours along the way. One set was a series of "Paris Liberation" postcards. The other was a set of scenes in Saint Quentin, a city on the Somme River. I don't know if this meant that he stopped at either place.

I did see a report, though, that Battery B had its trucks commandeered for the "Red Ball Express" near the town of Dreux. The Red Ball Express was the nickname for the massive convoys of trucks which repeatedly transported supplies from Normandy to the advancing armies. Dreux is an historic town 60 miles or so west of Paris. I suspect that the men of Battery B didn't complain about the loss of their

trucks. They may even have been a bit upset when replacement vehicles were sent to them.

I do not have any record of Battery B stopping in Paris. I did see a report of the 784th's headquarters battery which made an unscheduled detour to go through Paris. I suspect that Battery B was not able to do the same.

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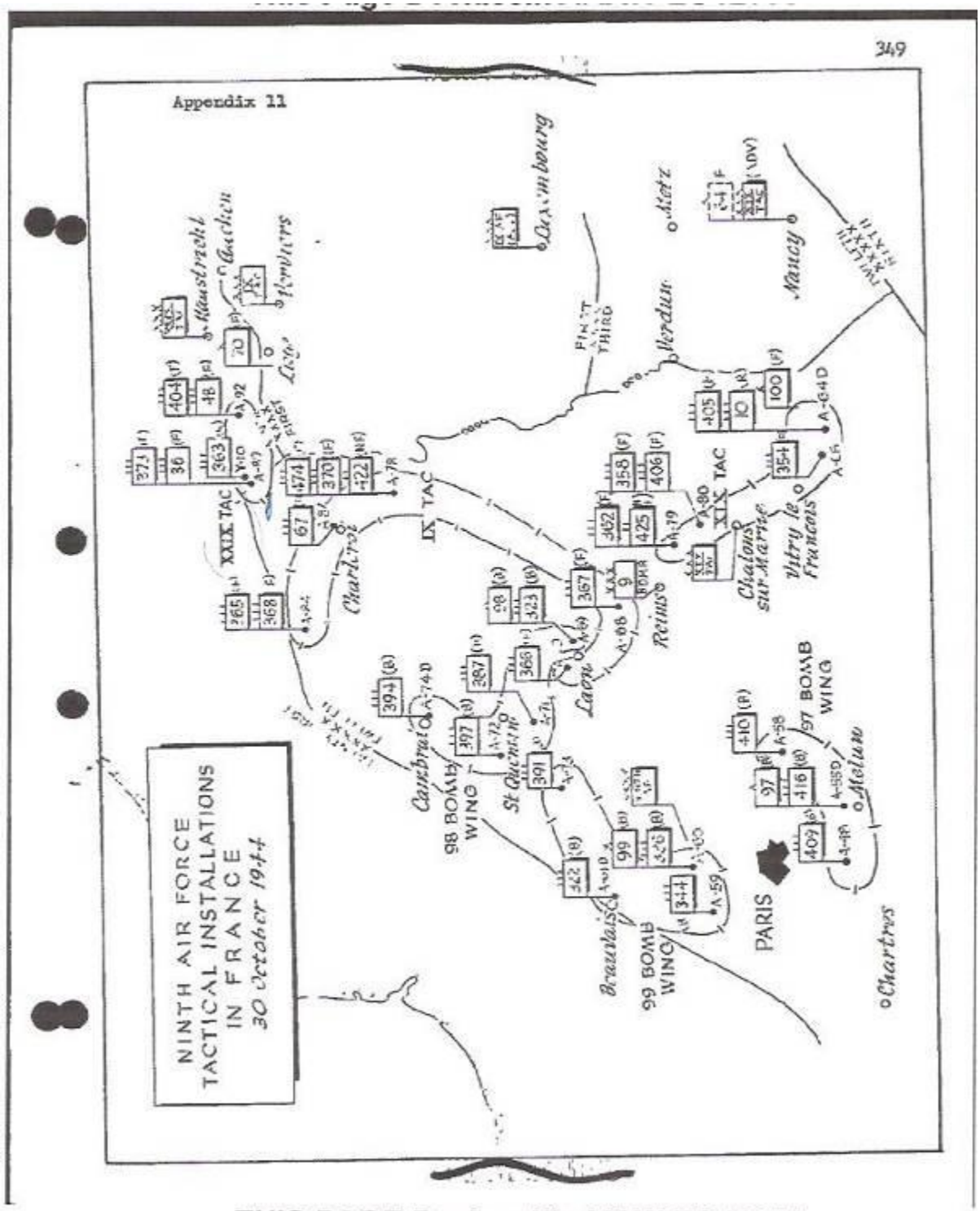
By early August, 1944, all of the Ninth Air Force units were located in France. Through September and October, these units were being moved from western to eastern France, and even to Belgium.

The Allies captured Rheims and Soissons on August 28th. Laon was taken by the Americans within a few more days. As it did in Normandy, and as it was to do in Belgium and Germany, the Americans converted captured German and French airfields in to American airfields as soon as humanly possible. The 784th was assigned to defend two of the captured airfields in and around Laon.

In particular, Batteries A and B were assigned "Airfield A-70".

The map on the next page shows the locations of Ninth Air Force locations as of October 30, 1944. I am not positive, but I believe Airfield A-70 is sometime referred to as "Couvron" – the name of the airfield. It is difficult to make out the airfield numbers on next page's map. You can make out "A-", followed by a number at some of the fields, but the text was too faint for me to locate A-70. The larger numbers in the flags are the army air force squadron numbers. I did verify that the 366th Fighter Squadron was at Couvron Airfield in September. From this, and a few other clues, I think A-70 is the airfield marked with the "366" flag, immediately northwest of Laon.

And that is where I believe Chester was from mid September until early October, 1944.



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The Breakout at St. Lô was perhaps the worst German defeat in the war. In the total campaign in France, more than 200,000 Germans were killed or wounded, and an equal number were captured. Allied losses were not as huge, but equally distressing. The Americans had 21,000 killed, 95,000 wounded, and 10,000 missing. The British and Canadians had 16,000 killed, 58,000 wounded, and 9,000 missing. Approximately 1.2 million Americans were involved in the Normandy and Northern France campaign.

The "Northern France" combat designation ended on September 14, 1944, at which time the 784th was at Laon. September 15, 1944 marks the beginning of the "Rhineland" campaign, and the beginning of a new combat designation period. This phase would include the invasion of Germany itself.

While the Northern France campaign was characterized by the rapid movement of American and British armies across France, the Rhineland campaign involved far slower progress. By September, the Allied armies had outstretched its supply lines. Fuel and other requirements for a modern army became harder and harder to come by. The Allies had to slow down to permit new and improved supply lines.

In addition, by September, the Germans had reorganized and regrouped, and again became a formidable enemy.

XII

Rhineland
(Up To The Battle of the Bulge and The Belgian *Fourragère*)

Historians mark September 15, 1944 as the beginning, and March 21, 1945 as the end, of the Rhineland campaign. Private Boyd was in the Rhineland region during this entire period, and received Rhineland campaign combat recognition as a result. He and the 784th also received the Belgian *Fourragère*, as noted on his honorable discharge.

Before we can get to the Battle of the Bulge and the *Fourragère*, we need to describe the 784th's antiaircraft duty in Laon, Chièvres, and Guignicourt; describe a change in the role of AAA units to shooting targets on the ground, rather than planes in the sky; describe the German V-1 and V-2 rockets and AAA units defense against rocket attacks; describe the overall war situation in the Fall of 1944; and describe the strategic importance of Antwerp and Liège. We can then describe the V-1 and V-2 rocket attacks on Belgium; the German Ardennes offensive – better known as the Battle of the Bulge; and, finally, the Allied (and 784th) defense along the Meuse River in Belgium. We'll do this over the next two chapters.

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Chièvres was first used as an airfield in World War I, when the Germans (after invading and conquering Belgium) converted a flat expansive farmland there into an airfield. It was used then as a single grass runway for biplanes. After World War I, the land was returned to agricultural use. On the eve of World War II, the Belgians drew up plans to establish an airfield at Chièvres for Belgian military aviation. But in 1940, the Germans again invaded Belgium and, by May 19, took over control of the region. The Germans immediately resumed their earlier project and made Chièvres an operational airfield. Besides its level, open contour, Chièvres was located halfway between Germany and the coast of Great Britain. From the German perspective, this made it an ideal location for an airfield.

The Belgian plan for an airfield at Chièvres called for a little over 100 acres. The Germans, however, built a 1,050 acre airfield and, by 1944, expanded it to 3,706 acres. The Germans demolished many homes in the region to clear the airfield. The tall trees which once lined the road between Ath and Mons were cut down. Using at least some forced labor, the Germans built runways, hangars, barracks,

and antiaircraft artillery towers. The Germans also built a rail line from the Mévergnies train station to Chièvres, and eight underground fuel depots.

The airfield was protected by six antiaircraft batteries of six guns each. Each battery had its own shelter, ammunition bunkers, and communication system. At its peak in 1942, Chièvres had 7,000 men.

The runways at Chièvres were painted in camouflage with green and brown paint. The Germans also used oxen on the base to move equipment, and a thousand sheep grazed in the area to keep the grass down. Crops were cultivated at nearly every unpaved area. All of this made it difficult for Allied aircraft to spot the airfield.

The Germans used planes from Chièvres to attack Britain in the first several years of the war, including the Battle of Britain. Thirty German planes from Chièvres attacked the landing beaches at Normandy a few days after D-Day.

The Germans were forced to abandon Chièvres at the end of August, 1944, and moved the entire operation to a base in the Netherlands. Before leaving, the Germans destroyed nearly all of the airfield's installations.

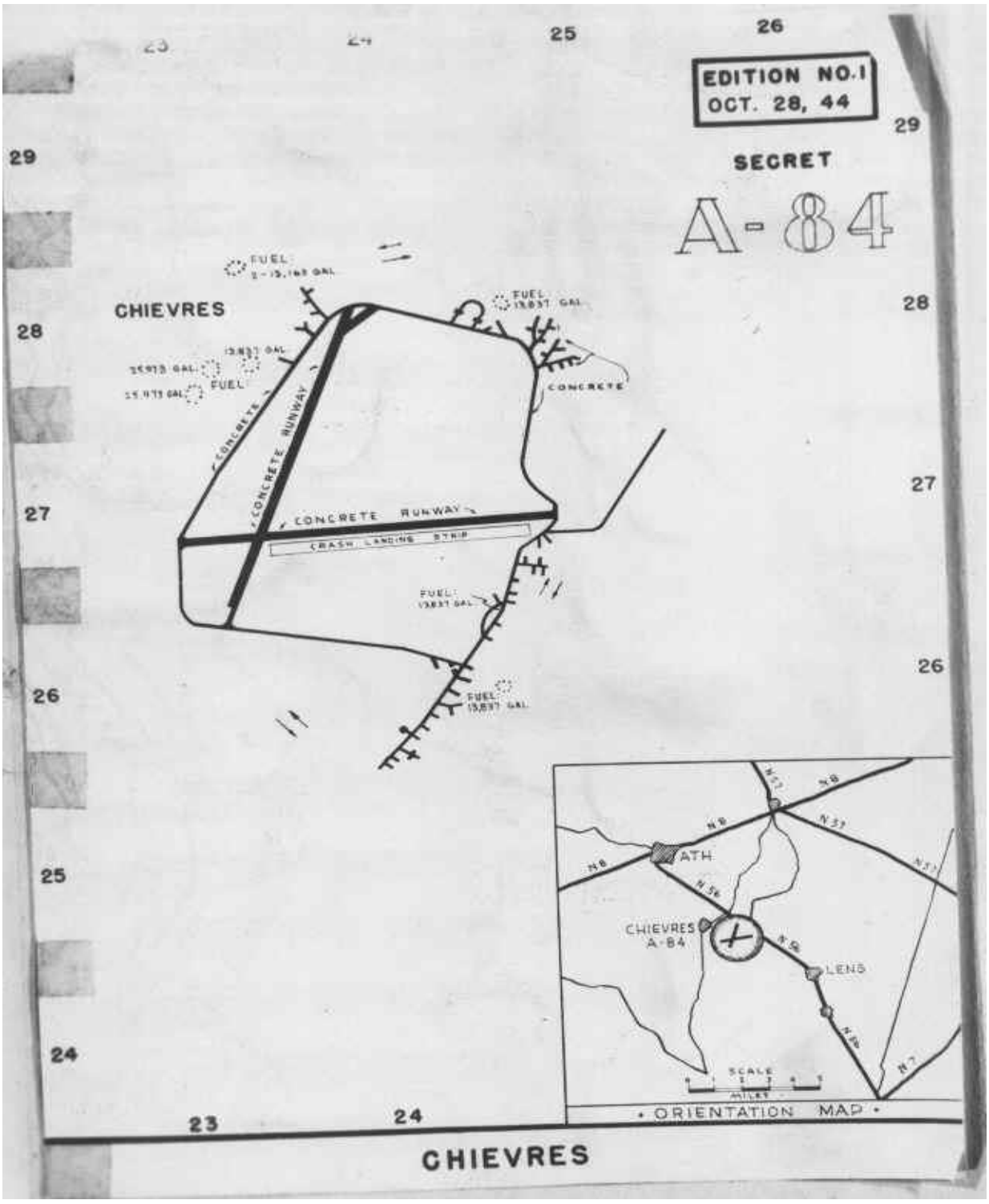
Armored units of the 1st Infantry Division of the First Army entered Chièvres on September 1. Within a week, Ninth Air Force engineers began to arrive and rebuild the airfield. The base became completely operational on October 1, 1944 as the Ninth's "Air Base A 84". A fighter group composed of three fighter squadrons using P47 Republic Thunderbolts used Chièvres as their base.

The 784th arrived at Chièvres on October 6th, and remained there through November 6, 1944. During that period, the P47s staged a number of raids against German troops. (P47s from Chièvres also took part in Battle of the Bulge, by attacking German motorized columns in the Ardennes.)

This is a present day map of Belgium. Chièvres is so small, it is not on the map. It is located southeast of Ath.

You can also see Laon on this map, in the France section at the lower left. For future reference, note the location of Antwerp, Liège, Maastricht, and the Meuse River.

The next page contains a sketch of the Chièvres air base drawn in October, 1944, after the Ninth's rebuilding.



The map on the next page is another Ninth Air Force map of the forward airfields, this one as of November 30, 1944. Chièvres is the field named "A-84", with the "365" and 368" flags, west of Charleroi.

Appendix 12

This is a map from the Battle of Britain – the air battle fought in the Fall of 1940. It shows the proximity of Chièvres to British targets.

Here are some photos of the P47 Thunderbolts – the plane flown out of Chièvres.

The 784th's story at Chièvres was relatively uneventful. Things would heat up in Belgium soon enough, but German air raids in this corner of Belgium, at this period of time, were infrequent. The battalion did receive a 24 hour leave to Brussels, which was their first leave since England.

(After the war, Chièvres Air Base became a Belgian military base. In 1968, it became a NATO air force base, primarily maintained by the U.S. Air Force.)

I may have devoted more pages than necessary to Chièvres, since it was not a center of combat operations while the 784th was there. But I found more information on this airfield that most of the others – including the airfield map. I chose to use Chièvres as an example, and typical, of the airfields which changed hands from D-Day to V-E Day. Some of these airfields, we've already discussed. Others, like historic Y-29 in Asch, Belgium.

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The 784th moved from Chièvres, Belgium back to France, on November 7th. (I'm not certain, but Battery C may have remained in Belgium). Headquarters was in Guignicourt, a small village 10 miles or so southeast of Laon. Battery A went on bridge duty at Soissons. Battery D guarded an airfield near Reims. And Battery B went back to A-70 Couvron airfield.

That's where the 784th's batteries were on the eve of the Ardennes offensive.

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Before we pick up the story in Belgium and the coming battle, another military development must be noted.

By Fall of 1944, AAA battalions and Allied air power continuously reduced the number of German Air Force raids. As noted previously, the army responded in part by disbanding AAA units – either by converting them to field artillery units or using the personnel as infantry replacements.

But someone, somewhere in the Northern France or Rhineland campaigns, came up with another novel idea. Like most good ideas, it seems extremely obvious in hindsight. The idea, simply, was this: If AAA automatic weapons units are skilled at shooting down planes, thousands of feet in the air and traveling hundreds of miles an hour, wouldn't they be even more skilled at shooting stationary targets on the ground? And if an antiaircraft weapon can provide intensive firepower when aimed vertically, couldn't it provide the same firepower when aimed horizontally?

This was not a "top down" idea. Rather, it came "bottom up". Ground forces at battalion levels or below began using this technique, and the news eventually reached the top commanders.

You can imagine how this might have come about. Infantry troops may have faced intense fire from a German unit, and sought artillery support. If an AAA battalion was nearby, one of its .40mm Bofor or quad .50 caliber machine guns might have been brought into the fight, with devastating effect.

Here's an interesting letter written by General Lucian Truscott, a corps commander in the Third Army, directed to his division commanders in September, 1944. As noted in the letter, this was not actually a "new" idea, but wasn't what military planners had in mind for the use of AAA automatic weapons.

"I have long felt the need for greater exploitation of our fire power in the attack. We have the means for far more effective use of massed fires of our automatic weapons in close support of infantry, particularly in the AAA automatic weapons battalion, mounted on half-tracks - four .50 cal. machine-guns coaxially mounted and one 37 mm with two .50 cal. machine guns co-axially mounted — capable of delivering tremendous fire with great accuracy and speed. they have generally been used in rear areas, watching for enemy aircraft. Although the need for antiaircraft protection has not disappeared it has certainly lessened greatly and I am sure that this valuable weapon can be used in many ways without interfering to any great extent with its availability for AA protection.

"The determination as to the use to be made of the AAA battalion at any one time rests with the Division Commander. The battalions are trained in the technique of ground fires and AAA AW battalion commanders are available to the division and to subordinate commanders at all times for technical advice on the employment of their weapons.

"Within limitation imposed by their characteristics there is a wide range of uses to which the AAA AW half-track may be put. They can be employed effectively in both attack and defense, day or night, and are most effective under circumstances which demand a high and rapid concentration of reinforcing fires at a particular point. The following data and information suggest a few practicable adaptations to ground missions.

CHARACTERISTICS OF AAA AW MOUNTED ON HALF-TRACKS

M—16 Mount w/armor plating	*(4) .50 cal. MGs*	*5000 rnds per min.*	*.50 cal. belts are normally loaded: 1 tracer, 2 incendiary, 2 AP.*
T-28-E1w/o plating	*armor(1) 37 mm gun*	*240 rnds per min.*	*210 rnds of HE tracer w/burnout at 3500 yds. 30 rnds AP.*

"It is obvious that because of the half-track's limited, cross-country mobility, the light armor or no armor and its high silouhette, great care must be exercised in using it in the presence of enemy anti-tank weapons. It should not be used to accompany the infantry in attack as is the SP assault cannon but might, however, be moved from one secured cover to another, close behind the assault troops and thus be able to furnish close, supporting fire, particularly for quickly destroying enemy machine gun positions. The M-16 vehicle is better adapted to this type of mission as it possesses some armor and can fire more rapidly and accurately while on the move or at sudden halts. Moved into position at night, concealed and dug-in, this weapon can greatly increase the weight of infantry fire along the line of departure.

"As the nucleus of a strong point or to cover a road block, bridge or similar position it should be carefully dug-in and concealed and covered by infantry small arms. However, the half-track crews are able to furnish some of the small arms flank protection while still able to operate the piece.

"In support of a night attack the weapon may be used to indicate direction and to furnish diversionary fires. Used extensively by the Germans in Africa and Italy often with excellent results.

"In short, I expect each and every commander in the Corps to constantly seek to develop the techniques of combat with all the weapons at our disposal. And remember, the weapons alone will not do the job. Only by a high degree of coordination and teamwork between the infantry and this weapon will success be achieved".

And so, instead of aiming up at German planes, the AAA units began to aim across at Germans on the ground.

This made a big difference in the life of an AAA soldier. Before, the AAA soldier was slightly behind the front line, guarding key positions recently taken by the infantry. Now, the AAA soldier was side-by-side with the infantry, taking the key positions.

I read an interesting battalion history of the 443rd AAA automatic weapons battalion in which this adjustment was described. By the time of the Rhineland campaign, this self-propelled AAA battalion saw fewer and fewer German planes to shoot at. Meanwhile, it endured German artillery barrages, and was out of range to fire back. As a result, the unit was eager to get involved in "ground support" missions. This battalion history described a three day infantry battle, in which the AAA provided support with .37mm Bofors and .50 caliber machine gun fire. Since AAA guns were not designed for this purpose, the gunners and the men feeding ammunition remained well above ground without protective armor of any kind. This gave them no protection against the considerable enemy return fire.

Another 443rd report describes field adjustments made to the .37mm Bofors. The guns were capable of traversing a full 360 degrees horizontally. Vertically, the guns ranged from 90 degrees (straight up) to 15 degree. Below 15 degrees, the ammunition clip jammed. Mechanics in the field jerry-rigged the clips to permit a -5 degree angle. Why, you might ask, would they need a cannon which fired down (unless they were aiming at the ground)? The reason was to set the gun on a hill or rise, and fire down at the enemy below.

This photo provides a visual example such ground support. These are American AAA gunners and a machine gun mount near a Rhine River crossing in 1945. Note that they are pointing the bigger gun "across" the river (presumably to Germans on the ground), and not "up" to German planes.

Chester Boyd's separation qualification record confirmed that he participated in this type of ground support – aiming at Germans on the ground with an antiaircraft weapon. The record noted that he "*provided automatic direct and indirect fire in support of units breaking through enemy defense, harassing enemy troops and positions, and in defense against enemy aircraft, armored vehicles and enemy counter attacks"*.

I do not know whether any of the batteries within the 784th were called upon to support ground troops in this manner. They may have been at Mortain. The 784th did prepare to repel the Germans at the Meuse River, during the worst days of the Battle of the Bulge. Thankfully, this type of ground support was not required.

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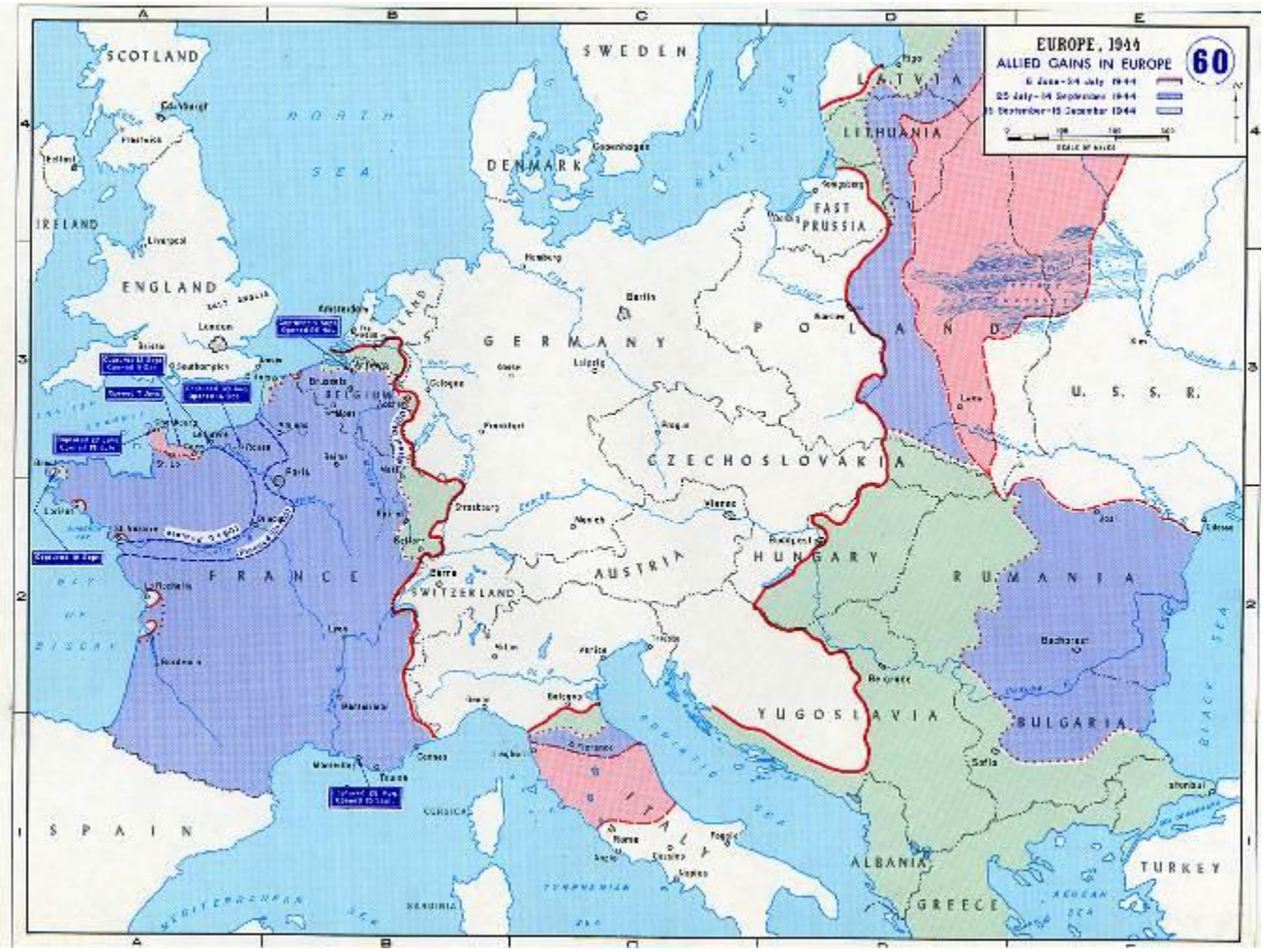
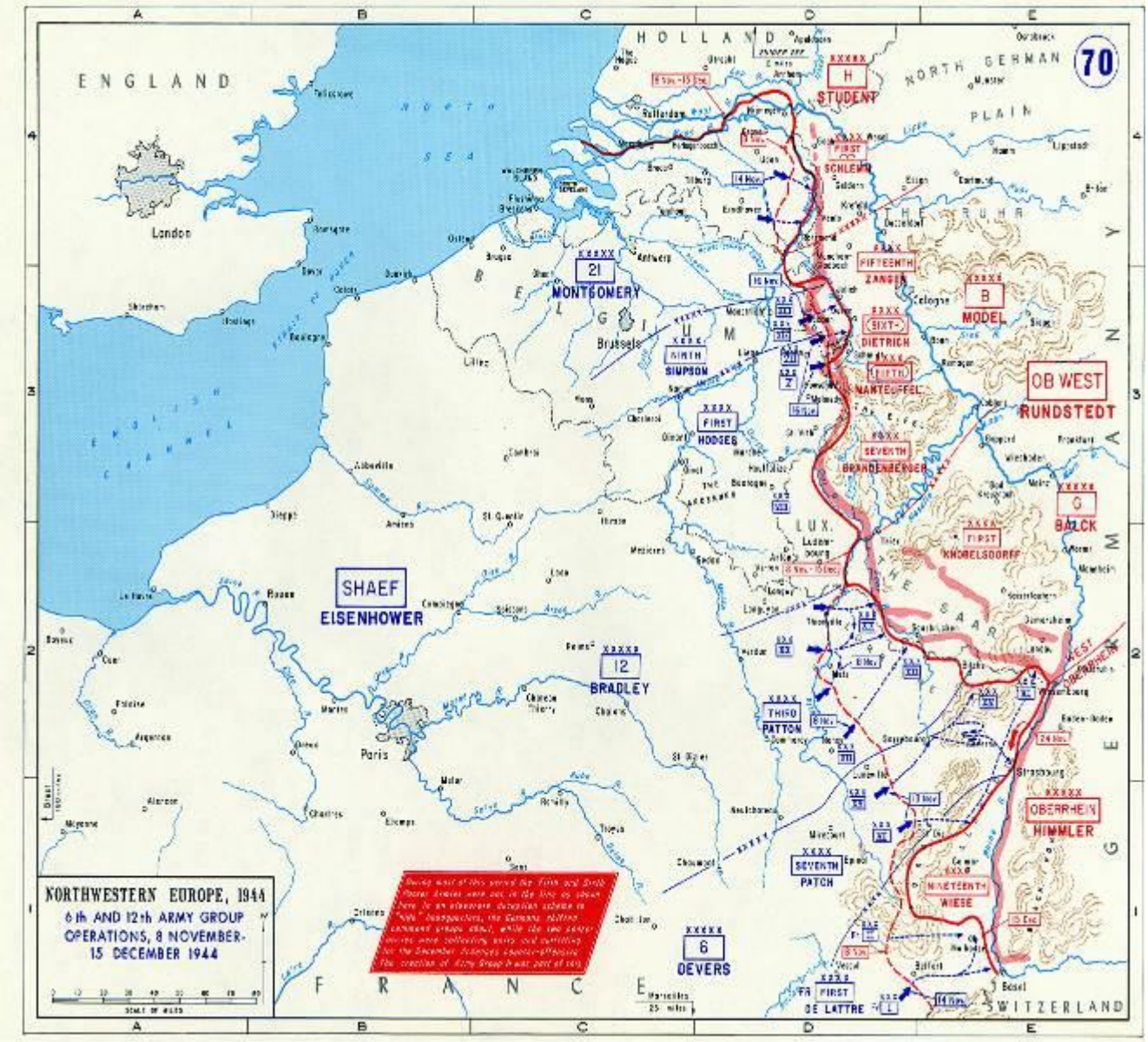
This map shows the rough location of the front lines in the latter part of 1944.



In this map, the red areas were taken by the Allies in June and July, 1944; the blue areas were taken by the Allies between July 25th and September 14th; and the green areas were taken between September 15th and December 15th.

As you can see on this map, the Americans and British had taken most of Belgium and entered into Netherlands to the north. In the middle, American troops took entered Aachen – the first Americans in Germany. Further south, the Americans took most of Alsace-Lorraine, and reached the Rhine River at Strabourg.

This next map provides much the same view, in greater detail.



On this map you can see Liège, Belgium, very near the German line. Chièvres is not shown, but is slightly north and west of Mons (which is shown). Laon is also shown – about half way between Paris and Brussels.

Without going into further detail, this is roughly the situation by December, 1944.

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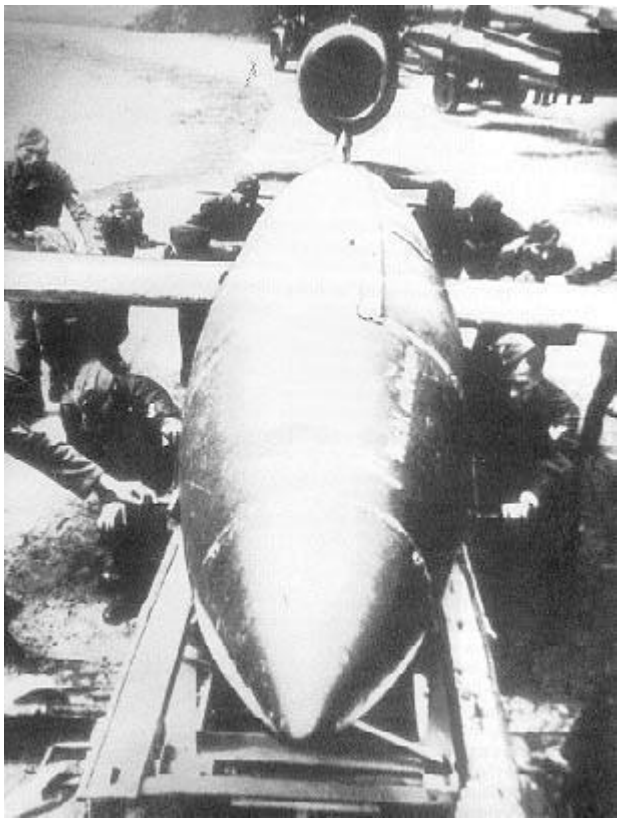
And now the rockets. The Germans were far ahead of the rest of the world in rocket technology in the 1930s and early 1940s. Once the German's lost the Battle

of Britain and cancelled plans to invade Great Britain, Hitler authorized the full-scale development of the "pilotless bombs". By June, 1944, the first version of these rockets – the V-1 – were launched. The first rockets were targeted to London, and fired within a few days of D-Day. These were launched from mobile launch ramps near Calais. Over the next year, over 9,000 V-1s were fired at England.

Here are some photos of the V-1s in flight.

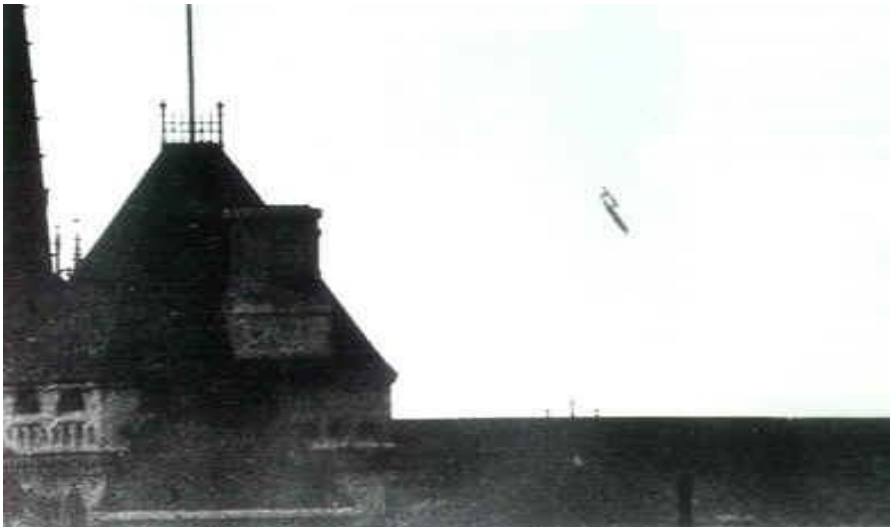
This next photo gives a better idea of the size of the V-1.



This V-1 is on its launch ramp in France.

This V-1 photo was in Chester's photo collection, but it was not taken by him. There word "reproduction" is printed on the reverse side of the photo.

This last photo is of a V-1 at the end of its flight, about to impact near Drury Lane, London, in 1944.



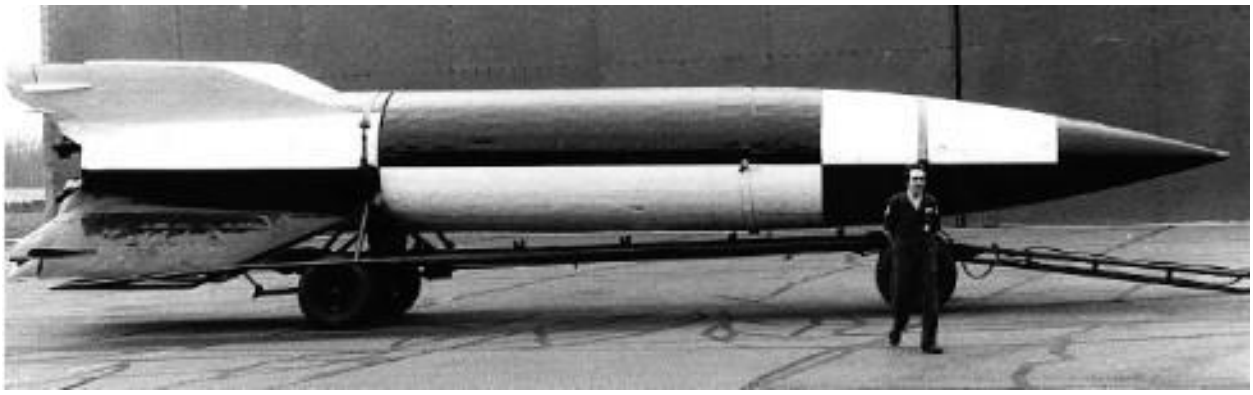
The V-1 traveled faster than any of the aircraft at the time, up to 400 mph. The rockets could fly between 3,000 and 5,000 feet altitude. The launch sites had to be close to the coast in order to hit England, since their range was only 250 miles. The body of the rocket was a steel tube filled with fuel, a 2,000 lb. warhead, and the guidance system. The guidance system was relatively primitive and as weapons, the V-1s were not very accurate or effective.

The V-1s were, however, terrifying for the residents below them. They V-1 made a characteristic sound as it went over head, which could be heard by the residents below. When the sound stopped, it meant that the V-1 was no longer being propelled forward and, instead, was about to fall upon those below.

The V-2 came shortly behind the development of the V-1. While the V-1 may be called a "pilotless bomb", the V-2 is a more modern guided ballistic rocket. It traveled up to 3,500 mph, and took only seconds to reach it target. It was terrifying to civilians since it came down from the stratosphere without warning. And, unlike the V-1, the V-2 when first introduced could not be spotted or shot down in flight – either by antiaircraft artillery or fighter planes. The only real defense against the V-2 was to capture its launch sites.

The "V" in V-1 and V-2 stood for "*Vergeltungswaffe",* which means *"*Vengeance Weapon".

Here are some photos of the feared V-2.



And now Antwerp, Liège, Y-29, and the Meuse.