

JOURNEY with the COMBAT ENGINEERS in WWII “ESSAYONS”

Contents:

- Chapter I Formative Years
- Chapter II Army Life "101"
- Chapter III Assault Training Center in North Devon, England
- Chapter IV Preparation for Normandy Invasion
- Chapter V Omaha Beach
- Chapter VI Invasion Aftermath
- Chapter VII Normandy to Paris
- Chapter VIII Paris to Siegfried Line
- Chapter IX The Bulge
- Chapter X Monschau to Remagen
- Chapter XI Remagen to Czechoslovakia
- Chapter XII Beyond VE-Day
- Chapter XIII Retirement and Reunions

NOTES

1. Assault Training Center Layout
2. Army Gap Assault Teams--and Navy/Army members in the attached NCDUs
3. Copies of original Top Secret Neptune “Bigot” orders and Omaha Beach “Bigot” map
4. D-Day After Action Reports for 146ECB
5. Various Awards
6. Errors in reporting the Omaha Beach Demolition Mission as a totally Navy-run Operation
7. Veteran's Stories
8. Belgian MIA-Team Correspondence
9. Miscellaneous
- 10 “OPERATION OLYMPIC”--The planned invasion of Japan
- 11 Abbreviations in Text
- 12 Code Names of Various Units

FOREWORD

ESSAYONS is French for "Let us Try"--as told to me at Oregon State. It was--and I believe is still--the motto of the army engineers. Army engineers were the only WWII army units to have their own distinctive uniform buttons--an engineer castle with "ESSAYONS" inscribed beneath.

A JOURNEY with the COMBAT ENGINEERS in WWII--ESSAYONS was written to:

1. Give my children and grandchildren a thumbnail sketch of life as seen and lived during the Great Depression; followed by military training at Camp Claiborne, Louisiana and the Assault training center in North Devon, England; then military action in France, Belgium and Germany from the limited perspective of a platoon leader in a Combat Engineer Battalion.

Initially all of the episodes were from my experiences, but personal accounts from others have been added to make it more relevant and interesting. The text attempts to flow along in chronological order, but deviates when paralleling items are deemed pertinent. I believe the anecdotal information is accurate, even though some minor errors may still exist. Known errors have been corrected, and in a few instances--when it may be of interest--both the erroneous and corrected text are included.

2. Furnish a needed revitalization of WWII history, whether from our homes, our schools, our books, or on the internet. Hopefully, accounts such as this may be modestly helpful in generating that interest and may also help to dispel the notion that war movies accurately depict reality. War should NEVER be portrayed as fun and games!

3. Illustrate how actions of a number of well-meaning pacifists led to the deaths of many Americans in WWII. The failure to prepare for an obviously impending war and to provide the proper tools and training, resulted in inadequately trained Americans being sent up against the well-trained Wehrmacht professionals; who usually had superior weapons--although often in lesser quantities. We also downplayed Japan's expertise in fighting men, pilots, planes, ships and torpedoes. American lives were sacrificed to overcome our initial myopia. It is always proper to question the agenda of the Military-Industrial-Complex, but remember this: "Spending too much wastes only money--spending too little may again waste lives".

4. Indicate that war is a poor substitute for diplomacy, and to be used when no reasonable alternatives exist--as was the case with the United States in WWII. Few of us were eager to kill others or risk being killed. There were few heroes--mostly just those who were doing their assigned task as best they could. Many of the real heroes are not with us--they did not survive their selfless sacrifice!

5. Correct known historical errors as put forth by some authors:

- a. Preponderance of Army Engineers vs navy NCDU personnel in the Omaha demolition mission--an effort that corrected in 2012. page 31
- b. Liberation of Paris by 1st Army--not Patton's 3rd Army. page 87/89

6. Enlist historians in uncovering suspected historical errors:

- a. First use of the "proximity" fuse on the continent. pages 120/122
- b. Ludendorff Bridge collapse into the Rhine. pages 153/156

7. Enlist historians in verifying a known but elusive fact--

- The 1945 repair of "TOP SECRET CABLE" linking the Signal Corps at the ETO Supreme Headquarters with the Pentagon. pages 171/173

"A JOURNEY with the COMBAT ENGINEERS in WWII, ESSAYONS" does not attempt to depict strategy or even much of the tactical--just the workings of an ordinary combat engineer platoon--without the ability to peek into the briefing rooms of the upper echelons. Throughout our time on the continent, the 3rd Platoon--along with a platoon from the 2nd Ranger Battalion--was often attached to a troop of the 38th Cavalry Squadron, which in turn was attached to various infantry units. As such, we were far down the chain of command from the decision makers and so were often clueless as to the big picture. This book is a narrow bit of history, as seen by a bit player, who had minimal understanding of the general's war!

These tales are only modestly sanitized and relate the events as they were remembered--even to the sometimes tasteless, sordid or gruesome details. If some accounts are offensive, that is regretted; but an actual presentation of events must be so written, if they are to be honest!

Wesley R Ross SN 0-472141

O.I.C. Gap Assault Team #8, that landed on Omaha Beach at dawn on D-Day; later Platoon Leader 3rd Platoon, B-Co, 146ECB--France, Belgium, Germany and Czechoslovakia.

CONFIRMATION of SOURCES

1. LETTERS SENT HOME--for verifying dates and significant incidents
2. ENSIGN HAROLD BLEAN--OIC of NCDU #137, attached to Gap Assault Team #8
3. LICHFIELD by Jack Gieck--Story of the Infamous 10th Replacement Depot
4. CROSS CHANNEL ATTACK by Gordon A Harrison--Plan Changes, D-Day actions, and lessons learned--Library of Congress, catalog card #51-61669
5. 146ECB NARRATIVE HISTORY by Captain Stephen Pipka--Bn S-2 & Historian
6. SEAL's MUSEUM--listing of NCDU personnel, both navy and attached army
7. OMAHA BEACHHEAD by Historical Division, War Department
8. COMMANDOS FROM THE SEA by John B "Barry" Dwyer
9. SPEARHEADING D-DAY by Jonathan Gawne--Wealth of information on landing craft, equipment, clothing and operations on the landing beaches
10. UNTOLD STORIES OF D-DAY by Tom Allen--National Geographic, June 2002
11. JOE VAGHI--one of several beach-masters from 6th Naval Beach Battalion
12. BODYGUARD OF LIES by Anthony Cave Brown--British strategies that were so successful in disguising the Allied landing intentions on D-Day
13. PHIL RIVERS--Superintendent of American Omaha Beach Cemetery
14. IS PARIS BURNING by Larry Collins and Dominique Lapierre--How General Dietrich von Choltitz saved Paris from Hitler's ordered destruction
15. FOLLOW ME AND DIE by Cecil B Currey--The Hurtgen Forest Debacle
16. THE BATTLE OF THE BULGE by Robert E Merriam
17. HISTORY OF THE 38th CAVALRY RECONNAISSANCE SQUADRON, MECHANIZED--
Only known Cavalry Squadron to win a Presidential Unit Citation
18. ENGINEERING THE VICTORY by Colonel David Pergrin--Role of 291ECB in Bulge by thwarting Kampfgruppe Peiper's drive to the Meuse River
19. BUTLERS BATTLIN' BLUE BASTARDS by Thor Ronningen plus personal letters about 3rd Bn, 395th Regiment, 99th Infantry Div at Hofen, Germany
20. THE SERVICE by General Reinhard Gehlen--German Intelligence Chief
21. THE BRIDGE AT REMAGEN by Ken Hechler--Commander of a four man team of combat historians who were nearby when the bridge was captured and who then wrote about its destruction. After WWII, he was a West Virginia Congressman for nine terms and later the West Virginia Secretary of state for four terms ending in 2001--Quite a guy!

With twenty-six others, I graduated in 1938 from Maupin High School in north-central Oregon, with plans to study electrical engineering at Oregon State College. (Until 1937--Oregon State Agricultural College)

The principal allowed me to take a solo course in trigonometry--a prerequisite at Oregon State. Oregon State was a given, because it was less expensive than other engineering schools and because Daniel Poling--the Assistant Dean of Men--a wonderfully warm human being--had been the principal at Maupin during my freshman year. My respect for him was immense and I knew that his help would be available should I need it.

In the spring of 1938, my father hired a logger with his diesel-powered "donkey" to clear trees from a forty acre patch of forest near Badger Canyon. I skipped school for six weeks to set chokers and be the powder monkey, but still did homework and sent it in to the school for credit.

Main-line and haul-back cables were run around successive areas to be logged. A studious lecture on "keeping out of the bight of the line" when logs were being dragged was never forgotten. If a steel cable were to hang up on an obstacle, it could release suddenly and whip across the intervening space with the deadly effect of a meat cleaver.

An old powder monkey showed me how to cup my hands over dynamite caps, while crimping them with my teeth--better to lose fingers than eyes! I drove a pointed steel bar under the stumps and then used a small explosive charge to enlarge the hole so it would accept the main powder charge.

The depression had not yet run its course and jobs were almost non-existent in the depressed Wamic area. My father suggested that I use his vintage Vaughn reciprocating drag-saw to cut firewood on some recently acquired timberland, in order to garner the money to enroll at Oregon State.

On the weekends, we would fall enough trees with the crosscut saw (Swedish Fiddle), to keep me busy during the week. These were old-growth Ponderosa Pines, up to five feet in diameter at the base. I averaged a cord per day--cut, split and piled--so the evening meal was attacked with zest.

Three weeks before the fall term began, I had my first firewood sale. The going price was \$3.50 per cord, but since this was premium quality old-growth pine, I asked and after much haggling, finally received \$4.00/cord.

With the princely sum of \$75.00 in my pocket, my neighbor--Leo Brittain--and I headed for Corvallis in my Model T Ford runabout that I had cobbled together three years earlier from our discarded 1923 Ford farm truck and some scrounged touring car parts from the various local junk heaps.

Since this was of necessity to be a Spartan existence, Leo and I batched the first year. The upstairs in a house on the Willamette River--across from the Oregon State crew house, where I later competed on the Lightweight Crew--was rented for \$11.00 per month. Our evening meal was prepared by--and eaten with our landlords--the Herseys. We bought food very carefully, so our food bill also averaged about \$11.00 per month. We relied on day-old bread, when available and ate unlimited quantities of split-pea soup, which was always available on the stove and surprisingly is still a favorite.

The following list of expenses is shown to illustrate how much these items have increased in price over the intervening years:

WINTER TERM EXPENSE--as listed in my notebook:

Jan 1939

Contributions: Aunt Ethel \$5; Aunt Muriel \$5; Walter Morris \$5(probably orchestrated by Grandmother Morrow)	
bus ticket to Corvallis	3.25
mints	.15
tuition for the fall term	37.00
haircut	50
bread	06
notebook paper 1/2 ream	43
Popular Aviation	25
lettering paper	20
Scotch tape, pencils, paper	35
food	40
books--manual drawing & hygiene	3.25
Scotch tape	15
bread	10
India ink, gummed rings, eraser, drawing paper	40
shoeshine--for ROTC	15
show	50
socks (2 pr), shoestrings	60
data sheets	20
bread	09

shoe polish	15
show	20
brass polish	20
bread	06
comb	10
Coca Colas (2)	10
shirt and muffs	1.99
bread	08
package and envelopes	41
food	51
dance card--for nickel hops at Sororities	1.00
show	35
bread	06
Cash on hand \$4.49 + \$3.50 Shupes Furniture job	
show	20
shows	40
ice cream bar	05
food	1.20
food	90
milk bill	3.50
bread	08
peanut brittle	20
food	82
Chore Girl	10
shoe shine for military	15
show	35
milkshakes (2)	30
ice cream	20
board + ironing shirts	6.50
drawing paper	05
engineering problems paper	25
pen point	05
food	1.05
physics coordinate paper	25
canned milk	36
show	70
candy bar	05
telephone call	05
gas	83
skate	50
envelopes	07
envelopes	14

A home-cured ham was a treat and the bone flavored each succeeding batch of pea soup until the flavor was leached out. Mother's canned sausage, beef and fruit were welcome additions. On occasion, she would send one of her wonderful brandied fruitcakes--out of this world!

My total out-of-pocket-expense for the entire 1938/39 school year, was a few pennies over \$329.00--portal to portal, from and back home to Wamic. This undoubtedly was a school record for a student who was not living at home, but--putting it into proper perspective--the total tuition for three terms was only \$101! Used drawing equipment, used books and other needs were inexpensive and such luxury items as a typewriter could not even be considered.

My first term was a horror story. Most of my engineering classmates had attended large Portland high schools, so their freshman year was essentially a review. I worked hard, but not especially smart and managed to squeak by with a 2.50 GPA--aided by an "A" in Military.

My engineering reports were unbelievably bad hand-written efforts on regular tablet paper, with penned longhand text and crudely drawn freehand sketches. I was competing with students who had typewriters and access to reports from previous years to review, to use as guides and to plagiarize.

At the end of each school year I would hurry to find a summer job to provide money for the following year. In order, I worked:

1939 Mount Hood Trail-Crew for ranger Eric Gordon in Dufur, OR; Grasshopper Point fire lookout; Dee, Oregon and Mt Adams, forest fires. Hjalmar Hvaam--a Norwegian born, medal-winning Olympic skier was a member of our trail crew. He was very modest and never mentioned his Olympic medals! He later owned a Portland ski shop.

1940 Worked green-chain in a sawmill west of Wamic and then sewed sacks for my Uncle Lloyd Morrow for the fabulous wage of \$5 for a ten hour day--as he contracted out his six-foot-swath McCormick Deering, rubber-tired combine. An old sack-sewer showed me how urinating on one's hands, reduced the soreness from using the rough sewing twine and from filling gunnysacks.

1941 Attended a six-weeks ROTC summer camp at Fort Lewis, where I met Dorothy Wickens--my future wife. I then worked for a Corps of Engineers precise level crew at Drain, Oregon; in Hell's Canyon upriver from Lewiston, Idaho where we ran elevations for future Hells Canyon dams; on the Salmon River near Riggins, Idaho.

My pay in Riggins was silver dollars--this was silver-mining country and the locals would not accept greenbacks!
1942 Groundman for Max J Kuney Electrical Contractors at Camp Adair, Oregon; Camp White, Oregon--where 299th Engineers, our 1944 D-Day companions on Omaha Beach had trained; National Guard Airbase--later Portland International Airport.

In the fall of 1939, I became a houseboy at Lockwood Hall--a boarding house for young college women on 9th street--later called Varsity House when it began housing boys. There were four houseboys--Al and Ray Lockwood and Lagrande Allen--my basement roommate.

In return for board and room, I kept the furnace hopper filled with sawdust, served lunch and dinner, washed dishes, swept floors, and did odd jobs--a daily routine that required about four hours. All four were in the school of engineering--Al and Lagrande in civil, Ray in mechanical and I in electrical.

In 1940, we four completed the classroom and airtime for our private pilot's licenses in the CPTP--Civilian Pilot Training Program--at a total individual cost of \$25.00. My Certificate of Competency--#95517--was dated 31 January 1941.

I flew a TaylorCraft--a neat high-wing monoplane with a wheel instead of a stick--and learned to do all types of aerobatics, including spins and hammer-head stalls. We wore back-pack parachutes, in case of a plane failure. I soloed after ten hours of supervised flying time.

My instructor--Ralph Romaine--was only a few years older and a competent flier. He later trained British pilots who fought in the "Battle of Britain", and after WWII was a test pilot for several major airplane manufacturers.

My open-topped, hand-cranked Model T Ford was transportation for the four of us--to and from the Albany airport. Gas at \$0.09/gal was combined with diesel at \$0.06/gal to reduce costs. It smoked a bit, but ran without a problem.

When Pearl Harbor was bombed on 07 December 1941, I was in the college infirmary with pneumonia. All of my ROTC friends and I were convinced that the US would defeat Japan within a year--but were less optimistic with regards to Germany.

I was a member of the 1941 Oregon State rifle team, which won the Hearst Trophy, Pacific Northwest Intercollegiate Rifle Championship and National Scabbard and Blade Trophy. We had iron-sighted Springfield bolt-action rifles and were able to compete favorably in the Willamette Valley Rifle League against competitors who had superior rifles with scopes.

My selection for the Little Colonel and her court for the 1942 Military Ball was one that was completely devoid of the usual campus politics--nominees shot for the honor on the rifle range. Orleen Koenecke--an independent--was our Little Colonel; Beverly Stevens--Little Major; Esther Voget--Little Captain; Kay Goul--Little 1st Lieutenant; Ann Wright--Little 2nd Lieutenant. An extra benefit was to innocently snuggle up to the little beauties, to help them assume a good shooting position, but more honestly to make progress for a future date!

For our annual Military Ball, we managed to obtain several big name bands--including Les Brown's "Band of Renown" and Russ Morgan's "Music in the Morgan Manner". Nat King Cole was one of my favorite singers--though he began his career as a pianist. A tragedy that he smoked heavily and died from lung cancer at forty-five--sad to lose such talent from a known carcinogen!

Glenn Miller's Tuxedo Junction, In the Mood, American Patrol Moonlight Serenade, String of Pearls; and anything else that his band played were my favorites. We were saddened when Glenn was lost in the English Channel on 15 December 1944--one day prior to the beginning of The Battle of the Bulge. Other tunes in my memory bank were Smoke Gets in Your Eyes, Deep Purple, Stardust and Red Sails in the Sunset.

In a senior ROTC military law class, Captain David B Powers wanted to demonstrate the fallibility of first-hand, eye-witness evidence, so when he challenged three of us rifle team members to come forth with a plan, we cooked up the following scheme:

Dave Gross--our top shooter--and I were having a heated argument as we sauntered late into a law class that was already in session. The argument continued, getting progressively more noisy. This attracted everyone's attention, which prompted Captain Powers to request us several times to tone it down--without getting a proper response.

Suddenly we stood up and exchanged punches. Dave pushed me backwards into the seats and then ran up the aisle and through the door with me in hot pursuit. As Dave was making his hurried exit, Jim Hanley--our premier standing shooter--shoved a pistol through the door and fired three blank shots in my direction.

I groaned and crumpled face down in the aisle, meanwhile squirting a blob of red ink on my T-shirt over my heart. Someone--who quickly came to my aid--rolled me over and cried "Oh my God, those crazy fools, he's dead"! Many assumed that to be true, thereby enhancing the consternation.

Only a few saw the hand and pistol sneak in through the door, where it was pointed at Dave's groin, probably done on

purpose by Hanley--an original true-blue character--causing skin and corduroy burns and much pain and swelling.

Several chemistry professors, acting on the evidence at hand, chased Dave down the hall and into a restroom, where he was overpowered. They were unaware of our stratagem until they had dragged a protesting Dave back into the classroom.

Captain Powers stated the purpose of the ruse and required each member of the class to write down what he had observed. This experience was indelibly etched in our memories and thereafter we would be skeptical of eye-witness testimony.

It was surprising how so many members at an elbow-rubbing distance could have gained such diverse impressions. (In this regard, members of my Gap Assault Team #8--who landed at dawn on Omaha Beach, D-Day morning--also had major recollection errors in their After Action Reports that were recorded just two days later.)

In this instance, only a few observed that Jim Hanley--the recent winner of the "J D Hanley Memorial Cup", awarded for highest scores in the standing position--had wielded the pistol. Testimony of observers in the following court-martial convicted Dave of murder and sentenced him to hang.

Not until the death sentence had been read, did Hanley sally forth with his grand self-serving pronouncement--"My strong character will not let me stand by and see such a fine man convicted--I killed Ross"! Unfortunately, he deprived future audiences of such talent by eschewing life in the theater and working instead as a civil engineer in Baker City, Oregon.

ARMY LIFE "101"

II

After being commissioned as a 2nd Lieutenant in the Corps of Engineers in May 1942, I requested a deferment to complete the class work for my Bachelor of Science Degree in Electrical Engineering. I had taken lighter class loads for the first four years, because of jobs that helped to keep me in school.

My deferment was denied, but I was not called to active duty until July 1943. My fifth year was spent in completing the required classwork, helping with the ROTC program, and working as a lab instructor for the V-12 naval engineering program.

In March I suffered an inguinal hernia after a hard landing when jumping over the intramural obstacle course wall. Surgery and recovery took three weeks, but I graduated with honors--barely--on 29 May 1943 and was inducted into Eta Kappa Nu, the National Honorary Society for electrical engineers.

After graduation, for a short time I worked for the Soil Conservation Service, leveling land with a "Caterpillar-50" tractor and scraper on Juniper Flat between Tygh Valley and Maupin, Oregon. My father was the job foreman, so I had an inside shot.

My orders to Camp Claiborne, Louisiana were dated 13 July 1943. I headed to Kansas City in an air-conditioned railroad car on 27 July, wearing a comfortable woolen uniform. I had heard of the extreme humidity in that area that intensified the heat perception, but had no concept of what that really meant.

Our train was late arriving in Kansas City, so we missed our connection to Camp Claiborne and I was forced to stay overnight. Upon stepping from the train, I found the heat and humidity unbearable, due I thought, to the steam engines puffing around within the covered station area.

With my bags in hand, I bounded up the eighty-plus flight of stairs, expecting to find cooler air out in the open. Nothing had changed, except it was even more unbearably hot and humid on the outside.

After locating a hotel--without air conditioning--I took a cold shower. The water was tepid, so I stretched out on the bed for half an hour, expecting to cool from evaporation, but the high humidity kept that from happening and I was still sweaty and sticky. I toweled off and then located in turn an air-conditioned restaurant, an air-conditioned movie and an air-conditioned dance. Upon leaving the dance at 0200, the outside temperature had dropped only four degrees!

The next day in sun-tan cottons, I boarded a train for the trip to Camp Claiborne. The train was an old rattler, running over an uneven roadbed and without air-conditioning. It was overcrowded and there was no place to snooze, so at night I spread papers on the floor and managed a few winks between the bumps. This was my least memorable train ride--less comfortable than on a "40 & 8" to Antwerp on my way home in 1945!

Prior to my arrival at Camp Claiborne, a group of black and white soldiers had squared off in the company street and begun shooting at each other. I don't know if any were killed, but several were wounded. I'm not sure what started the ruckus, but suspect that it was triggered by the intense racial hatred that was apparent in that southern army camp.

I must admit that even though I had no overt racial bias, I had hoped to be assigned to a white engineer outfit for overseas duty. I now believe that my fears were unfounded. However, my later assignment to the 146st Engineer Combat Battalion in Devon, England was an ideal fit for me.

At Claiborne, I was assigned to the 361st Engineer Special Service Regiment, which included a number of men with a great amount of heavy construction experience. With my very limited construction background, I often wondered why I was assigned to that unit.

In 1998, I found that Art Hill--the H & S Company Commander of the 146th Engineer Combat Battalion in WWII--had been in the 361st one year earlier. Because of his extensive construction experience, he was chosen to meet with the commanding officer to build a parade field.

He walked up and began the conversation without the usual formalities such as saluting. When the general asked how long he had been in the army, Art replied "about a week". The bemused general replied "it figures". The parade ground was completed in record time, so the general was well pleased. Subsequently, Art was accepted into Officer's Candidate School and ended at Camp Swift, Texas with the 146th Engineer Combat Battalion.

After several weeks at Camp Claiborne and mastering the ability to sweat through my combat boots, I decided that I might not die from the heat and humidity. With a night time temperature drop of only four degrees, the moisture-laden air condensed on the roof of our tarpaper hutments and ran off like rain. To avoid insect bites it was necessary to sleep under a mosquito net--and usually that was all!

At the end of the work day, we hit the showers, but by the time we had lined up for retreat our suntans were sweat-soaked and we needed another shower!

Several weekends three of us "shavetails" checked out army Harley Davidson motorcycles and wandered around on the narrow winding back roads at the rear of the camp. Although none of us had a suicidal bent, we scurried around over the roads as if that were the case. Flat-out, these 45 cubic-inch twin-cylinder Harleys could barely make it to eighty-five miles per hour, but that speed on these narrow roads--on which we had not previously traveled--was indeed an adequate challenge.

After eight weeks at Camp Claiborne, a contingent of us were shipped to Camp Shenango, Pennsylvania--near Youngstown, Ohio--and we made a few interesting evening forays there. Lt David Hurlbut and a big Irish lieutenant and I made the rounds.

"Smoky" Hurlbut knew that he had the flair of a natural comic and he worked overtime at it. With a cigarette dangling from his lower lip he squinted through the haze and completely fractured his audience--thus the name "Smoky".

One evening he found himself at a party with twenty-eight male homosexuals and came looking for the big Irish lieutenant and me, to "go clean out the queers". I wanted no part of that, as the sexual mores of others are not my concern. Had we chosen to do battle, we might have been royally stomped, as I heard later that some gay men were of necessity formidable fighters.

My next stop was at Boston's Camp Miles Standish. Harrell Kanzler--Oregon State graduate in my 1943 electrical engineering class--was at MIT taking additional classes, so we attended a few dances together, usually at the Copley Plaza in downtown Boston. He had transferred from the Army Engineers to the Marine Corps and was a handsome stud in his Class-A uniform. He also had been a member of the Oregon State Rifle Team, so a bit of catching up was in order.

He was gung-ho on military discipline, so when two army privates turned away and looked into a store window as we passed by on the sidewalk, he grabbed one by the arm and said "what's the matter soldier--is your arm broken?" They stuttered an apology, then saluted and we walked on.

Captain Hal Kanzler was on Okinawa in WWII and in China after VJ-Day. His 1967 suicide and the death of Jerry--his youngest son--and three friends in a Montana avalanche, is detailed in "The White Death", by McKay Jenkins--condensed in the March 2000 Readers Digest. Really a sad story, for a number of reasons.

I rode herd on a casual company with a number of misfits, who were forever going over the hill (AWOL). I found that if I worked them hard, they were more easily kept in line, so we hiked and ran the obstacle course daily. I made sure that no one beat my time over the course. Subsequent AWOLs were marched around the area with twenty pounds of rocks in their back-pack.

One of the men was born with six toes on each foot. One vestigial toe had been amputated, but he still required extra wide shoes. He had been in camp for over a month, while his shoes were being custom-made and he was still patiently waiting when I waved goodbye to him and the rest of the crew.

I was told that these men would be my charges on my trip to England, but in mid-October, I received a welcomed reprieve--orders to a replacement depot near Birmingham.

Smoky had introduced me to a Boston jeweler friend who made up Dorothy's engagement ring--after I had made a marriage proposal by phone that was accepted--just before leaving for overseas. The ring was delivered to her Tacoma home, soon after I had joined the 146thECB at the Assault Training Center in North Devon, England. Years later, I discovered that Dorothy had been engaged at the time of my proposal, which prompted a "Dear John" letter to some poor soldier!

On 22 October 1943, I boarded a 300' freighter" built in New York's Hog Island Shipyards during WWI. With a full head of steam, she was capable of eleven knots--if no one slowed her down by tooting the whistle! In addition to us four engineer 2nd lieutenants, she carried aviation gasoline, trucks, jeeps, wood poles, copper wire and many other items desperately needed in England.

In 2001, The History Channel stated that our high-octane gasoline improved the performance of the Rolls Royce engines in their Hurricanes and Spitfires--thereby contributing to their successes against the Luftwaffe in the Battle of Britain.

The freight was overseen by a 2nd Lt Transportation Officer who made the trip every five weeks, in order to spend quality time with his widowed mother. The transportation officer and we four engineer lieutenants were the only army men aboard ship.

I have heard of no other four-man army group being sent by ship to the European Theater of Operations--ETO. I have no clue as to why, but there may have been an urgent need for junior engineer officers in England and this was the response of the Camp Miles Standish personnel section.

In retrospect, this may have been better than being cooped up with thousands of others on a big luxury liner. Our food was ample and very good when I felt the urge to eat.

After coming on board, I was unhappy to find that I was not allowed to leave the ship. Navy sentries armed with Thompson sub-machineguns were on the dock, guarding the cargo--which apparently included me!

On the second day aboard, I made a deal with a merchant seaman, borrowed his uniform and identity card and then called Kanzler for night on the town. It went off without a hitch, so we went out again on the following night.

My dance partner the last evening was a very attractive Italian girl, who was doing her bit for the war effort and was aware that I was out of uniform. While momentarily away from the table, a suave navy Lieutenant tried to coax her away from "the little merchant seaman". After a short and animated discussion, I persuaded him to buzz off, but could not get too pushy for fear that my out-of-uniform status might be discovered.

I was singing a melodious sea chantey when Kanzler dropped me off on the dock. My ship had already gotten up steam and it headed out to sea ninety minutes later on 26 October 1943. It likely would have been a court-martial offense, had I been left standing on the dock waving goodbye to my ship!

After arriving in England, a letter from my mother enclosed one from my dance partner, requesting that I send back the pair of silk stockings that she had tucked in my jacket pocket while we were dancing. Silk stockings in that era were pure gold! After removing her shoes, she apparently had slipped off her precious silk stockings, so she wouldn't wear holes in the feet. I rescued the stockings, that had gone unnoticed and they were sent back pronto to Boston--with apologies. My mother was a bit skeptical of my explanation--but 'twas the absolute truth!

Members of the 146th Engineer Combat Battalion--to which I was later assigned--were ferried to England on the Mauretania, a sister ship of the ill-fated Lusitania, that was sunk in 1915 by a German submarine and was a major factor in the US entering "The Great War"

This liner was fast enough to outrun submarines and would have been vulnerable only where a sub just happened to be sitting directly in its path. Our tub was a far cry from this speeding beauty and at eleven knots all-out, was a sitting duck!

We stopped a day in Halifax, Nova Scotia where an ammunition ship explosion in WWI had destroyed a major portion of the city

and had killed many residents. We then left for the UK in a large convoy.

Convoys were protection against the U-Boat Wolf-Packs that were out again in force, in the North Atlantic. By the spring of 1943, U-Boats had trebled their 1940 numbers, but they then had forty-three destroyed in May, so for a short interval Admiral Doenitz halted all offensive operations in order to regroup.

Their losses were the result of several new techniques and tactics being employed by the allies: a new type radar for surface detection; sonar for underwater detection; improved triangulation systems to home-in on their radio signals; escort carriers with fast, hard-to-spot planes; the Mark 24 acoustic torpedoes; and the fact that the British had been deciphering their secret naval codes for an extended period and so knew their orders in real time.

The U-Boat personnel--all of whom were volunteers--had more than a 75% fatality rate throughout WWII. This was greater than any other combat force by either Germany or the Allies. Although U-Boats had sunk about 3,000 merchant ships and over 140 warships, almost 800 of their U-Boats never made their return trip to Germany and 30,000 of their dedicated young volunteer submariners found a cold watery grave.

The second day out of Halifax, our ship developed rudder trouble and we were left alone on a very big ocean while repairs were undertaken. Later, I learned that the skipper felt safer when traveling solo, so this was his standard ploy. He faked trouble until the convoy disappeared, then made his own way across the Atlantic.

We passed within view of the night-lights in St Johns, Newfoundland and then continued on into the far North Atlantic, where we would be out of the normal traffic lanes being harassed by the Wolf-Packs--although we would then be navigating through the fierce North Atlantic winter storms.

The weather was cold and raw and the waves were monstrous--breaking over the bow and passing completely across the deck on successive days. During one poker session, the ship rolled so heavily that the mess hall table and benches broke loose from their moorings and we cascaded across the room into the side wall. No one was seriously injured, but it broke up the game!

The 18-man merchant-seamen and the 28-man navy armed-guards were old hands and aware of the captain's sneaky machinations. They spun many tall tales during our evening poker sessions.

On an earlier trip, a U-boat had fired three torpedoes at this ship. One missed by the bow, one missed astern and the big waves caused the hull to rise up and then drop back down on the rear of the third torpedo--a split-second from disaster! The blow upset the torpedo's guidance mechanism and it porpoised harmlessly away into the distance.

Several of these merchant-seamen had made the Murmansk run with supplies and combat equipment for the USSR, where they had come under a number of attacks by German bombers and submarines. A large number of their convoy had been sunk and many of their cohorts had died in those frigid arctic waters--enough wild stories to generate a heavy duty case of insomnia.

We had "Goon Suits"--rubber-impregnated coveralls, to be slipped over one's clothes, designed to protect us from the frigid waters, should we have to abandon ship. We were able to don the suit and be on deck within two minutes.

It was necessary to jump feet-first into the water and secure the waist belt after the air had been driven out of the lower section of the suit. If one jumped in head-first, air would congregate in the legs and feet making that area more buoyant and impossible to keep one's head above water. Later I learned that these suits were for our mental well-being, as the survival time in these icy waters was only about forty minutes!

One of our foursome--Lt Eldridge--was a sadistic character. When he found that two of his companions had queasy stomachs, he brought in a plate of boiled cabbage. Of course it stunk up the room and caused the two to head for the rail. He asked the Transportation Officer if he would like a nice big slab of greasy pork. This generated another fast trip to the rail--followed by a week in which that officer never made it back out on deck.

One cold day the naval gun crew was practicing with a 5" deck gun and a twin-barrel Bofors 40mm antiaircraft gun. I was allowed to fire a few bursts from the Bofors at a balloon, but I did not garner any laurels! I also found that hitting a flying seagull with a carbine was not a given. From twenty feet, I missed seven or eight times, without even ruffling a feather.

The last few days of the trip were the most stressful, as we were in the area of heavy U-boat activity. We saw none--only several schools of dolphins that porpoised alongside near our bow wave. After nineteen days at sea, we passed in sight of the Irish coast and docked at Cardiff, Wales on 15 November 1943.

We were whisked by train to the 10th Replacement Depot at Lichfield's Whittington Barracks--a neat nineteenth-century

British army camp near Tamworth and twenty miles south of Birmingham--complete with nice old brick buildings and a huge parade field. The rooms were heated by coal burning fireplaces, but since coal was in short supply, the rooms were always cold and damp.

Colonel James Kilian--the camp commander--was well known as a tough taskmaster and his court-martial threats kept everyone in line. AWOLs and deserters were dealt with very harshly. After VE-Day, nine of his guards were court-martialed and later Colonel Kilian was himself court-martialed and reprimanded for allowing his guards to mistreat prisoners. Although most of the prisoners would not have been classified as choir boys, some surely did not deserve the treatment that they received.

The book "LICHFIELD"--by author Jack Gieck, from the University of Akron Press--spelled out the story of the court-martials. This would be interesting to anyone who had spent any time at the "10th Repple Depple".

A few miles away, the town of Tamworth offered access to the picturesque old British pubs and to the evening dances. Finding one's way about at night was complicated by the dense chilling fogs and by the mandatory complete blackouts. On several occasions I ventured right into a private home, while searching for a pub! I hastily apologized, but the British were sympathetic and laughed along with me at my embarrassment.

While learning the non-decimal English money at our poker sessions, we picked up a few ribald English drinking songs. These two are as remembered after almost seven decades:

ROLL ME OVER IN THE CLOVER

This is number one and the fun has just begun

Roll me over lay me down and do it again

Roll me over in the clover

Roll me over lay me down and do it again

Followed by more verses, most of which were not meant for mixed company!

I'VE GOT SIXPENCE

I've got six pence, jolly jolly sixpence, I've got six pence to last me all me life. I've got tuppence to spend, and tuppence to lend, and tuppence to send home to me wife--poor wife.

CHORUS

No cares have I to gree-eeve me
No pretty little maids to de-cee-eeve me
I'm happy as a king, be-lee-eeve me
As we go rolling, rolling home
Rolling home, rolling home, **rolling home**, rolling home
By the light of the silvery moo-oo-oo-oon
Happy as the day when we line up for our pay
As we go rolling, rolling home.

As the verses continue, the pences diminishes from six to four, four to two and finally, two to zero. The wife's tuppence is dropped first, then the tuppence to lend and lastly the tuppence to spend. The last verse is: I've got no pence, jolly jolly no pence, I've got no pence to last me all me life. I've got no pence to spend, and no pence to lend, and no pence to send home to me wife--poor wife.

(Author--John B "Barry" Dwyer mentioned that his father--a WWII Army Air Corps veteran--often sang this song as they drove out to their favorite fishing hole)

My recollection of the English coins follows:
Copper one-half Pence--hapenny
Copper one pence
Copper two pence--tuppence
Silver three pence--trepenney bit, a tiny coin
Silver six pence--about the size of our dime
Silver shilling--slightly smaller than our quarter
Silver half-Crown--slightly larger than our quarter
Silver crown--about the size of our fifty cent piece
There may have been other coins which I have forgotten.

After a several weeks of poker-playing inactivity, three of us 2nd lieutenants--William Anderson--from the University of Tennessee; Eskell F Roberts--from Chickasha, Oklahoma; and I were sent to the 146th Engineer Combat Battalion at the Assault Training Center in North Devon, England.

Having been commissioned the longest--I had attended school for a year after being commissioned--I was made the Officer in Charge (OIC) and carried our orders. Eskell Roberts kept this in perspective with typical Roberts prose: "Rank among second lieutenants is like virginity in a whorehouse"! Does this sound like an old First Sergeant--which Roberts had been before he was commissioned as a Ninety Day Wonder, upon graduating from Officer's Candidate School?

Anderson went to A-Company as a platoon leader; Roberts to C-Company as the administrative officer; and I to headquarters. Per Robert's version--he sat quietly while Captain Vincent Wall gave a detailed explanation as to what was expected of him. When Captain Wall sat back, quite satisfied with his stellar performance, Roberts asked if he was through. Although quite surprised by that question from a junior officer, Captain Wall said that he had finished.

Roberts then said slowly "captain, when you give me a job"--a pause and then a roar--"STAY AWAY AND DON'T FUCK WITH ME"! Translation--when you give me a job, don't try to micromanage. Captain Wall wisely complied and C-Company soon had the best mess, best motor pool and best small arms training program to be found in any of the line-companies--courtesy of 2nd Lieutenant Eskell Roberts!

My assignments were reconnaissance officer, communications officer, assistant mess officer--and much later, bomb disposal officer. These jobs were mine, because I just happened to be available when they surfaced.

That I had been the Battalion Communications Officer, surely was the reason I was given an assignment twenty-two months later that was beyond the scope of my electrical engineering background. The Supreme Headquarters called upon someone--me--to correct a problem that had baffled their real communications experts. Their "TOP SECRET" Cable to Washington, DC was failing twice daily for no apparent reason. 'Twas an interesting story about a fortuitous fix that is spelled out on pages 170-174.

Seven officers had been housed in a Nissen hut behind the clubhouse. Nissen huts are similar in design, but slightly smaller than the American Quonset huts. Lt Ray Lanterman--who later became a top-level graphic designer and artist in Honolulu--was the idea man for the "Seven Georges", as he had christened the group in their hut before my arrival. Others were Art Hill, Frank Remes, Wm Trescher, Wm Langhurst, Al Sarrach and John Caldwell. All of the group called each other "George" whenever they met and were not engaged in official business and this practice continued, even though I had brought the total up to eight.

The ATC was designed by Colonel Paul Thompson--a West Point Engineer--who had spent some time in Germany during the 1930s, observing their war machines and military. The Germans were interested in showing off their expertise to an American, so he gained a wealth of information which he later found useful in construction of the Assault Training Center.

Located in North Devon on the shore of the Bristol Channel, it included: Woolacombe--the location of the ATC Headquarters; Saunton Sands Golf Club--a great old golf course where the 146thECB headquarters was located; Braunton Burrows; and Baggy Point. Baggy Point is shown on page 46 in the October 1995 National Geographic.

We made an utter mess of a great fifty-year-old golf course while building concrete defensive structures, as sand dunes were converted into make-believe enemy defenses. Our battalion began building fortifications at the ATC in November 1943, just after arriving from Camp Swift, Texas.

Simulated defensive positions were built to be attacked and overrun by the various assault units as they trained for the upcoming Normandy invasion. We then rebuilt these strong points after they had been reduced to a pile of rubble by bombs, artillery, mortars, flamethrowers, and explosive charges during the training of each successive assault unit.

There were two strong points--one to be attacked and one to be rebuilt after being destroyed. They consisted of concrete barrier walls; concrete pillboxes, positioned for mutual fire support; concrete dragon's teeth; anti-tank ditches; barbed-wire and concertina-wire; emplacements for machine guns, mortars and artillery; anti-tank (AT) and antipersonnel (AP) minefields.

The ATC provided realistic training to prepare the infantry, and their supporting assault troops, for all known aspects of

the Normandy invasion. The training was rugged and a number of men were killed, while attacking fortified positions with live ammunition in conventional weapons, explosives and airpower. I saw two wounded infantrymen--both of whom later died--caused by a faulty 81mm mortar round that exploded in the tube.

The attacking forces used smoke to mask their advance--at which time, machine guns and other small arms, mortar, artillery and airpower softened up the fortifications--before demolition parties moved in and attacked with flame-throwers, bangalore-torpedoes and satchel-charges.

I am unaware of any new weapons being unleashed at that time, but improving the skill and coordination with which existing weapons were employed, brought great dividends later. This rigorous training saved many lives on the continent, thus justifying the existence and expense of the ATC.

In January 1944, I had a 48 hour pass to London--then the largest city in the world. A two day trip was just enough time to scratch the surface, as our only transportation was taxi, the underground, and shoe-leather.

Food in London was in short supply, but the restaurants stretched out their menus with potatoes, cabbage, a variety of other vegetables and plenty of orange marmalade. I thought that they were quite innovative in furnishing solid meals under such constraints. While some of the offerings were not earth shattering, they were more than adequate.

I was often embarrassed by American soldiers, who were less than complimentary about British small cars, their food and warm flat beer. Some Americans were downright insulting and The British, not to be outdone, responded "The bloody Americans are overpaid, oversexed and over here"! (Bloody is a derogatory British swear-word.) Still, most of us got along well with the British, and especially so with the female version thereof--many of whom were quite trim, having been on reduced rations for an extended period.

Grosvenor House was a fine old building in the heart of London, containing a posh restaurant--a favorite haunt of the high-level military brass of many nations. I dined there alone one evening, very conscious of the fine swath I was cutting in my Class-A uniform.

When finished, and being used to mess-hall dining, I stood up straight and tall and sauntered with great aplomb towards the door. I was about to make my grand exit when a proper British waiter--from under his brows--reminded me that I had not paid my

bill. Red of face, I slunk back, hoping that nobody had noticed, paid the charge and slithered out into the night.

Other than food, two vivid remembrances of London remain:
1--was their utter commitment to free speech. Some really wild-eyed emoters--from their soapboxes in Hyde Park--rambled on to small and medium sized gatherings. Topics were anything that they perceived to be wrong with their government--unusual I thought during wartime!

2--was their low-key style of advertising--in contrast to that in the United States, which even then promised Nirvana in a package. Billboard advertisements impressed on my memory decades later, implored "Drink Bovril, It's Good" and "Guinness is good for you". I would now welcome such low-key advertising!

At a dance, I met Marie Walters, a pretty redhead of Irish extraction, with the accompanying Irish wit and a great dancer. Her father owned a store at 87 Leonard Street, London E.C.2.. On a later trip I stayed in the apartment of her American aunt who had been an entertainer with the Americans forces in WWI and had married an English gentleman. Marie showed me the places of interest and we had great times--at dances and sight-seeing.

I was invited to her summer home in Scotland, as soon as the weather had improved enough to ride to the hounds. A tentative date was set for May when the weather would be favorable and I could get my next 48 hour pass. The invasion got in the way and although I wrote occasionally, I never saw her again. Just as well--I'm a lousy horseman. I stopped writing after returning home, where a month later I married Dorothy Wickens.

Several of us made trips to the midlands, which included guided tours of Shakespeare's home at Stratford-on-Avon and Kenilworth Castle. Kenilworth was an ivy-covered ruin of what had once been a magnificent castle with great rooms, beautiful arched windows and a large surrounding field--possibly for jousting? Someone suggested that it may have been King Arthur's castle.

I was even more impressed with some of the old thatch-roofed houses nearby. One home built in the mid-1500s was still in reasonably good condition. The doorway was framed with heavy oak timbers that still appeared to be sound. However, the door lintel was so low--slightly over five feet--that we had to duck down to enter. The guide mentioned that the people at that time were much shorter than at present--possibly due to disease, bad genes and a less than ideal diet.

On my second visit to London in mid-March 1944, I wandered around the city with 1st Lieutenant Joe Gregory from C-Company, who was well acquainted there--and especially with several Red Cross ladies. He was a big handsome fellow from Elko, Nevada--a fun guy and a great companion--who was later killed on D-Day.

There was much devastation in London, even though most of the bomb damage had taken place several years previously. St Paul's Cathedral, Parliament, Buckingham Palace, Towers of London and other well-known landmarks showed only modest damage, but no structures remained in many areas--only smooth ground where once they had existed. Air-raid sirens wailed several times while there, but the bombings were near the dock area and were never dangerously close--but close enough!

On this trip while walking across a bridge over the River Thames near the Parliament buildings, a Hurricane fighter plane roared over the center of the bridge immediately after I had passed. He came over so low that his propeller cut the field telephone wire festooned down between the lamp standards and the chopped-off telephone wire flopped down near my feet. His propeller had cleared the stone side-rail by no more than a few feet, as the lamp standards were only twelve feet high and the telephone wires sagged down well below that level in between!

Flying over or under bridges was not unusual for these young fighter pilots to show off their flying skills. Many--who were barely out of their teens--were seasoned pilots and the true heroes of WWII. They gave Britain breathing room in 1940, when the Nazis tried to bomb them into submission prior to their planned "Operation Sea Lion"--the invasion of Great Britain.

Without their efforts in extending Hitler's timetable, there may have been no Normandy invasion as Germany may very well have defeated the Soviet Union in 1941. Also, had not a majority of the German army been in the USSR on 06 June 1944, the Normandy invasion may not have been attempted then--and if attempted, may have failed.

In a 1992 reunion of the 146st Engineers in Lake Havasu, Arizona I again saw the London Bridge. It had been dismantled and each stone carefully labeled, before being shipped over and reassembled on dry land. A water channel under the bridge was then carved out by heavy earthmoving equipment, thus making an island with its linking bridge. It appeared to be the same bridge, but I could not be certain.

Two elderly British couples--who were touring the US--said "This was the only Thames Bridge with that style of architecture and lamp standards". They also said that portions of the lamp

standards were cast from the bronze cannons that were captured from Napoleon's armies at Waterloo.

It was unbelievable that the bridge could have been moved and rebuilt without losing any of its original landmark qualities. An old photo demonstrates that the Lake Havasu Bridge and the London Bridge are indeed one and the same!

While touring the Towers of London and meeting the guards--known as "Beefeaters"--I was disappointed to find that the crown jewels had been moved to safer quarters in case of a Nazi invasion. On my first return trip in 1987, Dorothy and I were able to view them--they were most impressive!

Touring the slightly bomb-damaged St Paul's Cathedral--designed by Christopher Wren--I found that the monks were not as pious as generally depicted. A series of three-dimensional figures carved centuries ago on the thick wooden bottoms of four adjacent seats, showed a monkey urinating in a jug. These were very explicit carvings--difficult to believe that expressions such as this would be allowed in such a beautiful cathedral!

The guide then positioned himself on the opposite side of the dome to demonstrate the unusual acoustics. We could hear his whispers from 75 feet away.

When training of all of the assault troops destined to storm the Normandy beaches had been completed by mid-April 1944--and so the mission of the Assault Training Center had come to an end--our battalion moved to southern England to wait out the invasion, supposedly to go to France at some later date when and where needed. We were bivouacked near a British army training camp and we trained and exercised nearby.

One day my men--with my tacit approval--went on a rampage through their bayonet training course. The dummies consisted of gunnysacks stuffed with straw and stabilized at the top and bottom with ropes. My men ran through the course, bayoneting with great abandon until an aggrieved British sergeant roared in and ate me out royally for being in charge of a bunch of bloody, rowdy, Americans who were messing up his training area. His chewing was very direct and was professionally done with rich inimitable British verbiage. I took his tirade and chose not to cross verbal swords with him, as it was obvious that I would have come off a poor second!

PREPARATION for NORMANDY INVASION

1V

We had expected to stay in Cornwall for a short period after D-Day and then be given a routine assignment somewhere in France. This plan was suddenly changed when Leonard T Gerow--the V-Corps commanding general, who was to oversee our landing on Omaha Beach--became concerned that 290 men in 21 Naval Combat Demolition Units (NCDUs)--who had been programmed for the beach obstacle demolition mission--were too few for the task.

In early 1944, workers under General Erwin Rommel's direction had begun emplacing additional anti-boat obstacles on a number of French beaches. This included our proposed landing in the Calvados area of Normandy and they were now appearing in ever greater numbers, as was discovered on the low-level aerial photos provided by the 34th Photo Reconnaissance Squadron.

Twenty-one NCDUs--each bolstered by five army engineers--had planned to use C-2 explosives to blast 21 lanes through the obstacles on Omaha Beach. Each NCDU averaged seven navy men and their OIC, plus the five attached combat engineers. They planned to set their demolition charges while down in the water, so as to gain some protection from enemy fire. Underwater breathing tanks were used in swimming pools and then in the ocean, as the NCDUs trained the attached engineers to be substitute NCDUs.

The revised plans called for demolitioners from the 146th and 299th Engineer Combat Battalions to form twenty-four, 28-man Gap Assault Teams (sixteen Primary and eight Support GATs) to which the NCDUs would now be attached. This combined force was to blow sixteen fifty-yard-gaps through the wood and steel obstacles, located below the high tide line.

It was important that sufficient lanes be quickly cleared through the obstacles, so that the infantry--as well as the 5th and 6th Engineer Special Brigades (ESBs)--could move inland in a timely manner. The 5th ESB was to land on the eastern sector of Omaha and the 6th ESB on the western sector.

Performance of these brigades was crucial to our success. In addition to assisting the demolition teams in clearing the beach obstacles, they were to remove the various barriers to tanks and wheeled vehicles and open up the routes inland.

An immediate concern for the brigades was the natural sand seawall and the thick layer of "shingle"--the name given to semi-flat rocks that had washed up into a narrow strip above the high tide line--that was an effective barrier for wheeled vehicles. Beyond were tank traps, minefields, machine-gun emplacements and concrete barrier walls, all of which had to be neutralized.

A further task was the need to quickly move ammunition and supplies to the stockpile areas on shore. This would be partially accomplished by DUKWs--the army's seagoing trucks.

Colonel Paul Thompson--the former Assault Training Center commander--was made commander of the 6th ESB, and he and his staff set about planning for these two brigades. To accomplish their assigned tasks, each brigade was allotted three Engineer Combat Battalions, augmented with heavy equipment well over and above their normal T/O & E--plus a great variety of attached troops. The troop assignments for these two brigades were completed by early April 1944.

Additionally, two Naval Beach Battalions (NBB) were to come ashore at 0730--the 6th on the eastern sector and the 7th on the western sector. These NBB consisted of more than 600 officers and men--and would be the priceless asset on D-Day morning, as they directed naval gunfire and acted as traffic cops for the main landings that were to follow.

Ensign Joe Vaghi--whose Platoon of the 6th NBB, landed at 0735 on Easy Red Beach, on the eastern sector of Omaha Beach and just east of my Gap Assault Team #8's landing site--was one of six navy beach masters. His platoon provided the communication between his beach and the ships at sea.

He sent me a copy of his "BIGOT" map, with notations showing the planned landing sites of the sixteen primary Gap Assault Teams, by noting their GAT number and the name of their attached NCDU's Officer. "Bigot" is a level of security that is above "Top Secret" and as such is shown to only the favored few!

A copy of our original "BIGOT" map--which is enclosed--was the one issued to our battalion S-3, prior to D-Day. It shows detailed information on tidal currents, the terrain features--both on the beach and inland--and it located the fortified house near the landing site of my GAT#8, near the mouth of les Moulins Draw. It was from that fortified house that a machine gunner gave us trouble before being silenced by our tank-dozer's 75mm gun.

6th ENGINEER SPECIAL BRIGADE UNITS--on western sector of Omaha
(this information from English author Richard T Bass)

Brigade Headquarters and Headquarters Company

147th Engineer Combat Battalion

149th Engineer Combat Battalion

203rd Engineer Combat Battalion

538th Quartermaster Service Battalion

967th Quartermaster Service Company

3204th Quartermaster Service Company

3205th Quartermaster Service Company

95th Quartermaster Battalion

88th Quartermaster Railhead Company

555th Quartermaster Railhead Company

3820th Gas Supply Company

280th Quartermaster Battalion

460th Amphibious Truck Company

461st Amphibious Truck Company

463rd Amphibious Truck Company

74th Ordnance Battalion

618th Ordnance Ammunition Company

3565th Ordnance MAM Company

60th Medical Battalion

453rd Medical Collection Company

499th Medical Collection Company

500th Medical Collection Company

634th Clearing Company

214th Military Police Company
31st Chemical Decontamination Company
293rd Joint Assault Signal Company

5th ENGINEER SPECIAL BRIGADE UNITS--on eastern sector of Omaha
(this information from English author Richard T Bass)

Brigade Headquarters and Headquarters Company
37th Engineer Combat Battalion
336th Engineer Combat Battalion
348th Engineer Combat Battalion

533rd Quartermaster Service Battalion
4141st Quartermaster Service Company
4142nd Quartermaster Service Company
4143rd Quartermaster Service Company

619th Quartermaster Battalion
97th Quartermaster Railhead Company
559th Quartermaster Railhead Company
Company A, 203th Gas Supply Battalion

131st Quartermaster Mobile Battalion
453rd Amphibious Truck Company
458th Amphibious Truck Company
459th Amphibious Truck Company

251st Ordnance Battalion
616th Ordnance Ammunition Company
3466th Ordnance Medium Auto Maint Company

61st Medical Battalion
391st Medical Collecting Company
392nd Medical Collecting Company
393rd Medical Collecting Company
643rd Clearing Company

210th Military Police Company
30th Chemical Decontamination Company
294th Joint Assault Signal Company

In mid-April, the three 146thECB line companies returned to the Assault Training Center for obstacle demolition training--to be taught by the NCDUs--and to be joined there by the 299thECB, which had arrived on 18 April.

Major Milton A Jewett's orders upon leaving Fort Pierce, Florida--by plane ahead of his unit--indicated that the 299thECB would be used to train others for the demolition mission. Upon arriving at the ATC, he discovered that his battalion was to be in the first assault wave on Omaha!

This illustrates the changes that took place very late in the planning, required by the sudden increase in the number of obstacles. The 299thECB had just completed an extensive demolition training program under navy supervision at Fort Pierce, and so was a prime prospect for this mission.

The 146thECB was chosen because of its sterling performance record at the Assault Training Center, commanded by Colonel Paul Thompson--the new 6thESB commander--and certainly it was he who selected the 146thECB. Further, these battalions were picked because they had no assignments until after D-Day. Both were immediately available for this all-important mission!

On 27 April 1944, command of the Gap Assault Teams passed from 1st Army to General Gerow's V-Corps. **V-Corps Provisional Engineer Group** was organized on 30 April 1944 to take over command from the navy--as this would now be a "dry-shod operation on the open sand", as compared to the "hunkered, down in the water" demolition mission planned by the NCDUs, and so would now be an army function

Because the two battalions lacked the numbers to fully man the demolition teams, about 150 volunteers from the Second Infantry Division were attached to these two battalions. About half of the men were combat engineers and the remainder must have been infantry. GAT#8 had six Second Division men--most of whom had previous explosives experience.

Lt Ray Lanterman's GAT#9 and Lt Joe Gregory's GAT#10 were from C-Company 146thECB, but they were attached to the 299thECB, because their B-Co was scheduled to land on Utah Beach, 20 miles to the northwest--thus leaving them short-handed.

Initially Max Norris was the only GAT#8 medic, but Al Davis, from the 53rd Medical Battalion, was added a few weeks prior to

D-Day. This alerted us to the fact that the planners had perceived our mission to be other than a cake walk!

H-hour would be at 0430 hours sun time--0630 by our watches, as we were operating on British Double Daylight Savings Time. The sixteen primary Gap Assault Teams were scheduled to land at 0633--just three minutes after our infantry covering force.

The GATs were to land at low incoming tide, 150 yards seaward of the outer band of obstacles and 400 yards from the high tide line. Each team would then blast a 50 yard gap through the wood and steel obstacles and mark the gap so that landing craft could pass unhindered through the cleared lanes.

The four 146thECB Support GATs were to come ashore eight minutes later--when and where needed as directed by Lt Colonel Carl Isley. However, on D-Day they debarked from the Princess Maude about an hour late and landed in the 299thECB's eastern sector--several miles east of their planned landing sites on the western sector.

On the western sector, eight M-4 Sherman tank-dozers--one per each primary GAT--were to land at 0627. Companies A, G, F and E of the 116th Infantry, 29th Division, would land 720 men at 0630 (H-Hour) as the initial assault force and to be cover for the eight Primary GATs, to land three minutes later.

When the 50 yard gaps had been cleared--planned to be done within 27 minutes--a second equivalent force from the 116th Infantry Regiment would land on our western sector.

Some of the tanks--firing from the beach to provide covering fire, would be Duplex Drive Shermans--a special British design. They had collapsible canvas side-walls and two propellers, and were to operate like a slow boat on their trip from their LCTs to the beach. That plan went somewhat awry on 06 June.

Each Primary GAT had an assigned area with its attendant obstacles. In early May, aerial photos by F-5s flying just above the beach, showed the obstacles and German work parties with great clarity. F-5s are P-38s, equipped with cameras, but without machine guns.

This and other intelligence allowed a three-dimensional, scale-model sand-table of the beach to be built, showing the beach with the obstacles, the hills above and the German strong-points in exquisite detail.

Although we did not know our destination in Normandy, this would approximate the view as seen from our landing craft, as we made our way shoreward. The obstacles were wood posts and wood ramps--many of which had Tellermines attached; steel Element-C (Belgian gates); and heavy, angle-iron steel hedgehogs.

The Omaha Beach "BIGOT" map, dated 12 May 1944, located the obstacles, and showed Belgian Gates seaward of les Moulins Draw. There were none there, nor at the Easy-Green/Dog-Red border--200 yards further west--the landing site of Lt Ben Bartholomew's GAT#7.

A few weeks prior to D-Day, the **V-Corps Provisional Engineer Group** was attached to the 1st Infantry Division. They were the old hands--with battle experience in Africa and Sicily--and all of the orders for the attached troops would now be channeled through their headquarters.

TOP SECRET NEPTUNE "BIGOT" orders of the 1st Infantry Division were dated 22 May 1944 and TOP SECRET NEPTUNE "BIGOT" orders of 146thECB were dated 24 May. The orders were not declassified until decades later, so this may excuse the failure of many authors to recognize the existence of the Army Gap Assault Teams!

With the addition of sixteen M-4 tankdozers--that had been scrounged up shortly before D-Day by General Kean--the **V-Corps Provisional Engineer Group** was renamed **Special Engineer Task Force (SETF)**.

One tank-dozer was provided for each of the 16 Primary GATs to furnish fire support and to have a dozer blade available to physically demolish or move any remaining obstacles. Only three dozers had initially been available--see the anguished letters between General Leonard Gerow and General Bill Kean.....Note #4

What follows are the nuts and bolts of a difficult mission, that was patched together very late by a group of dedicated planners who did their utmost to provide workable solutions. This must have been a gut-wrenching task, since time constraints dictated that more deadly options must be accepted--the more reasonable ones had been trumped by the late planning.

There must have been some card shuffling at the planning headquarters in an attempt to clarify the intangibles bound to surface, because the detailed planning had begun far too late! This may excuse their optimistic time-charts---as the Primary GATs were allotted just 27 minutes for their demolition mission. This allowed no time for slip-ups or for late landings **and this was no training exercise!**

The resulting demolition plan could have been improved had there been sufficient time to train with Apex Boats and Ready Foxes--remote explosive systems--that might have been used, had they arrived from the US in time to allow us to become familiar with them. They would have been employed near the high tide line, thus requiring a change in the invasion date to conform to

the tides. However, the simple solutions are often beset with the least tactical problems, so the Omaha Beach landing was successful--but just barely!

Having left the ATC only weeks before, the 146th returned to the ATC and formed ten Primary GATs and four Support GATs-- each of which included twenty-five engineers, two medics and their OIC. On the eastern sector of Omaha, 299th furnished six GATs with the same makeup. Primary GATs #9 & #10 from the 146th were attached to the 299th, because their B-Company was to be on Utah Beach--twenty miles north. Each battalion would then have eight Primary and four Support Gap Assault Teams on their beach sector.

Even though the NCDUs were the seasoned old hands and the army engineer Gap Assault Teams were the new trainees, the NCDUs were attached to the army GATs when the training had been completed. Demolition would now be done out in full view of the enemy, instead of down in the water, for which the NCDU Teams had trained.

Command of the obstacle demolition mission passed from navy control to the army at this late date. These orders were not declassified until decades later, long after many authors had passed on the erroneous information, implying that the NCDUs were in charge of the mission and under direct navy command, with no mention of the army Gap assault Teams to which they were attached! This error should be revised by any serious historian!

In order to have the maximum time to get troops ashore, we would debark at dawn on low incoming tide and seaward of the outer band of obstacles. This dictated that the earliest dates meeting these requirements would be 05, 06 or 07 June 1944.

SUMMARIZING:

After General Gerow took over planning, it became obvious that clearing an adequate number of 50-yard lanes through the greatly expanded numbers of beach obstacles--and done within the allotted time--was beyond the capability of the 290 navy/army men in the 21 NCDUs. Sixteen Primary GATs and eight Support GATs were then formed from the 146thECB and the 299thECB and named the **V-Corps Provisional Engineer Group**.

Demolition training--under navy tutelage--was given and when training was complete, the navy/army NCDU Teams were attached to the larger army GATs to simplify the chain of command, which had suddenly become an army mission when the demolition was moved from "in the water" to "out on the open sand".

With the addition of sixteen tankdozers--the Gap Assault Teams and their attached NCDUs were renamed **Special Engineer Task Force (SETF)**.

Army vs Navy personnel in Gap Assault Teams and NCDUs:

16 Primary GATs and 8 Support GATs	26/team =	624
Army Engineers attached to the 21 NCDUs	5/team + 2 =	107
Engrs in lieu of NCDUs in 3 Support GATs w/o NCDUs	7/team =	21
Total Army Personnel, excluding the 48 medics	=	<u>752</u>
NCDU PERSONNEL ON OMAHA BEACH		
Navy Personnel in 21 NCDUs--per Ft Pierce records	=	<u>183</u>
Total <u>NCDU</u> Personnel (183 navy & 107 army)	=	<u>290</u>

From the above, it is easy to see that the total army personnel exceeds the navy NCDU personnel by over a four to one margin! The above facts were apparently unknown to many authors who continue to give the navy and their NCDUs total credit for this mission. Understandable--but graveling to us old army geezers, who were there!

Following is an excerpt from the original TOP SECRET NEPTUNE BIGOT orders of the 1st Infantry Division, that was issued to the 146ECB in May 1944:

PAGE 2 (of 4 pages)

3.
 - f. Twenty-one (21) Navy Combat Demolition Unit teams will have ten (10) teams attached to Combat Team 16 and eleven (11) teams attached to Combat Team 116.

They will revert to Navy control upon completion of the assault.

1st DIVISION COMBAT TEAM 16 WAS ON THE 299th SECTOR--EAST END.
29th DIVISION COMBAT TEAM 116 WAS ON THE 146th SECTOR--WEST END.
For a complete listing.....see Note 2

During our training, we heard the story of Exercise Tiger at Slapton Sands on the southern coast of England. On 27-28 April a large scale pre-invasion landing exercise had been undertaken to work out the logistics of the seaborne landing in Normandy.

It was designed to test the feasibility of duplex-drive (DD) tanks, which were to move like slow boats, after debarking from their LCTs (Landing Craft Tanks); in the use of rocket-firing LCT-Rs to augment the bombardment of the beach defenses; and to solve the problems that would inevitably surface in a large-scale contested landing on a hostile shore.

Several Landing Ship Tanks (LSTs) were sunk by German torpedo boats and almost 800 sailors and soldiers were drowned. In addition, a quantity of equipment destined for the invasion--including DD tanks, jeeps, trucks, artillery, and much support equipment--was lost. However the critical losses were the trained combat personnel and the LSTs.

While this debacle was not officially announced until long after D-Day and so was supposed to be a big secret, the news quickly made the rounds at the ATC--certainly not a morale booster for those of us who were waiting in the wings for our expedition on Omaha.

Our GATs took twice-daily salt water baths as we made practice landings from our 50' Landing Craft Mechanized (LCM). Our clothes are shown drying on the fence in several of the team photos.

We carried explosives and all of our equipment, in order to work out the kinks that might occur on Omaha. Obstacles similar to those showing up on the aerial photos on Omaha, were attacked twice daily and although we used smaller explosive charges on the lighter gauge steel, it was still a dangerous exercise. Steel was in short supply, so we made several dry-runs before destroying the obstacles.

During our training, an infantryman--who was also undergoing assault training--was killed by flying steel fragments while taking a nap in the sand dunes 100 yards above our demolition area. He had slipped within the restricted zone without our knowledge and we blew the obstacles per plan.

This was a sobering demonstration on the lethality of explosive-driven steel fragments that may have colored my response on D-Day, when an infantry LCVF landed within our demolition zone, just as we were ready to detonate our charges on the steel hedgehogs, causing an unfortunate delay!

GAT#7 and GAT#8 were formed from the 3rd platoon, B-Co, 146ECB--which had previously been Lt Ben Bartholomew's platoon. Ben still felt responsible for all of these men, but I believed that GAT#8 was mine! I wonder why I didn't get smashed in the mouth on several occasions, as I was more than a bit lippy.

One day I made a smart remark to Lt Eskell Roberts that ticked him off and he came charging after me like a raging bull. I waited until he was almost upon me and then stepped back and stuck out my foot, tripping him. He landed on his belly and made like a bulldozer as he plowed a neat furrow in the sand.

He jumped up angry and sputtering and chased me around among the sand dunes until he was winded and finally gave up. I was

not about to let him get his ham-like hands on me until he had cooled off--which he eventually did.

Roberts had been a 1st Sergeant before becoming an officer and was superbly qualified and well respected as a combat leader. He had been the instructor in the C-Company small arms training program, before he was given command of a boat team.

He was also a wild Irishman, who weighed in at 210 pounds on a 5'-8" frame and was the foulest talking human being I had ever encountered. However, we usually got along well and I often picked his brain where I lacked his experience and expertise.

Our Primary GATs were to clear eight 50 yard paths through the obstacles for the Battalion Landing Teams of the 116th Infantry, 29th Infantry Division and our four support GATs were to be directed to their landing sites by the radio in Lt Colonel Isley's command boat. Navy records stated that four reserve teams were to back up our four support GATs, but as far as I can determine, they did not exist on D-Day!

Lt Colonel Isley's command boat was also to carry explosives which were to be used to blow an extra path through the obstacles when our Support GATs landed late and off target. The 299ECB had a similar plan on Omaha's eastern sector, with their primary Gap Assault Teams #11 through #16; four support Teams E, F, G, & H; Lt Colonel Jewett's command boat; Primary GAT#9 and GAT#10, that were attached from the 146ECB. They were to clear eight 50 yard gaps for the Battalion Landing Teams of the 16th Infantry, 1st Infantry Division.

Navy Combat Demolition Units were an early precursor of the present-day navy SEALs. Ensign Harold P Blean's NCDU #137 consisted of six seamen and five NCDU-trained engineers and it was attached to GAT#8. All 16 Primary Gap Assault Teams had an NCDU team attached, but support Teams #C on the 146ECB's western sector and Teams #E, and #G on the 299ECB's eastern sector did not--as 21 NCDUs were available for attachments to the 24 GATs.

I rediscovered Ensign Harold P Blean--erroneously shown as Blein in the Fort Pierce navy records--upon reading page 79 of "The Frogmen of WWII" by Chet Cunningham.

Hal Blean sent the following: "I was born in Muscatine, Iowa a small town on the Mississippi. After receiving a degree in architectural engineering at Iowa State, I worked for the Corps of Engineers in Alaska, until given a commission in the Seabees. After three months of basic training at Camp Perry, Virginia, I transferred to the NCDUs--when given the chance to go into something more exciting than spending years on a Pacific Island."

"Upon completion of training, I was sent to Fort Pierce, Florida for intensive training and in assembling my NCDU #137. Of the five men shown in the Fort Pierce NCDU photo, only three went ashore on Omaha--Buffington, Patrick, and Brown. White and Luttrell were hospitalized just prior to D-Day and Crossley was never in NCDU #137."

"In addition to the five army engineers who bolstered our numbers in England, three navy men were added--Johnson, Heister, and Redeye. All three had been in the brig and were given a chance to redeem themselves on this mission, which they did."

"The physical conditioning at Fort Pierce was intense. We could run the legs off of the army men assigned to us, and then just keep on running. I was surprised at how soft a year in the army had made men who came from farms and construction work. Much of the technical training was preparing us to come shoreward in the dark, set the charges on obstacles in the surf, and escape out to sea."

"This was a far cry from the actual mission, when we came in on low tide in the early daylight hours and set the charges out in the open. We spent a few months in Florida doing survey work on demolition of beach obstacles, where I tried to interest the navy in thermite cutting of steel obstacles--this was not successful because the navy was obsessed with explosives."

"Our NCDU was flown to England a few months before the invasion and had my NCDU augmented by the numbers as listed above. Cannot tell you much about the other NCDU teams, but believe that we all were disappointed in the almost impossible assignment that we were given on Omaha, and how little we were able to accomplish. After watching the following landing craft get sunk by obstacles and blown up by mines, mortars, and 88s; and the men mowed down by machine gun fire, I was sure that it was the overwhelming numbers of men and equipment that saved the day--surely not the smarts of the high command!"

"After making camp on the beach for a time after D-Day and doing odd jobs, we were returned to England. The units were overloaded with Ensigns, and an opportunity to go to University of Michigan for schooling in naval architecture showed up. I now had a pregnant wife, and nine months in the states sounded good to me. Upon completing the course, I was sent to the Bremerton Navy Yard, where I remained until war's end."

"I then went to work for a power plant designer doing the envelopes around the equipment, and eventually had my own office--sometimes with partners."

"Managed a decent living until I found that I could do better working for General Contractors--so worked for several in the building of the Trident Submarine Base at Bangor, Washington. I retired and moved to East Wenatchee, WA in 1984. Have found the good life, with lots to do, including involvement in bike trails, annexations, moving the courthouse--you name it!"

Our motor pool then began the task of waterproofing our tanks, trucks, jeeps and weasels by attaching snorkels to the air intakes. This allowed vehicles to waddle ashore even when completely submerged.

Any seam where water might leak into the motor or gear train was sealed with asbestos grease--a sticky heavy-bodied grease that stuck to everything. Its waterproofing capability and adhesive power was also used to seal the fuse-lighters and blasting caps on the primacord detonators.

The day before we left for the marshaling area, Melvin Vest was killed when a 1/4 pound block of TNT exploded in his hand. We had been lighting five second fuses by slipping lighted matches into the split end of the fuse--as I had done as a civilian. Sergeant Grosvenor suggested using a fuse lighter instead of a match, without asking me or taking precautions that a spark could not flash down the outside of the short fuse and directly in the blasting cap. This is what happened, but I was at fault because I had failed to exercise proper supervision of an NCO!

Sergeants Roy Arnn, Bill Grosvenor, Earl Holbert and I bundled up Vest and hustled him by truck to a nearby hospital, but he died of shock four hours later from extensive damage to his hands, legs, and groin. This was a gut wrenching disaster and the fact that Melvin Vest was such a neat guitar-playing soldier and so well liked by everyone, made it even more of a tragedy. A sad, day for our team and one I shall never forget!

In the marshaling area, we discovered that H-hour would be at 0630am (0430am sun time, as we were operating on British Double Daylight Savings Time). The sixteen primary Gap Assault Teams were to land at 0633--just 3 minutes after H-Hour, when our infantry cover was scheduled to land.

We were to land at low incoming tide 150 yards seaward of the outer band of obstacles and 400 yards from high tide line. Each GAT would then blast a 50-yard gap through the wood and steel obstacles and mark the gap so the infantry landing craft could pass unhindered through these cleared lanes.

On the western sector, eight M-4 Sherman tank-dozers--one per each primary GAT--were to land at 0627. Companies A, G, F and E of the 116th Infantry, 29th Division then were to land 720 men at 0630--H-Hour--as the initial assault force and to be the cover for our Gap Assault Teams that landed three minutes later. When our gaps had been blown, projected to be done by 0700--a second equivalent force from the 116th Infantry would land.

A number of our tanks--firing from the beach to provide covering fire, would be Duplex Drive Shermans. With collapsible canvas side walls and two propellers, they were to operate like a slow boat on their long trip to shore, after being launched from their LCT at sea. That plan went somewhat awry on 06 June!

Each primary Gap Assault Team had an assigned area with its attendant obstacles. In May, beach photos by F-5s (P-38s with cameras but without machine guns) from the 34th reconnaissance Squadron of the 10th Photo Reconnaissance Group, flying at low level along the beach showed the obstacles and German work parties with great clarity.

This and other information allowed a panoramic scale-model sand-table of the beach to be built, showing the beach in great detail with its obstacles, the hills above, German strong-points and fortifications. We did not know our exact destination in France, but this would approximate the view as seen from our landing craft, as we made our way shoreward.

The photos showed a number of runnels--deep channels in the sand running parallel to the shore--which filled with water on the incoming tide and drained on the ebb tide. In one photo, a German soldier was frozen horizontally in mid-air after having been thrown from his horse. The horse had been pulling poles along the beach and was startled by the sudden appearance of the F-5, flying fifty feet above the sand.

In 1995 I found Henry Lanterman, who then lived in Spokane, Washington and had been a captain in the 34th Photo Recon. Squadron in 1944. He sent me several squadron photos and attempted--unsuccessfully--to locate the photo of the German soldier who was shown suspended in mid-air after having been dumped from his steed. His brother--Raymond Lanterman was the OIC of Gap Assault Team #9.

The obstacles were wood posts and ramps set in the sand, many with Tellermine anti-tank mines attached; Element-C (Belgian gates); and hedgehogs. Major Baker's Omaha Beach "BIGOT" map dated 12 May 1944, located the obstacles, although it showed Element-C at the landing sites of GAT#8, seaward of

les Moulins Draw. There was no Element-C there, nor at the Easy-Green/Dog-Red border--GAT#7's landing site.....Map > p.36

The NCDUs would demolish the wooden obstacles and Belgian Gates with 2½ pound blocks of Composition C-2 plastic explosive that were encased in a denim sack called the Hagensen Pack--named after its designer, US Navy Ltjg Carl Hagensen. The packs were made in quantity by British sail makers, and had a small diameter rope at one end and a flat metal "V" hook on the other, thus providing for a quick attachment to the obstacles.

Hagensen Packs could not be supplied by the British sail makers in sufficient quantities for the recently conjured up army teams, so we had to improvise. A small pebble was dropped into the toe of a GI woolen sock and seized with waxed cobbler's thread, thus forming a small knob. The C-2 was split and double-knotted primacord was laid between the halves. This assembly--with its 4' primacord tail--was dropped into the sock--and along with a four-foot length of baling wire--was seized there with waxed cobblers thread.....>p 59

The malleable baling wire would be flipped around the obstacle, drawn tight and wrapped twice around the rock knob in the sock, making a solid connection. The primacord tail would then be overhand knotted onto the ring main--consisting of two strands of primacord, friction-taped at 2' intervals to a small rope--running around the perimeter of the obstacles to be blown.

Detonators would be attached to opposite ends of the ring main, thus reducing the possibility of a detonation failure. Detonators consisted of an M-1 fuse-lighter; a short fuse; a blasting cap and a short length of primacord. M-1 fuse-lighters had slanted needle-points inside of the tube which kept it firmly attached, once it had been slipped over the fuse end.

The fuse was cut to length for the desired time delay and a fuse-lighter slipped over one end, and encased in a condom, with the fuse's exit daubed with asbestos grease and seized with waxed cobbler's thread. This made a waterproof seal while still allowing visible operation of the fuse lighter.

The fuse ran into a blasting cap and that juncture was sealed with friction tape. The cap was friction-taped to a short length of primacord, which could then be overhand-knotted onto the ring main to detonate the attached explosives. Primacord was a yellow explosive cord--slightly larger than the regular blasting fuse--with a crosshatched rough surface that was discernible by feel in the dark.

Although navy plans specified two minute detonator delays, we used delays of 45 and 22 seconds, with 8 second delays for

emergency backup. After the fuse igniter was pulled, there was a mad scramble shoreward! Since primacord detonates at 22,000 feet per second, all of the charges would appear to explode simultaneously.

The wooden poles and ramps were as large as 12" in diameter and required one C-2 charge for each pole, but Element-C required over a dozen C-2 charges to lay it flat on the sand.

Tetrytol satchel-charges were GAT#8's explosives of choice for the heavy steel hedgehogs. The carrying strap would be slid over an upright arm, so as to center the 15 pound charge on the shoreward side of the heavy steel gusset plate.

This was a quick attachment of a charge that would surely destroy it, and a placement that directed the steel fragments seaward. The fragments, which fly for several hundred yards, are more deadly than artillery since their path is essentially horizontal. Tetrytol and C-2 were the explosives of choice, because they are 25% more powerful than TNT and--like TNT--are not normally detonated by small arms fire.

While making up the charges, Sergeant Grosvenor and I built a non-approved variant. Instead of using baling wire to tie the charge to the obstacles, the primacord would serve a dual purpose. A double loop of primacord was run out of the sock's toe, in place of the pebble and seized with cobbler's thread. The primacord tail--out of the sock top--would be flipped around the wooden obstacle, drawn tight and run twice through the primacord loops before knotting onto the ring main.

Primacord's tensile strength was more than adequate, thus eliminating the baling wire and making the charges easier to store in the musette bag, in which they and the purple smoke canisters were to be carried ashore. Grosvenor told me later that he had used these charges successfully before he was wounded by small arms fire.

We were in the marshaling area for about ten days--complete with a perimeter fence and armed guards--before moving to Portland Harbor. Our time was spent in preparation of the explosive charges--about thirty pounds per man, plus 500 pounds of back-up explosives, to be stored in a rubber raft in our LCM.

Fatigue coveralls, to be worn over our wool uniform, were impregnated with a smelly dope designed to protect us from chemical or poison gas attacks. A large black number "8" was painted on the back of these fatigues, so we could be recognized by our tankdozer crew and by the infantry force that was to follow us ashore. Our tank-dozer had several large white "8"s painted on it, to help with its identification.

Rubberized black assault-gas-masks were to be positioned up high under our chins for additional buoyancy to our "Mae West" lifejackets, should we be dumped into the channel. We were told that they would keep us face-up in the water, even if we were unconscious.

I don't remember receiving one, but in 1993 Sergeant Roy Arnn--in charge of a mine detector crew--told me that he was given a silk map, which he sewed inside the seat of his woolen pants to aid in his escape if he were captured.

When not working, we played softball and continued our forced marches to keep in shape. For no particular reason except to prove that I could beat the system, I slipped out through a well-worn hole under the guarded perimeter fence on two successive nights to go to a nearby village and quaff a beer.

This was even more stupid than the time I borrowed a Merchant Marine's uniform and his identity card in order to get by the armed security guard and meet my friend Hal Kanzler in Boston, just prior to leaving for England--and especially so, since drinking warm British beer was not important to me.

Six of us lieutenants slept in a Nissen hut and watched as "Mother" Trescher busied himself with creature comforts for himself and his men. He was not interested in sleeping on the cold ground, so he had an air mattress built by inserting a series of linear bicycle-repair-inner-tubes into a slotted canvas cover. He then bought a small foot-operated air pump to inflate his invention.

Trescher was more of a gentleman than the rest of us, and it was a nightly ritual for Eskell Roberts to have his raunchy jokes get under Trescher's skin. It always started with Roberts yelling "Hey Andy, do you know what the WAC said to the douche bag"? A somewhat embarrassed Bill Anderson's voice followed--"No, what did the WAC say to the douche bag"? Roberts--"Get in there you little squirt and clean up that officer's mess".

As Roberts continued, Trescher would pull the covers over his head to muffle the voices, but to no avail. When he began to giggle and hooomph, Roberts knew that he had been had, and would step the pace. Finally Trescher would say "Go to sleep Roberts, you dirty old man". We would all then drift off to sleep. Above is essentially verbatim and utterly predictable--but is only an example of the less-noxious verbiage by Roberts.

I usually gave my liquor rations to my men because I was not enamored with the taste and disliked being out of control. However, one night I "tied one on" with a weird combination of various liquors to see what I might be missing and because I was

concerned that I might not survive D-Day. It was a grand puking disaster with a monstrous headache that lasted for three days--requiring a handful of aspirin to finally quell. That episode was never again repeated. From that day forward, I gave the bulk of my monthly liquor ration to my men, with no regrets.

About 01 June we moved to Portland Harbor. GAT#8--and attached NCDU #137--was introduced to LCT#2075--a 112' Landing Craft Tank--which towed our 50' Landing Craft Mechanized (LCM), in which we would travel from the LCT to the beach.

Both of these crafts had drop-down front ramps. LCTs could carry four Sherman tanks in addition to our team. Aboard were two regular Shermans, plus our tank-dozer that would provide firepower support on the beach. (The various landing craft are shown in detail in Jonathan Gawne's book "Spearheading D-Day".)

Several days were required to get the ships loaded according to plan. We loaded directly from concrete beach aprons called "hards"--necessary because the great amount of equipment to be transported could not be loaded quickly enough from available docks.

While crossing the Channel, a stock of 500 pounds of C-2 and Tetrytol explosives, plus fuse, blasting caps, primacord and bangalore torpedoes was to be stored in a centrally positioned rubber raft on our LCM. The extra explosives was in case we needed more than the thirty pounds that each man was carrying when dumped ashore.

One of the directives called for all team members to have short haircuts so that head wounds would not be complicated by having long hair driven into the wound. When we boarded our LCT, only Otis Broussard had not complied. Otis had a great head of curly black hair and was not overly interested in having his lovely locks shorn.

After several discussions without results, I borrowed barber tools from the navy and proceeded to give him the "Ross Special". I did my best to give him a good haircut but with no previous tonsorial experience, his hair got shorter and shorter as I labored to keep the sides symmetrical. Upon completion, his was the shortest haircut in our team, with plenty of nicks with white scalp showing through. Otis must have thought this sloppy GI haircut was intentional--which was not the case--just my own ineptness. I'm not sure that he ever forgave me!

OMAHA BEACH

V

Our LCT left Portland Harbor in horribly stormy weather, on the afternoon of 04 June 1944, in a massive collection of minesweepers, fighting ships, assault crafts, and barrage balloons. After spending a miserably cold and seasick night in the English Channel--as we moved steadily toward Normandy--the invasion fleet reversed course about midnight and we returned to England. The invasion had been postponed for one day because of the terrible weather.

We left Portland again that evening. Rough seas kept us wet, cold, and seasick--although the Sherman tanks afforded some protection from the spray. Sergeant Grosvenor slept with the navy crew and gave his dry blankets to me--a great swap, as mine were soaked! Around midnight, the navy cooks provided us with a hot meal--a real lifesaver! Except for one D-Ration chocolate bar, which was eaten on the beach and soon upchucked, it would be my only food for the next twenty-two hours.

Two nearby LCTs sustained severe storm damage and had lost sections of their protective side rails to the large waves. Seawater was sloshing over their decks and running off. This was partially the case with our LCT, as there was a ten inch space between the deck and the side-rails--except our side-rails were still intact.

Added in 1996--Lt Wm Anderson, OIC of Gap Assault Team #2, told me that his LCT was one that I had noticed being washed down when the side rails were ripped away by the high waves. Watching from several hundred yards away in the dark, I saw the waters running over the deck and was sorry for the poor souls on board--but happy that this was not our team. I learned later that his men and the tank crews clambered from his sinking LCT #2273 into their LCM, shortly after midnight, but it did not sink then, as Anderson had believed. Anderson's LCT is shown on page 142 of "Spearheading D-Day".

In the dark at 0330 (0130 sun time)--carrying our individual explosives, plus rifles in transparent plastic sleeves to keep out the sand and seawater--GAT#8 scrambled down the heavy rope landing nets into our wildly bobbing LCM. All of our rifles and my carbine were later abandoned on the beach, when we suddenly became very busy!

After finding Salata--a 2nd Division volunteer--asleep, I rounded him up and we left for our assembly area, several miles seaward from Omaha Beach. We circled counterclockwise for over an hour, while waiting for the signal to head for the beach.

That counterclockwise pattern of our landing craft allowed each one to peel off and head for land--beginning on the west end of Omaha at Dog White--without crossing in front of any adjacent crafts. We were so miserably cold and seasick that we were ready to land on any old beach--well, almost any old beach!

We saw a number of our bombers overhead with alternating large black and white stripes on their wings and fuselages for D-Day identification. Later, as our LCMs circled around marking time, we heard but did not see the planes in the heavy mist and their bombs did not saturate the beach as had been promised.

Later we learned that the bomber crews were concerned that--because of the poor visibility--they might drop the bombs among us onshore, so most of the bombs were dropped a short distance inland.

The only bomb crater seen by me that day was one that was fortuitously placed right where needed--almost dead center in our demolition area. It was a twenty foot diameter Foxhole with its surrounding sand parapet, located midway between the wood ramps and the hedgehogs!

Suddenly we straightened out and headed for the beach--partially obscured by the fog and mist. Just as we passed close-by, west of her bow, I looked up at the name "TEXAS" on a huge battleship, just as she fired her first broadside. We heard the distinctive "whhuutuu-whhuutuu-whhuutuu" of the 14" projectiles as they passed overhead on their way to soften up the German gun emplacements at Pointe du Hoc.

The flame and dark brown smoke was in itself quite a spectacle, but the blast was unbelievable and would have blown off my helmet, had my chinstrap not been fastened. However, it did cure my seven barf-bag case of seasickness, before I used up all of my barf-bags--so seasickness must be mostly mental!

The four 146thECB support Gap Assault Teams A, B, C, & D crossed the channel on the Princess Maude--which had been a prewar British cruise ship. An hour later than planned, the

support teams crawled down the rope ladders into their bobbing LCMs and landed far into the eastern sector, when they failed to identify their proper beach. One man had his legs crushed when caught between the landing craft and the Princess Maude--out of action even before having been a target!

Earnest Hemingway related the events of D-Day mid-morning while moving with a 1st Infantry Division landing craft towards Fox Green Beach: "I was glad when we were inside and out of the line of fire of the Texas and the Arkansas. Other ships were firing over us all day and you were never away from the sudden, slamming thud of naval gunfire. But the big guns of the Texas and Arkansas that sounded as if they were sending whole railway trains across the sky were far away as we moved on in. They were no part of our world as we moved steadily over the gray, white-capped sea toward where, ahead of us, death was being issued in small, intimate, accurately administered packages."

A short distance west of us at 0610, LCT-Rs--LCTs modified to fire high explosive rockets--sent several volleys of hundreds of rockets towards the shore. The craft's long axis was aligned perpendicular to the beach, and the rockets were then fired when at the proper distance from shore. Watching the winkling of the rockets on the hill above the beach, we were impressed as they gave the Germans their early morning wake up call.

Some writers stated that most of the rockets landed in the water and so were wasted. Above our western sector, all of the rockets appeared to be hitting the steep hill above the beach and so were quite effective.

The steep hill above the beach was called a bluff by many writers, but the real vertical bluffs were only at opposite ends of the beach. A number of brush fires were caused by the rockets above our half of Omaha.

As we approached the beach, I began seeing splashes in the water from the mortar, artillery and small arms fire and so immediately lost interest in being an observer and ducked down behind the steel ramp and sidewalls.

This was fingernail-biting time, as detonation of explosives in our rubber raft by mortar or artillery fire would have been devastating. That unfortunate scenario was visited upon several of the 299th Gap Assault Teams on the eastern sector, when their explosives were detonated prematurely and many of their NCDU members were listed as killed in the navy records. The army GATs--to which the NCDUs were attached--must also have suffered similarly, as the 299th pro-rated fatalities were almost double that of the 146th.

As we neared shore, our gunner began hosing down the beach ahead with his twin .50 caliber machine guns mounted near the rear of our LCM. This was a morale booster for us, because we saw several dead GIs face-down, bobbing and rolling in the surf.

This was most unsettling, as this was only a few minutes after our infantry covering force had been programmed to be the first troops ashore. These men may have landed earlier than planned--but had they been in our initial infantry cover force, their under-the-chin black assault gas masks should have kept them face-up in the water, even if they had drowned.

Our Coast Guard crew was very professional and operated as if this were routine landing exercise. They had made landings in Africa and Sicily, and so were no neophytes.

Our coxswain promised me an easy wade ashore and he gunned his twin Gray Marine diesels, driving the LCM hard aground before he dropped the ramp--a real pro, as the water was only ankle deep! Some of the other coxswains may have appeared fearful of being stuck on the sand and becoming sitting ducks, so they dropped their men off in deeper water--but this may have been the result of the runnels and their accompanying sandbars, with deeper water shoreward.

Although many writers stated that the tidal current pushed all of the landing craft to the east, all eight of the 146thECB Primary GATs landed on our western beach sector and most were reasonably close to their designated landing sites. Lt Kehaly's GAT#1 landed on Dog White, east of their planned landing on Dog Green. With the possible exception of Lt Bill Anderson's GAT#2--whose LCM landed late because their LCT had taken on water and swamped--all of the other teams beached somewhere near their designated areas on the western sector.

Landing to the east may have been true for many of the infantry craft--and all four of the 146ECB Support Gap Assault Teams did land far to the east on the 1st Infantry Division's eastern sector. Our support teams may have landed to the east because they were following the leader, or perhaps because the smoke from the brush fires on the hill obscured their landmarks.

Lt Latendresse's Support GAT#C--which was to have landed on Dog Red near GAT#7--landed at the eastern end of Omaha, where the sandy beach ended and the vertical bluffs began--off target about 2½ miles! Per Sergeant Homer Jackson, the NCOIC of that team--"The only troops to our east would have been British and Canadian"!

Lt Latendresse was hit in his lower legs by machine gun fire soon after landing. Privates John Heenan and Albert Tucker left

their protected area in defilade below the bluff and went back into the machine gun swept surf to drag their wounded lieutenant back to safety.

One of the early penetrations of the defenses was there--east of Colleville Draw. A small force from the 1st Infantry Division, accompanied by Support GAT#C, fought their way to the top of the hill. Landing errors did not deter the "Big Red One", and an unplanned opportunity was quickly exploited!

Jackson said that a close-in destroyer was getting target locations by semaphore from a navy seaman on the beach and the destroyer's gunfire greatly aided their advance. This may have been one of several fearless D-Day destroyers that ignored the enemy fire and moved close-in to provide supporting naval gunfire for our beleaguered infantry.

A five-man German machine gun crew from a pillbox above the beach tried to escape through a rear tunnel, but all were captured when they bobbed out further up the hill. This may have been the machine-gun crew that had wounded Lt Latendresse. Sergeant Jackson now commanded the crew and remained with the 1st Infantry Division. He was a mile inland when they were finally located two days later and brought back into the fold by Lt Colonel Isley.

We saw no tankdozers or infantrymen when we landed--at 0638, per Ensign Blean's D-Day notes--five minutes later than planned. This five minute delay had an unfortunate effect on our mission. Our tankdozer was late and I initially thought that our infantry covering force was also late, as no infantry was visible near our landing area--but I may have been wrong, as we landed late and off course.

We landed on Easy Green, 200 yards west of our assigned spot. Lieutenant Ben Bartholomew's GAT#7 was 200 yards further west, at the Dog-Red/Easy-Green border and Lt Ray Lanterman's GAT#9, about the same distance to the east.

Machine gunners in the mansard-roofed house near the mouth of les Moulins Draw were a short distance east of our landing site. This fortified house is shown following this book's page 28, and on page 12 of the book "Omaha Beachhead". Joe Vaghi's map--with notations--located the fortified house at coordinates 667-906. Joe was a Navy Beachmaster on the Easy Red subsector immediately to our east in the 1st Infantry Division's sector.

The members of our teams hurried inland 150 yards to the first band of wood-ramps and wood-post obstacles and began tying on the C-2 demolition charges. Meanwhile, several team members and I attempted to slide out the rubber raft, containing our

backup explosives. It took some real tugging to skid out the loaded raft, while sweating it out as we presented a stationary target with our backs to the enemy.

Earl Holbert then pulled the raft eastward beyond our gap area and tied the long small-diameter rope to a wooden obstacle, so its explosives would be available, should we need them.

Running a fast zigzag path up to our Super Foxhole--located between the wooden obstacles--I found Sergeant Grosvenor firing at the machine gunners in the fortified house to our left front. He said that it was important that he suppress the machine-gun fire coming from there.

After a short but fruitless discussion that he run the ring-main per plan, I finally grabbed his large Signal Corp wire reel, containing the ring main--two primacord strands friction-taped at two foot intervals to a small diameter rope--and took off running!

Sprinting in short dashes and hitting the ground often, denied the enemy a ready target. Bullets knocked off splinters overhead from some of the wooden obstacles after I hit the ground--or so I was told later! I ran an end of the ring main clockwise around the fifty-yard-wide band of obstacles and Bill Garland ran his end around counter-clockwise. We connected the ring main ends together where we met and then rejoined the team to help tie on the C-2 sock-charges.

Sergeant Grosvenor apologized later for not performing per plan. My response--"We got the job done--end of conversation". It was never mentioned again.

While proceeding with the placement of charges, I happened to be looking eastward, just as an artillery round hit the sand sixty feet away. It ricocheted twenty feet into the air and its pointed nose was momentarily visible against the pre-sunrise sky before it detonated. Splitting along its length, it sent a two foot "V-shaped" steel chunk cart-wheeling over and over toward the northeast! Artillery is supposed to produce multiple high-velocity steel fragments that fly in all directions, so this was a faulty round, and one that may have been sabotaged by slave labor?? If so--it was much appreciated!

We were under heavy small arms fire immediately and machine gunners--almost all of whom were invisible on the high ground--were tracking our movement. We began suffering casualties soon after landing--but we did not bunch up and so did not attract any unwanted attention!

Our medics were unbelievably efficient and began taking care of the casualties where they lay. Many of the less seriously

wounded didn't bother calling for help. Minden Ivey, a rugged little Texan, took a bullet through his wrist, resulting in a compound fracture, but he kept on firing his rifle, refusing medical aid in favor of the more seriously wounded. However, he did accept help in reloading his M-1 Garand.

There were no visible infantry or tank-dozers on Easy Green when we landed. At 0645, I saw three riflemen slinking east in defilade below the natural sandbank seawall, just above the high water mark. They were heading toward the fortified house, but I was too busy to monitor their progress. These men were likely the first contingent ashore from 29th Infantry Division and may have been attempting to silence the machine gun fire coming from the fortified house.

I have been questioned as to whether our "Super Foxhole" might have been other than a bomb crater since many authors have stated that our bombers dropped all of their bombs further inland. Poor visibility, because of the low clouds and mist, would not allow accurate bombing close to the beach--which was only a few hundred yards deep--and the bombers were flying perpendicular to that beach.

Our LCMs were already heading toward the beach when the bombers arrived and many writers said that all of their bombs were dropped inland to ensure that our boat teams--as well as tankdozers and supporting infantry--were not splattered.

However our Super Foxhole was surely a bomb crater! Although unlikely, this may have been a German bomb crater--but a bomb crater it was! The only other source for such a large recent crater would be the guns from our battleships, but such craters would have been elongated and not round as was our foxhole.

Further, this was a fresh crater that had been made after the previous high tide, as the surrounding sand parapet had not been smoothed down by the waves, and there was no water in the bottom of the hole. Regardless of the contrary writings, this surely was a bomb crater--and probably produced by a bomb of about 500 pounds.

Without warning and from ten yards to my rear, our tankdozer fired a 75mm HE round into the left jamb of the right window in the fortified house, 200 yards to our left front. That silenced the machine gun that had been giving us so much trouble.

We had been busy, attaching explosives to the wooden obstacles and until that blast I was unaware that our tankdozer had finally landed. It was about twenty minutes late and one of eight that were scheduled to land at H-Hour minus 3 minutes on

the western sector. It had been put ashore from LCT#2075, from which we had debarked into our LCM at 0330.

Shortly thereafter, Team #8 had a fifty yard wide section of the wood ramps and posts ready for demolition. Sergeant Garland and I then tied 45-second detonators to opposite sides of the ring main and each tossed out a purple smoke canister as a warning signal to the infantry that demolition of the obstacles was about to take place.

We moved a short distance inland as the blast made a pile of wooden poles and kindling, but a number of obstacles were not destroyed in this initial effort. I suspect that the primacord ring main may have been cut by artillery or mortar fire--or possibly by our tankdozer's treads.

Garland and I then tied 22 second detonators on the opposite ends of the surviving ring main and tried again. Two posts outlived that blast, so I ran back and attached an eight second detonator to the ring-main fragment, pulled the igniter and splashed shoreward in water up to mid-calf. It was a successful blast and our gap was now cleared through the wooden obstacles. Only the steel hedgehogs remained to be blown.

Ensign Blean then asked what his NCDU team should do next. His team carried 2½ pound C-2 explosives, but no tetrytol satchel-charges to be used on the heavy steel hedgehogs, so I released his navy/army NCDU team to take cover in defilade near the sea wall. The fifteen pound tetrytol satchel-charges may have been an over-kill on the hedgehogs, but there was no question that they would destroy the hedgehogs--and they did!

A short while later, I noticed a soldier sitting on the sand seventy feet to the west, facing seaward at the water's edge. Small arms fire was kicking up the sand around him and I yelled for him to take cover behind one of the steel hedgehogs.

Either he did not hear me, or was disoriented and could not react, or he may have already been wounded. Soon after, he slumped over on the sand and the water sloshing around, slowly turned a delicate pink. He most likely was killed and probably was Wayne Carrol from our attached NCDU Team. I learned later that Wayne and Jesse Cleveland--both from NCDU#137--were killed that morning.

Heading for the seawall Tom Wilkins yelled for Jessie to take cover from the fierce enemy fire. Jessie airily replied "I'll still be going when you're dead and gone"! Soon after Tom was shot through the hip while rescuing a wounded infantryman--for which he was awarded a Silver Star--and Jessie was decapitated by a mortar round that must have landed on his

helmet. Jesse's body was picked up the next day and almost surely is the body shown near the fortified house on page 12 of the book "Omaha Beachhead"--and in this book following page 59. His body would have been deposited there by the eastward flowing tidal current.

By the time Bill Garland and I moved shoreward to the hedgehogs, our team had the tetrytol satchel-charges in place and we were ready to watch them disappear as if being swept away by an oversized broom! Just as Garland and I were ready to pull the 45 second detonators, an infantry LCVP landed seaward, near the eastern border of our gap.

This was the infantry force scheduled to arrive at 0700. From a past fatality at the Assault Training Center, I knew how deadly explosive-driven steel fragments could be and in the time until detonation, those men would have been nestled in and around the hedgehogs about to be blown.

At our briefings--prior to the mission--we were told not to delay demolitions because there were troops in the danger zone. So, although I agonized about a delay, I could not bring myself to shred our own infantry. The explosive driven steel would surely have killed or wounded a number of them--so demolition was delayed and eventually postponed when the incoming tide inundated the hedgehogs before the infantry had cleared the area. The hedgehogs were destroyed by the healthy members of GAT#8 without incident when the tide receded shortly after noon.

ADDED IN 1996--It is now plain that my decision to delay demolition of the hedgehogs was a mistake. Sergeant Garland and I had already attached the 45 second detonators and I should have proceeded according to plan. I could have reinforced the demolition warning to the infantry by tossing out another canister of purple smoke and/or sent a runner down to guide them further east on their way to the sea wall.

Flying steel fragments may still have killed some of these men, but this action might have reduced the overall death toll by allowing a succession of landing craft to quickly disgorge their men through our gap. My decision at that time seemed to make sense--in retrospect, now it does not!

Until retiring in 1986, I had given this little thought, but after reflecting on the events of that long ago day, it is apparent that in this area, I goofed. In 2005, Ensign Harold Blean--OIC of NCDU#137, whom I had just rediscovered--said that we had landed five minutes late. This allowed us 22 minutes to complete an overly optimistic 27 minute mission. We could have made good use of those additional five minutes!

As the water was now lapping at our feet, we began gathering our wounded and moving them through the three foot deep runnel to an area in defilade below the natural sand-banked sea wall. As I was preparing to follow, I noticed Sergeant Roy Arnn--in charge of a mine detector crew--lying on the sand a short distance to the west.

He had severe wounds from an artillery round that had landed so close-by that his uniform was gray from the explosive residue. A big chunk of meat had been gouged from the rear of his right thigh, but a section of his pants was jammed into the wound, staunching the blood. Artillery had torn open and broken his right shoulder and clavicle, which caused a bubbling puncture wound. He was also bleeding heavily from his forehead where the edge of his helmet had been driven down by the blast.

His arm and leg were useless, so he held on as I hunched forward like a wiggle-worm on the sand. As I neared the runnel, a machine gun burst splattered sand in our faces, so we slithered behind a nearby hedgehog. The gunner soon found other targets of opportunity and we were then able to slip unnoticed into the runnel--now four feet deep and 30 feet wide--and cross with our noses just above the water.

Roy was carried to the sandbank--near to where GAT#8 had congregated by our tankdozer--and was given further attention by our medics. Just prior to being wounded he had been shooting at the machine gunners in the fortified house. A bullet struck nearby splattering sand in his face, so he flattened down just as the artillery round arrived. Had there been no small arms near-miss, he very likely would have been mortally wounded by the artillery fragment that ripped into his shoulder!

He was in defilade at the eastern border of our gap when a Signal Corps photo of the area was taken, showing the hedgehogs and several wooden posts and ramps just east of our assigned gap, but no Element C--as projected in our preliminary briefing.

At mid-morning, Roy was moved to the collection station near the entry of les Moulins Draw and later to the water's edge on a stretcher--on his way to the LST hospital ship. On that trip, an artillery shell struck nearby, bouncing him out of the stretcher and slicing his finger, but it did no serious damage. In England, he spent three months in an army hospital and another three months at a convalescent center.

In December, when the Bulge got underway, any bodies that were still warm were sent in to replace our heavy losses. Although Roy still did not have complete use of his arm and had difficulty walking, he was sent as a replacement to an artillery

outfit. When that administrative officer looked him over--and another soldier who was using a cane--he vented his verbal disgust with the system and sent both of them back to a replacement center near Paris.

He was then assigned to a post office in Marseille where daily exercise partially rebuilt the strength in his arm. He returned to the states with the 146ECB in August 1945 when he discovered that they were in Marseille and on their way home. His commanding officer managed to get hurry-up orders to allow Roy to rejoin his old outfit--what a nice guy!

Roy's golf game, plus a heavy exercise regimen has since brought his arm almost back to normal, with just a few deep scars to indicate a long ago activity known to only a few!

Lt Colonel Isley--commander of the 146ECB demolition teams on the western sector--landed on Dog Red. On the side of the 146ECB Weasel was the stenciled sobriquet "Barge with a Charge". Other than tanks, this may have been the first vehicle ashore on Omaha and it carried Isley's command radio, plus driver Morris Fugitt and radio operators Henri Rioux and James France.

Fred Heischman from H & S Co, had initially been assigned the task of bringing the command radio ashore in his Jeep, but weasels were substituted just prior to D-Day, when it was found that Weasels produced a much lower ground pressure, and so would not detonate Tellermines.

Our inundated tankdozer--after its snorkels had been jettisoned--is shown on page 159 of "Spearheading D-Day"--and following page 59 in this book. Apparently, it had gone back on the beach and been disabled. Colonel John T O'Neill's After Action Report stated that only one M-4 tankdozer out of a total of sixteen on Omaha Beach survived D-Day.

The DD-tanks on the eastern sector of Omaha were launched at sea and sank like rocks when their flimsy canvas sidewalls buckled in the heavy surf. The DD-tanks on the western sector were dropped off on the beach after that naval officer realized that the surf was too rough to launch them at sea. The DD-tanks were to support our infantry with machine gun and cannon fire and so their loss was a definite setback to the 299ECB on the eastern sector.

After a quick check on my men, I hurried eastward along the beach to find Lt Colonel Isley for further orders. Why I went east is a mystery, as I was near the far eastern border of the 146ECB sector, so I may have been more than a wee bit excited! This was not too bright a move--out in the open with small arms, mortar and artillery fire incoming.

I had gone about 75 yards and just as I stopped and twisted around to my right to check again on my men, a mortar round hit in the shingle rock, eight feet to my front. Had I not stopped, that mortar crew would have dropped that round on my helmet--as apparently happened to Jesse Cleveland from our NCDU Team.

There were small fragments in my right great toe, both feet, instep, calf, knees and a collection in a one inch diameter left thigh wound. Being sideways to the blast reduced my exposure area and surely saved me from being further spiculed. Despite what I had heard, the thigh wound was quite painful--possibly because the fragments were red hot and traveling at fairly low velocities. Conversely, I was unaware of the fragments in my feet and lower legs until that night on the hospital ship.

Once an experienced mortar crew registers on a target, they fire several more rounds in rapid succession. Knowing that, I quickly hopped inland to the sand beyond the shingle, just as two more rounds dropped into the area just vacated. Although not so inclined at the time, I have to admire the proficiency of that German mortar crew on a moving target--me!

Upon revisiting Omaha with Dorothy in 1987, I discovered the secret of their accuracy. A mortar pit, with a weatherproof map midway up the hill below the American cemetery, showed our beach terrain and all of the landmarks in exquisite detail.

I had been scared spitless while in the LCM, but once we landed, I was too busy to bother being terrified. Now finding that I was not indestructible, I again became concerned about my welfare. I began digging a foxhole in the sand--with my bare hands, then with my helmet after slicing open my hands on buried barbed wire--to gain protection from the enemy fire.

Medic Max Norris found me later and we enlarged the foxhole to hold the two of us. He poured sulfanilamide powder into the thigh wound hole, bandaged it and gave me a morphine injection.

Upon reflection, I would suggest withholding morphine except as a humanitarian move for those not expected to survive, or for those who are seriously wounded and may go into shock. Most physically fit soldiers can handle pain and won't request or need morphine.

I believe that Lala may have been given a second morphine injection by one of our medics after being improperly tagged after the first injection. If so, it may explain his lethargy and subsequent death. Although he was seriously wounded, he was third on my list of concerns.

Max acted as my messenger and brought me up to date on our casualties. He was unaware of any fatalities although >60% of

our team had been wounded by 0800--most not seriously. My main concerns were Lala and sergeants Arnn and Grosvenor.

Of the seven hundred seventy army men in the demolition teams, almost one hundred were killed and over four hundred were wounded--almost all in the first ninety minutes. (I have no totals for navy KIA and WIA.--WR)

Lt Joe Gregory was the only 146ECB officer killed on Omaha Beach that morning. "Naked Warriors" chronicles Joe's efforts before being killed by an artillery round soon after his 50 yard gap had been blown. Ensign L. S. Karnowski--OIC of NCDU#45 that was attached to Gregory's GAT#10--furnished the notes from which several chapters of "Naked Warriors" apparently were written.

It details the efforts of the NCDU teams--both navy and army personnel on Omaha--even though it entirely ignores the larger Gap Assault Teams--to which the NCDUs were attached--and who furnished most of the SETF's manpower.

For the casual reader, "Naked Warriors" implies that the army-augmented navy/army NCDU teams, operating independently and under direct navy command--did the entire demolition job. The author was apparently unaware of the existence of the army Gap Assault Teams that had been formed a short time before D-Day--and that the NCDU teams were attached to and commanded by that GAT's OIC.

Further confusion may have been caused by Lt Commander Joseph H Gibbons--Commanding Officer of the NCDUs in "Force O". In his 18 June letter to Commander of "Force O"--Omaha Beach--he furthered the impression that the NCDUs were in charge of the demolition mission on Omaha when he stated: "The NCDU's in the Neptune Operation--the navy part of the invasion--were assigned the mission of clearing enemy placed obstacles on the OMAHA beaches".."&.."Sixteen LCMS containing sixteen NCD assault units were to land at H + 3 and blow fifty (50) yard gaps as follows.. Initially, the mission was as stated, but had since seen major revisions--of which he apparently was unaware!

Sometime after ~0800, a group of 1st Division men landed a short distance west of my position and in the 29th Division sector--~400 yards west of their division border. Once they were in defilade, they took a short time to organize and then began infiltrating up the hill west of the heavy fortifications at les Moulins Draw. I'm not sure if they were the catalyst, but soon thereafter, more and more infantrymen began to appear on the hillside and were seen working their way inland.

Until late afternoon, prior to being assisted to the aid station, I was a scared, but wide-eyed spectator with a front

row seat, as the battle unfolded. Once, I heard the variable whine of fighter planes in the mist above, and the short bursts of machine gun fire, but was not sure who was shooting whom!

Around 0900, the enemy fire had quieted somewhat--probably because smoke from the rocket-caused brush fires had reduced the defenders visibility. This must have led our commanders to believe that this was now a safe beach--bad conclusion!

Near 0945, an LCT landed 200 yards west of my position and medics--with their Red Cross armbands clearly showing--came ashore, looking for all the world as if they were on their way to a Sunday School picnic!

They were talking and bunched together, and appeared to be in no hurry to get off the beach. The Germans had the area well zeroed and several large caliber artillery rounds landed in rapid succession right in their midst. Some, who did not get back on their feet, were probably mortally wounded.

A short time later I noticed a beached landing craft--a short distance to the west--sending up a huge column of black smoke. Soon after, an explosion below deck lofted a 2^{1/2} ton truck ten feet into the air, before it crashed almost upright back on the deck. Better than most war movies--no red gasoline fireballs that is the norm for lousy war movies **but is an asinine caricature of reality.**

In the late morning, Lt Colonel Carl Isley found my foxhole and brought me up-to-date. Earlier, as he was reconnoitering the beach with Joe Manning on his left and Sergeant Robert Campbell on his right, an artillery shell landed in their midst and Campbell was killed instantly.

Joe Manning was unhurt, but an artillery fragment ripped through the top of Isley's helmet, peeling back the steel as if it were a soup can. A large chunk was ripped out of the top of his helmet liner and the wool stocking cap beneath was frayed. However, except for a massive headache he was unhurt. His helmet is shown on **page 145** of "SPEARHEADING D-DAY"--a book with much interesting D-Day information.

In a 1993 letter to me, William A Delyea wrote: "I was in Lt Caldwell's Boat Crew #5. While snuggled in between two logs and firing at the house to our right, I looked down and there was Major Isley coming up the beach. A shell hit close between us and blew a hole in his helmet. He got up, shook his head, picked up his helmet and took off for safer ground."

"That afternoon, Lt Caldwell made me a Staff Sergeant and had me round up enough men to tie charges on the obstacles. We were tying the last charges when we got hit with 88s. Three of

us--Bookout, Long, and I were wounded and Alvin Last was killed. I had a hole in my head and one through the right leg below the knee." (Delyea was discharged--with a 100% disability.)

In late afternoon I was assisted the short distance to the aid station near les Moulins Draw. At dusk, a small boat rigged to carry stretchers across the gunwales, ferried me out to the LST hospital ship anchored near Colleville Draw--a mile to the east. The channel was still rough so I was seasick again and upchucked the chocolate D-Bar "the German secret weapon"--my only nourishment since midnight.

I was then transferred by a derrick and sling on a wild ride up to the ship's deck and was soon settled in a comfortable bunk. A nurse pulled off the thigh bandage and a pink, watery fluid messed up the white sheets. I then discovered the mortar fragments in my feet and lower legs that had gone unnoticed until then, due to the anaesthetizing effect of the cold water.

The navy doctors and nurses were supe/rb and although we made snide remarks about their soft life on-board ship with good food and comfortable beds, we appreciated them beyond mere words!

Captain John K Howard and Sergeant Roy Arnn were nearby. I was happy to see Roy as I was concerned that he might have been my first fatality. Captain Howard--the B-Company commander who commanded Gap Assault Teams #5, #6, #7 and #8--had taken a bullet through his shoulder. He walked over and filled me in on the operation as best he knew it.

At the time, it was feared that a determined German counterattack might shove our forces back into the channel. (Had General Erwin Rommel prevailed in his plan to have the German armored forces committed immediately--rather than having them held in reserve--that very well may have happened!)

That this was a distinct possibility was reinforced by General Bradley's concern from his command ship. Early that day, he contemplated pulling the troops from Omaha Beach and moving them to another invasion beach--but events then took a modest turn for the better and our commanding generals took in a deep breath!

There are several reasons why we finally prevailed on Omaha:

1. Hitler and his staff had been deceived by the British disinformation program, which led them to believe that the Normandy landings were only a prelude to main landings in the Pas de Calais area--as detailed by "Fortitude" in

Anthony Cave Brown's book "Bodyguard of Lies".

2. Hitler's "Case Three Orders" which denied any immediate reinforcement by the panzer and infantry units until he had given his approval. Hitler was asleep and was not to be disturbed. This delay postponed an expected German counter-attack.
3. A period of nasty weather in the English Channel, which convinced the German generals that a seaborne attack could not possibly be launched at that time.
4. Our outstanding naval gunfire support which decimated the defenders in their strong points.
5. Our superb air-force who gave us great overhead cover.
6. And especially, brave infantrymen who overcame monstrous odds in attacking up the steep hillside with little more than their M-1 rifles, a few grenades and a generous supply of guts!

OMAHA BEACH AFTERMATH

VI

146ECB Gap Assault Team Landings on OMAHA BEACH
(For Individual Team Members--both Army and Navy--see Note 1)

C G A T A N O.	O M P A N Y	BOAT TEAM LEADERS		LANDING LOCATION		NCDUs NCDU # & LEADER
		O.I.C.	N.C.O.I.C.	PLANNED	ACTUAL	
#1	A	w-Kehaly 1stLt Wm	n-Lewis Sgt Rodney	Dog Green	Dog White-----	#11 Cgm W R Freeman
#2	A	w-Anderson 2ndLt Wm	?-Leatherman Sgt Ira W	Dog Green (landed late)	Dog White??-----	#24 Ltjg W H Culver
#3	A	w-Schill 2ndLt John	?-Mixon Sgt Basil	Dog White	Dog White-----	#27 Ltjg O J Holtman
#4	A	w-Shively 2ndLt Kenneth	?-Moore Sgt Sherman	Dog White	Dog White/Red??---	#41 Ltjg I W Nichols
#5	B	n-Caldwell 1stLt John	?-Cole Sgt James	Dog Red	Dog Red-----	#42 WO W C Thompson
#6	B	w-Roberts 2ndLt Eskell	w-Rainwater Sgt George	Dog Red	Dog Red-----	#43 Ltjg W M Jenkins
#7	B	n-Bartholomew 1stLt Ben	?-Mikus Sgt Joseph	Easy Green	Easy Green/Dog Red--	#140 WO J G Hill Jr
#8	B	w-Ross 2ndLt Wesley	w-Grosvenor Sgt William	Easy Green	Easy Green-----	#137 Ens H P Blean
#9	C	w-Lanterman 1stLt Raymond	w-Beckman Sgt Wilbert	Easy Red	Easy Green??-----	#44 WO W E Raymor
#10	C	k-Gregory 1stLt Joseph	w-Winn Sgt Paul	Easy Red	Easy Red-----	#45 Attchd to 299ECB Ens L S Karnowski
#A	C	n-Meier 2ndLt Bernard	?-German Sgt Carl E	Dog Green	Fox Red-----	#133 Ens R W Mitchell
#B	C	w-Rollins 1stLt Charles	w-Murphy Sgt Howard	Dog White	Fox Red-----	#130 Ens A B Cheney
#C	B	w-Latendresse 1stLt Donald	n-Jackson Sgt Homer	Dog Red	Fox Red-----	No NCDUs (at bluffs east end)
#D	B	w-Trescher 2ndLt Wm	k-Anderson Sgt Homer	Easy Green	Fox Red-----	#128 Ens H E Duquette
COMMAND BOAT		n-Isley Lt Col Carl	n-Boudreau ?-M/S Lionel	Dog Red	Dog Red-----	No NCDU

FATALITIES in the 146ECB Gap Assault Teams = 36

It was surprising how recollections varied from reality on D-Day. Sergeant Bill Garland, stated in his After Action Report that there was no firing from our LCM--when the gunner really chewed up that portion of Omaha with his twin .50 caliber machine guns! Garland also stated that he and Sergeant Grosvenor ran the ring main around the obstacles when it was Garland and I who did it! He was remembering that he and Grosvenor had been so scheduled. Garland also stated that one of the tanks was a dozer type, but it was not in operation. This was the tankdozer that silenced the machine gunners in the fortified house. He may have known that it had shed its

snorkels and gone back in the surf, where it apparently had been disabled.

AAR

AAR

AAR

AAR

AAR

AAR

AAR

AAR

AAR

AAR

On our trip back to England, I talked at length with an infantryman from the 1st Infantry Division, who was in a nearby bunk and was 24--my age. He was from New York State and had seen duty in Africa and Sicily and was rather nonchalant about his exploits. The fingers on his right hand were blown away and several fingers on his left hand were mangled. He had numerous chest and facial pock marks from copper fragments of exploding blasting caps that had been stored in his rubberized black assault gas mask, positioned high under his chin.

As he was going up the hillside, he engaged Germans, whom he dispatched and then removed their watches. One German threw a potato masher grenade, which he grabbed and threw back! After repeating this exercise for the second time, he surmised that the enemy discovered what was happening and held that grenade for a few seconds before tossing it. When he attempted to throw that grenade back, it exploded in his hands.

In addition to mangling his hands, the explosion detonated blasting caps that were stored in his gas mask, riddling his chest and face with copper fragments. (The infantry used fuse-lighters, fuses, blasting caps and TNT to make quick foxholes.)

In spite of his wounds he was surprisingly cheerful and was awarding watches to those in attendance--but especially to the nurses! Initially, he had watches halfway to his elbow on one arm and a few on the other.

I recuperated in the 81st General Hospital, that was located near Pontypridd, Wales. "How Green was my Valley", starring Maureen O'Hara and Walter Pidgeon was filmed nearby. It really is a beautiful scene, even though several colliers with huge piles of tailings nearby, dirtied the area.

I immediately wrote my parents that I had been in the invasion and had been wounded, but would soon be back with my old outfit. This was very fortunate, as they received a telegram on 06 July stating: "REGRET TO INFORM YOU YOUR SON SECOND LIEUTENANT WESLEY R ROSS WAS SERIOUSLY WOUNDED IN ACTION SIX JUNE IN FRANCE LETTER CONTAINING PRESENT MAIL ADDRESS FOLLOWS = ULIO THE ADJUTANT GENERAL".

Had the telegram arrived first, my mother would have been a basket case. Really, my wounds were not serious--ones dubbed "Million Dollar Wounds"--wounds that are not life-threatening, but serious enough to get one removed from the battle area.

A letter of 29 May, stated: "The food has been great lately, hotcakes and pie every other day and everything cooked to perfection--Gotta watch my waistline! Nothing worth writing about--same old grind". Anything more would have been censored.

A green portable x-ray machine that could be parachuted into the battle areas--with the improbable name of "Picker"--was used to locate the mortar fragments. Picker X-ray, in Cleveland, Ohio was a family owned manufacturer, whose lofty postwar reputation began with these rugged portable x-ray units--in use on many WWII battlefields. I joined that company in 1959 and sold their medical imaging equipment until retiring in 1986.

I was surprised to learn that the mortar fragments would not be removed, but was told that the body encapsulates such foreign bodies, and unless an infection ensues, less tissue damage results when the fragments are left in place. This must be true, because the fragments have caused no problems over the intervening years--although most of them have migrated away from their initial location.

An artillery fragment that was embedded in Howard Kizer's left knee was not removed. In 1952 it became infected, requiring several courses of antibiotics which temporarily reduced the swelling. Sometime after his last treatment, the pus-filled abscess ruptured, while he was taking a shower and the fragment fell on the floor. Several of our men had similar experiences. Such artifacts make neat necktie ornaments--and especially so, when they are supported by a bit of relevant history!

The 81st General Hospital--only recently from "The States"--did everything By the Numbers. When their commanding officer made rounds, someone would call "ATTENTION" as he entered our ward and we patients were then supposed to sit upright at attention in our beds. This lasted for two days, after which time the old warriors refused to be bothered.

We received excellent care even though we gave the nurses a bad time, who then counterattacked with verve. After we had healed, two nurses took another patient and me out for a picnic. Very nice to have the nurses to ourselves!

I heard that a grumpy old field-grade officer had his "temperature taken" with a daffodil in his rectum!--he was not amused when he discovered the ruse. (Not verified)

One soldier two beds away seemed unusually subdued--he talked little and those nearby thought that he was unfriendly. Several days later, after **the more seriously wounded** had been treated, he was wheeled into x-ray. A scabbed-over area above his left eyebrow obscured the entry point of an artillery fragment that had penetrated his brain. He was taken to surgery and had an uneventful recovery.

During my hospital stay, I talked at length with a P-40 pilot from Africa, who enlightened me on the comparative worth of his Curtis Hawk P-40 fighter versus the Messerschmitt ME-109. I believed that the P-40 could run rings around any aircraft that flew--likely a result of the coverage of Claire Chennault's Flying Tigers--The American Volunteer Group. (They flew P-40s, but their phenomenal record over the Japanese in China and Burma was due to their innovative combat tactics and training--not the superiority of the P-40s that they flew.)

This pilot punctured my balloon by stating: "the ME-109 could outrun, outclimb, outdive and outturn the P-40--and there isn't much more that one can do in an airplane"! So whenever he bumped into an ME-109, he dove down near the desert floor and skedaddled for home. He did have one confirmed kill, however. An unseasoned German pilot--who chased him down toward the ground--crashed when he failed to pull out of his dive in time.

ME-109s were first flown in 1935 and were battle tested during the Spanish Civil War. In all performance categories however, the German Focke-Wulf-190 was superior to the ME109. FW-190 parts were built by cottage industries and assembled in hidden factories to escape allied bombing.

Later in the war their premier fighter was the ME-262 jet, the only truly operational jet in WWII--which Hitler initially misused as a bomber, thus saving the lives of many bomber crews.

Upon being discharged from the hospital, I passed through the 10th Replacement Depot for the second time. This was located at the Lichfield Barracks--an English army camp, three miles from Tamworth and twenty miles south of Birmingham--my home for ten days when first coming to England eight months earlier.

This was a pleasant interlude, as most of the British and American soldiers had departed for the continent. Many of the girls who had formerly been attached, now showed up at the dances and were promptly taken out of circulation. One eager, utterly gorgeous, raven-haired, stand-up beauty was picked by

me--but I had her for only for four evenings. Then my return trip to Normandy and back to the war!

Two other lieutenants and I were convinced that we would never make it back to our old outfits and feeling sorry for ourselves, attempted to transfer to an airborne unit. In our discussions, we thought that as long as we were to be targets, we might as well join a high profile airborne outfit and garner more attention.

Our requests were denied--probably because we lacked proper training--or because the paperwork may have been too daunting. This was fortunate, because our airborne units took severe pastings in the airdrop near Nijmegen, Holland--as a part of General Bernard Law Montgomery's "Market Garden" offensive--and again in March 1945, when his forces crossed the Rhine River at Wesel.

While at the Replacement Depot, a group of us officers were tasked with processing 200 black port-battalion soldiers in a single day--men who were desperately needed in Cherbourg to unload our supply ships. We had previously processed a similar sized group of white soldiers, which had taken us three days.

For reasons unknown, several of these street-smart black soldiers tried to short-circuit our limited time-table. We finally bit the bullet and took the entire contingent--with all of their gear--out to the center of the huge parade field and then took small groups away to get shots, verify records, mark clothing, check teeth, etc, etc. Most of these men were fine soldiers, but I had never heard such disgusting language from a few. MuthuhFuckuh--a new shock word in my lexicon--was every fifth word by some!

We boarded a train on the night of 20 July, and the next day loaded on an LCI and were on our way to France. LCIs (Landing Craft Infantry) accommodate 196 men below deck, so all of the officers slept topside near the bow. It was stuffy below, so six soldiers asked and were given permission to also sleep out on the deck.

For mattresses, they used a pile of barracks bags that were stacked amidships, along the narrow companionway. During the night--on our trip across the English Channel--a storm blew in suddenly, kicking up large waves. The next morning these men and a number of barrack bags were missing. Very likely, they had fallen overboard during the night and drowned.

Our colonel gathered all of the junior officers around and stated unequivocally "these men are AWOL, and if you don't wish to answer by endorsement for the rest of your army careers, you

had best agree"! Had they been white soldiers, the colonel's stance most likely would have been different. Overt racism was pervasive in the American army at that time--even though it wasn't called racism in 1944.

March 1993--The above story was sent to Department of Army. A standard form, acknowledging receipt of my letter was the only response. Such allegations would be difficult to verify and impossible to provide corrective action at that late date. I'm sorry that I waited too long to correct this injustice.

This was the only flagrant racist incident that I witnessed but I had heard of others--some of which may not have been true. A persistent rumor floating around prior to D-Day, was that several paratroopers cornered two black quartermaster soldiers wearing new paratrooper boots. At that time they were authorized only for paratroopers.

The troopers took the two up several stories in a bomb damaged building and said "so you want to be paratroopers--now jump"! They were pushed and I heard that they were seriously injured!

After Eleanor Roosevelt interceded on behalf of black soldiers, altercations between black and white soldiers were often resolved in their favor. Although most white soldiers of that era would disagree, this was a correct assessment because white soldiers were most often the aggressors when black soldiers--who sometimes called themselves "night-fighters"--were seen in the company of English girls. Since most of our enlisted men were from the southern states, they were often ready and willing to mix it up at the drop of a hat!

On 24 July we landed where Gap Assault Team #8 had landed seven weeks earlier, although in an entirely different setting--no welcoming committee and no fireworks! An exit road from les Moulins Draw leading up to St Laurent had been cleared of AT mines and most of the mess had been cleaned up. The 146ECB was bivouacked nearby in Cerisy Forest, so I rejoined them there.

The happenings on The Longest Day and on the several days following, were related to me by my boat team members. This information was lacking because I had been evacuated on D-Day. William Townsley noticed a pair of leather gloves lying on the sand near where a half-track had been blown to bits. He found that the left glove fit nicely, but when he tried to pull on the right glove, three severed fingers in that glove blocked entry. He laid the gloves back on the sand, but he did appropriate the dead man's razor lying nearby.

On D-Day evening, Edward Baumgartner looked up at a barrage balloon, whose steel cables discouraged low-flying enemy planes. He wondered what would happen if he were to fire a tracer round into it. He took the pragmatic approach and discovered that it burst into flames. Filled with the flammable hydrogen gas, it burned like the Hindenburg and the flaming debris fell near Leon Hill's foxhole, causing a wee a bit of excitement! With such scientific minds, one wonders how we managed to win the war!

A black Lt Colonel--the commanding officer of the 320th Barrage Balloon Bn--came by and asked if anyone knew what had happened to his barrage balloon. Of course no one knew anything about the incident! He probably was a bit skeptical, so he stayed the night and shared a foxhole with one of our men--most likely to forestall any more large flares in the sky.

An anti-aircraft outfit shot down the first three planes that flew over their area--small problem--all three were allied! The outfit was threatened with a transfer to the infantry if such a blunder occurred again, and so most likely, it did not!

On D+2, Leon Hill was with a crew removing the remaining obstacles, when a colonel told them to get a nearby Caterpillar tractor and push over a wooden post that was still standing. Leon was disinclined and said that there were mines buried in the sand. The colonel persisted and as Leon had predicted a mine blew off the track of the Cat.

Tellermine may have been buried in the sand, but a stronger probability is that this mine had fallen from a post during the obstacle demolition. The D-Day orders stated that mines were to be blown in place or removed before the obstacles were blown. Doyle Whatley in NCDU#42 stated that he climbed on sergeant "Crunch" Crayton's back to destroy mines atop the posts.

My Rolex Oyster was the only watch that continued to run after its D-Day dunking. It worked flawlessly until I lost it in a 1946 skiing accident on Mount Rainier. It was my graduation gift from Oregon State and had a screw-down seal on the winding stem that sealed out the water. One by one, the issue Hamilton watches gave up the ghost and died from their salt water bath!

Following are quotes from "THE FAR SHORE" by Rear Admiral Edward Ellsberg, relative to the D-Day landings: "The need to deal with those obstacles called immediately for the provision of what might well be a near-suicide unit in the assault force. Demolition teams, both engineer and naval, began feverishly to be trained for what obviously was going to be the most deadly task on the Omaha Beach on D-Day--to stand there on the wet sands in the early dawn at H-hour, practically sitting ducks for

every Nazi gunner still in action, and make no attempt to take cover while blasting and slashing to clear the paths through those mine-draped obstacles for our troop-laden landing craft to the seaward. And in spite of Nazi fire, to be damned quick about it too."

"The area around les Moulins Draw had been converted into a self-contained fortress area on the sands. It was a forbidding maze of trenches, machine gun nests and pillboxes, made humanly unapproachable from the sea by tangles of barbed wire, mine fields in the sands, and echeloned anti-tank ditches fifteen feet wide and twelve feet deep which blocked off every approach to the road leading off the beach and through les Moulins Draw. Coming about in the center of the beach area, the defenses at les Moulins, on the beach and on the heights above if taken together, had probably more deadly fire power concentrated there than at any other spot on the beachhead." (Gap Assault Team #8 landed directly in front of les Moulins Draw, but I doubt that the enemy fire there was more deadly than at many other places on Omaha Beach. In fact, any time you are being targeted--that place has deadly firepower!)

Ellsberg stated that there were no spotter planes on hand for the artillery and naval guns supporting the landing. They were shot down by our anti-aircraft gunners as they crossed the English Channel, even though the gunners had been told that we would have complete air superiority and any planes overhead would be "friendlies". Apparently, one gunner opened up and his companions followed suit! I don't remember seeing any small spotter planes over Omaha and I believe they were not there.

The Far Shore also tells the "PHOENIX" Story. These were the large concrete caissons that were to be towed to Omaha Beach shortly after the landings and sunk to form a breakwater. After being built, they were placed in a temporary storage location on the coast and sunk by flooding the interior compartments.

When the time came to refloat them, the seawater was pumped out, but during the storage period they had become firmly stuck in the mud and would not refloat. It is an interesting story of plans gone awry and of the innovations that were dreamed up to solve this vexing problem. With a lot of good common sense and a wealth of past experience, the caissons were refloated and towed to Omaha where they were put to their proper use.

In 1997, our battalion veterans had a bronze plaque placed on the 5th Engineer Special Brigade monument on the eastern sector of Omaha Beach. The demolition mission of the 146th Engineers was on the western sector of Omaha, so their plaque

should have properly been sited there--and ideally on or near the 6th Engineer Special Brigade monument.

When the time came to find a spot for our plaque, the only available spot--per Colonel Dale F Means of the American Battle Monuments Commission--was a space on the 5th Engineer Special Brigade monument. It was placed there, even though it is over a mile east from the easternmost border of the 146th ECB's sector. However, all four of our support Gap Assault Teams did land in error on the eastern sector, so our plaque location is not totally out of place!

The Plaque reads:

146TH ENGINEER COMBAT BATTALION

At H+03 minutes on 6 June 1944 our demolition engineers, plus attached soldiers from the 2nd Infantry Division and navy men from 13 Naval Combat Demolition Units, carried explosives ashore from 15 LCM landing craft to destroy the anti-boat obstacles on Omaha Beach. The main elements of the 1st and 29th Infantry Divisions then landed and overran the German defenders. For their valiant efforts, the 146th Engineers and the Naval Combat Demolition Units were awarded Presidential Unit Citations

THIS PLAQUE IS IN REMEMBRANCE OF OUR 35 MEN WHO DIED HERE

Ninety-one Combat Engineers in the obstacle demolition teams on Omaha Beach were killed on D-Day. Thirty-six were documented as being KIA from the 146th Engineers; and fifty-five from the 299th Engineers. The 299th ECB's pro-rated fatality rate was about double that of the 146th ECB, as almost 20% on Omaha Beach were KIA. They lost an additional eight men on Utah.

Their higher fatality rate on Omaha, was primarily due to two instances where their explosives were detonated prematurely by mortar or artillery fire--and because most of their DD-Tanks were swamped by the large waves on the trip from their LCT to shore. These tanks were to have been ashore to furnish additional cannon and machine-gun firepower for the Gap Assault Teams and the infantry.

In 2000, the 146th Engineer veterans bought bricks for the D-Day Museum walkway in New Orleans, to be arranged as follows:

**146 ENGINEER
COMBAT BATTALION
FIFTEEN
HIGH EXPLOSIVE**

**DEMOLITION TEAMS
OMAHA BEACH
H-HOUR + 3 MINUTES**

The attempt to have the bricks laid in time for the opening ceremony on the 06 June 2000 anniversary was a fiasco, as the individual bricks were laid in a haphazard fashion all around the area. A follow-up in year 2001 got additional bricks laid properly en bloc near the entrance, so the initial fiasco had its rewards--we had our battalion's message spelled out right near the main entrance!

Below is the inscription on the Woolacombe Memorial, as viewed by our members in 1994--prior to our participating in the fiftieth anniversary of the D-Day landings, at the Omaha Beach Cemetery in Normandy:

THE WOOLACOMBE MEMORIAL

IN THE AUTUMN OF 1943 THE UNITED STATES ARMY ASSAULT TRAINING CENTER WAS ESTABLISHED AT WOOLACOMBE WITH HEADQUARTERS IN THE VILLAGE AND ENCOMPASSING WOOLACOMBE AND SAUNTON SANDS, THEIR ADJACENT HINTERLANDS, AND THE SEA APPROACHES.

ON THE SIXTH OF JUNE 1944 THREE ALLIED ARMIES, BRITISH, CANADIAN AND AMERICAN INVADED THE CONTINENT OF EUROPE OVER THE HEAVILY FORTIFIED BEACHES OF NORMANDY.

IT WAS THE GREATEST AMPHIBIOUS ASSAULT IN MILITARY HISTORY AND WAS A DECISIVE BATTLE OF WWII.

THIS MEMORIAL IS DEDICATED THOSE THOUSANDS OF AMERICAN SOLDIERS WHOSE PREPARATION ON THE SANDS OF WOOLACOMBE AND SAUNTON IN THE MONTHS PRECEDING D-DAY CARRIED THEM TO GLORIOUS VICTORY ON THE SANDS OF NORMANDY.

**COMMISSIONED AND PRESENTED BY
STANLEY V. PARKIN OF PARKIN ESTATES, WOOLACOMBE
DEDICATED BY BRIGADIER GENERAL PAUL W THOMPSON
U.S. ARMY RETIRED, COMMANDING OFFICER OF THE UNITED STATES ARMY
ASSAULT TRAINING CENTRE. 1943-1944**

NORMANDY to PARIS

VII

I was happy to be back in my old outfit, and to learn more of our D-Day exploits. The failed bomb attempt on Hitler's life by thirty-seven-year-old Colonel Claus Philipp Maria Schenk Graf von Stauffenberg had taken place one week earlier on 20 July. Stauffenberg was executed one day later by a firing squad.

"Operation Cobra"--the planned breakout at St Lo--was launched on 25 July. Many bombs fell short of the front line and killed a number of our troops, including General Lesley McNair--head of the army ground forces. Blunders such as this are always troubling to ground troops and we were no exception. It is worrisome when bomb, artillery, mortar or small arms fatalities are delivered by the enemy--but even more so, when delivered by your erstwhile friends in so-called Friendly Fire!

In July, a meeting was held by the 102^{dn} Cavalry Squadron, in a small schoolhouse near Bricqueville, to devise a means for our tanks to break through the hedgerows. Hedgerows were a tough mingling of roots, vegetation, and dirt, four to ten feet high--used in lieu of fences to separate the French farm fields.

They were ready-made defensive positions and the German infantry used them very effectively. Many were hundreds of years old and so were an especially difficult tank obstacle, because they exposed the tank's thin under-belly to anti-tank guns and panzerfausts when they attempted to crawl over the top.

The organic engineers tried using explosives to blow holes through the hedgerows in some earlier trials, but this activity alerted the Germans as to the tank's intended path and they then blunted the attack before it could gain momentum. A short distance beyond, German 88s were positioned to destroy any tanks that had made their way through the hedgerows.

Captain Arthur Hill--H & S Company commander--suggested that sharpened, short, heavy steel rails be welded to the tank's front so they could blast on through the hedgerows without prior

activity. The 102nd Cavalry Squadron's Sergeant Curtis Cullin then built the first prototype, using heavy angle-irons from the hedgehogs that had been cleared from Omaha Beach.

A trial run was a resounding success, so a 24/7 construction project was undertaken to equip as many tanks as possible with the "Rhinceros"--as the modified tanks were labeled. Operation Cobra was delayed until adequate numbers of tanks were so fitted. The Rhinos became an important factor in the breakout at St Lo.

At my first opportunity I asked Lt Colonel Isley for a platoon. That had been my dream since arriving at the Assault Training Center in December 1943. Instead, I was given several assignments at headquarters--Reconnaissance Officer, Assistant Mess Officer, Communication Officer--and later, Bomb Disposal Officer.

Since the Battalion was short several engineer lieutenants who had been wounded, I won by default. I took command of the third platoon, B-Co from an infantry lieutenant who had been the acting platoon leader since shortly after D-Day. He returned to the infantry and we saw him on several occasions prior to the Bulge. He told us then, that his men had machine-gunned several German prisoners in September, when they withdrew from their initial penetration of the Siegfried Line near St Vith.

They had hung signs on the captives backs that read: "We fought for Hitler--too long". This was similar to the Malmedy Massacre by the troops of SS Colonel Joachim Peiper during the Bulge. I have no reason to doubt his account because of his detailed description and also because of his calloused demeanor.

Captain John K Howard was B-Co commander; Lt Freeman Martin the administrative officer; Lt John Caldwell--"Big John"--later killed in Korea--had the 1st platoon; Lt William "Mother" Trescher--killed in November 1944--led the 2nd platoon.

About half of my Gap Assault Team #8 ended up in the third platoon. Most of them were from Texas, Oklahoma and Louisiana and had worked on farms, in the woods, or as roustabouts in the oil fields and so did not worry about getting their hands dirty. There was a sprinkling of outsiders and all of the officers were from other states.

Platoon Sergeant Homer Jackson from Bowie Texas was a real treasure. Jackson had the respect of the men and at 6'4" and 245 pounds, had their rapt attention! He had a football scholarship in hand at a major Texas university before the army

grabbed him. He could lift me off the ground with one arm and did his best to keep me from making too many dumb mistakes.

In England when one of his men developed the habit of sleeping late and failing several times to make reveille, Jackson flipped over his bunk--blankets and all--and stomped him savagely. He was never again late for reveille, although he still considered himself to be one of the favored few, as he was from a rich family and so was not required to conform!

The 146th had trained at Camp Swift, Texas--as had the 612th Tank Destroyer Battalion. We subsequently bumped into them at the Assault Training Center; several times in France; during the Bulge at Hofen where they were attached to the 99th Infantry Division; in the Ruhr; and at long last, in Czechoslovakia.

The 612th and the 146th did not hit it off too well in Camp Swift. That C-Co engineers stole, cooked and ate Oscar may have been a clue. Oscar was the TDs mallard duck mascot, that had been messing up the engineer's area with his dropping. When a diligent search by the TDs found duck feathers in the A-Co garbage can--put there by the perpetrators from C-Co to divert suspicion--the battle was joined!

The MPs and a few officers combined to break up the melee. Major Isley refused to allow the MPs to arrest one of his men, after that soldier had decked an officer who had joined in the fracas. Isley did not want to be shorthanded, as his battalion was soon to be sent overseas.

To renew the festivities, all it took was an engineer to quack like a duck when the 612th TDs were nearby. The enmity finally died down when we entered Paris, as more interesting things than fighting were discovered. They then acted as if we were their long lost buddies, although they still called the 146ECB members "those damned duck-eatin' sons of bitches"--but with considerably less rancor. Since both units were in V-Corps throughout WWII, we were often bivouacked nearby.

One of the Camp Swift exercises was demonstrating the use of explosives in blowing road craters by placing explosives in culverts below the road. On one occasion, several charges were detonated and the students then gathered around for a critique, without allowing an adequate safety delay. In the delayed explosion that followed, several men were killed and a few more were severely injured. It is not generally known, but many engineer training programs had such accidents. Explosives are dangerous and must always be treated with respect!

Shortly after my return on 27 July, my Jeep driver--Chester King--and I were snooping around in the hedgerows and found

twenty remote-controlled, battery-powered miniature tanks that were stacked along the road. These electric "Doodlebugs"--which looked very much like a five-foot long version of the original WWI British tanks--were designed to carry explosives into our lines. We speculated that these interesting little vehicles were brought there under General Rommel's direction to help contain our forces within the beachhead, should we actually land on Omaha.

An early job after being assigned to the third platoon, was to destroy a number of Tellermines stacked in an apple orchard among the hedgerows. These are round, flat, anti-tank mines with an eleven pound charge of TNT and a screw-in pressure detonator cap on the top center. The safest way to dispose of mines, is to blow them in place. By so doing, there is less chance for an accident--but such disposal is not always practical.

I'm not sure if the clear area was inadequate, but for whatever reason, I decided to deactivate these mines by removing the detonators. This requires that one man only be in the immediate area, so that in case of an accidental explosion, only he would be killed. I chose to do the deactivating because of my previous explosives experience and because I had lost a great guy--Melvin Vest--to an accidental TNT explosion just prior to D-Day and was apprehensive about losing others.

The job was uneventful and the mines were hauled away for routine disposal. However, about three weeks later, a V-Corps directive arrived that warned against disarming Tellermines by unscrewing the detonators. A new type of detonator sheared a safety wire when it was screwed onto the mine body. Unscrewing that detonator caused the mine to explode instantly. Luckily, these mines had been in place for an extended period and were not equipped with the new detonators, or I would have been sent "Somewhere Over The Rainbow, Way Up High"!

Some recent disarming attempts had resulted in fatalities, which triggered the V-Corps investigation and prompted the directive. One infantry platoon leader had assembled his entire platoon around to demonstrate the disarming procedure. He and several of his men were killed and a number of others were seriously wounded. Such fatalities continued to happen for some time--apparently the directive was not being read or understood.

Our first important platoon job was in Torigni (Toree'nee)--a completely destroyed town eight miles SE of St Lo. It was a pile of rubble, but a number of dangerous still-standing masonry walls had to be removed to allow truck traffic to use this main

supply route to Vire. The walls were brought down by attaching a steel cable between two separated D-7 Cats. As the dozers moved forward in unison, the walls were sheared off at their foundations and the rubble was then trucked away.

Since we were within artillery range, steel helmets were mandatory. An infantry general touring the area, saw two of my men sitting boldly upright in their truck, one wearing a green derby and the other a black top hat--undoubtedly hats "liberated" from one of the houses. The chewing made it down the chain of command to me and although the general must have been duty-bound to enforce a standing directive, I'm sure he had to suppress his own chuckle.

It was in the totally destroyed town of Torigni where I was first introduced to Calvados. A little Frenchman--who spoke no English--stood in his doorway and offered me a small glass of clear wine. I thought he was rather chintzy because it was such a small glass, so I tossed it off in one gulp. What a rude awakening! He had to summon some real restraint to keep his beret from popping off his head.

That diabolical fluid ran around inside my skull like quicksilver. My eyes watered, my throat and inner ears burned and I couldn't regain my breath to speak for almost a minute. That Calvados burned all the way down to my boots! I later found that this Calvados was a triple distilled apple brandy, named for the Normandy province of St Severe Calvados, and was almost 150 proof.

My men discovered that Calvados made a great lighter fluid. It burned with a faint blue flame and lighted much more readily than gasoline. After a few refills, the lighter's cotton filler was flushed out with gasoline to remove the non-volatile residue and it was then good as new. A bottle of 80 proof Calvados--bought in 2004--was nowhere near as flammable, nor as tasty!

Cheese, milk, wine and brandy were the main food and drink in Normandy. I was surprised to see farmers wearing hand-carved Dutch-style wooden shoes, made from a single block of wood, but they must have been a practical footgear for wearing out in the mud and manure.

About this time--and without my knowledge--most of the tools from the platoon dump truck were relocated to the three squad trucks and the platoon truck was then loaded up with liquid consumables. I couldn't understand how my men were occasionally turning up so completely snockered during our trip across France, because we were always bivouacked away from the towns and civilians.

After we had entered Belgium, platoon tool corporal Leslie Teague consumed a bit too much at one sitting and proceeded to eat out Captain John K Howard--for no apparent reason. After a very thorough search--we found the almost depleted cache, but by then it was too late. Almost all it had been consumed!

The Louisiana contingent were very knowledgeable about the Normandy red wine and tried their best to enlighten the rest of the platoon. I admit that initially I did not like this heavy bodied wine, but after a time learned to appreciate its robustness.

All around Normandy--on the ground, in streams, and in the trees--we found quantities of thin aluminum-foil strips. We had no clue as to what it was, but later learned that it was called "chaff" or "window", and that it had been dropped by our planes on D-Day. It was to sprinkle down in a diffuse pattern over a wide area to confuse the German radar defense and it did as planned. On occasion it was wadded into loose balls, some over a foot in diameter.

This subterfuge--coupled with the British disinformation program--helped to gain a foothold in Normandy. Chaff appeared to be a large blob on the German radar screens and provided a space for planes to fly where information on the azimuth and altitude could not be determined.

In the meantime the allied assault forces were heading toward the Normandy beaches. Had the Germans been able to unravel our ruse, their 15th army at Calais plus other available nearby troops, could well have been moved to our invasion sites immediately after D-Day and thwarted our efforts.

Another technique picked up radar pulses and introduced multiple time delays. These images appeared to be a large number of planes in formation. (Per Jack Riley--a member of my electrical engineering graduating class at Oregon State--the Germans used a similar technique to hide the escape of the battleship Scharnhorst from a Norwegian fjord, where it had been bottled up for an extended period by the British navy.)

A number of British orchestrated disinformation programs--as defined in Bodyguard of Lies by Anthony Cave Brown--convinced the Germans that our main landing effort would be in the Pas de Calais area and not Normandy, as it was much closer to England. Such British ruses were effective before, during and after 06 June 1944, and thus saved many allied lives.

At a 1998 reunion at Oregon State I found that Jack Riley had worked on radar countermeasures while at Harvard with the Radio Research Laboratory. Following is his story about the

chaff. "At first the engineers tried using straight strips of aluminum foil because they were easy to make, but they tended to roll up. They then decided to bend them in a V-shape like a little piece of angle iron, 1/2 wavelength long and as narrow as they could make them. They got a bunch of paper cutters and let the aluminum foil hang over the cutter on the table about 1/16 inch to make a bend, then push out the foil another 1/16 inch and cut it off."

"The chaff worked fine, but they couldn't make much per hour, so it did not look to be practical. Later, several of the engineers went out to lunch and got into a discussion about the problem, then came back by a hardware store, bought a rotary hand-propelled lawnmower and had a machinist file every other blade smooth. They then rigged up some feed rolls and that afternoon made more chaff than their total previous production."

"An engineer went to England and hitched a ride on a bomber to observe how the chaff was working. He found that some the crews were throwing the chaff boxes overboard without opening them. A little training cured that and the chaff was scattered all along the route where radar detection was a problem. Chaff and other countermeasures were credited with reducing the losses on a 1000 plane raid from 100 planes and crews, to 10 planes and crews. Thousand plane raids were a daily occurrence at that time."

"Hitler was one of our greatest allies. After the war, I worked with a German scientist who had built a successful 10cm radar, which would have greater accuracy than the 60cm (500 MHz) radars the Germans were using. The 10cm (3000MHz) radars would have been much harder to jam. Our friend Adolph had personally made him dismantle the equipment, and he was forbidden to work on it again!"

"There was a jamming transmitter on a Dover cliff that spit random noise at Germany. Radar equipped enemy planes chasing returning flights would see a screen full of snow, and couldn't get any range data. Planes as far away as Italy could use the signal as a direction finder. The Dover cliff jammer signal was the first over-the-horizon example of reception at 500MHz"

"We had a prototype with a high gain antenna on the roof of our Cambridge lab. One night the block warden stormed into the Commander Hotel, about five blocks away, and demanded that the neon lighted sign on the roof be turned off. The manager showed him that the switch was off and the fuses were pulled. We did not tell anyone how the neon sign was being lighted."

"We also didn't volunteer any information about how a long strip of aluminum foil that was being tested as a radar reflector happened to drop on the wire for the electrified New York, New Haven & Hartford rail line, causing an arc that disrupted service for five hours--or about the little corner reflector that landed in the intersection at Somerville Square and started a parachute bomb scare."

Jack returned to Oregon State after WWII, received a Master of Science in physics, and did post graduate work at Harvard. He lived in Portland, Oregon as of year 2008.

I never ceased to be amazed at the audacity of our Piper Cub pilots who soared to and fro near the front, spotting for our artillery and daring the Germans to shoot at them. On the rare occasion when the enemy just could not resist, they paid for their folly by getting a truckload of artillery rounds dumped in their laps. Only the truly uninitiated ever made that mistake--and surely never twice!

After passing the Argentan-Falaise Pocket there were fewer targets, so we saw less of these daring little bugs until the Bulge. I was unaware that they had not been around on D-Day because they were shot down by our antsy anti-aircraft gunners--per Rear Admiral Edward Ellsberg in "The Far Shore".....p.65

After the St Lo breakout, we traveled south through Mortain on 04 August--which at that time was a relatively quiet area. Generalfeldmarschall Guenther von Kluge lost a vicious battle beginning on 07 August, while attempting to drive to Avranches on the Atlantic coast and cut off General George Patton's Third Army from the rest of the allied forces.

With superb artillery support, it was at Mortain where the 30th Infantry Division made their gallant stand. This was after Patton had sealed off the Cherbourg peninsula by driving to Avranches and then had swung east, with only the 9th Air Force as his southern flank protection.

Our allied armies destroyed or captured about half of the German Seventh Army between Mortain and Caen in the Argentan Pocket--made possible by the German attack at Mortain, which delayed their retreat and allowed our forces time to encircle them. The British had broken their "Enigma" code and so we knew of their attack plans and lured them into a trap.

While the battle was raging, von Kluge attempted to contact the Americans--possibly to surrender. He committed suicide with cyanide a few days later, when he was implicated in the 20 July 1944 bomb attempt on Hitler's life and was ordered to report back to headquarters. He sensed that such an order did not bode

well for his welfare, so he took the path of several other generals. The later suicide of General Erwin Rommel was almost a carbon copy of General von Kluge's.

I saw one devastated area in the Argentan Pocket, where one could walk for one hundred yards on destroyed German vehicles and the dead, without having to step off onto the ground. Destruction was utter and complete--due mainly to our P-47s bombing and rocketing the tightly packed immobilized German columns. Once our P-47s had shot up the lead vehicles, their escape was blocked and it was "shooting fish in a barrel".

They used a great many horses to move their artillery and supply wagons, so dead horses and dead German soldiers were everywhere. Horses often had four legs--and sometimes another stump--extending upward into the air from their bloated bodies. Only through superb generalship were the Germans able to extract about half of their vehicles and troops and escape to the east.

I had great empathy for those poor Germans but happy that we had total control of the air. Although the German army was shattered and much of their equipment destroyed or abandoned, some escaped from the pocket and were attempting to make their way back to Germany.

All through France and Belgium, we captured small enemy contingents, often found by spotting loose stools under horizontal logs--their makeshift latrines. Possibly the result of their sauerkraut diet?

It was at Mortain where I saw my first Tellermine fatality. A soldier had been blown apart so completely that his femur was dislocated from the hip socket and the shiny joint surface was exposed--sickening!

It was near Mortain where I saw my first civilian fatality--a pretty young woman with beautiful long jet-black hair, who apparently was attempting to flee the battle area. She was killed by artillery fire on a backwoods trail as she was heading for safety. Such civilian fatalities continued to result from the artillery fire from both combatants--and by our bombings of enemy controlled areas.

Without advanced notice, we suddenly were given orders to support General Leclerc's French 2nd Armored Division that was to liberate Paris. En route, we were intermingled with them and they stopped often along the way to toast their happiness at being back in their old haunts. Then to catch up with their units, they passed our convoy down in the roadside ditches.

Deep ditches, steep shoulders, steady rain and too much liquid happiness, ended with a number of their USA provided

vehicles belly-up beside the road. These Frenchmen were the ultimate wild drivers!

Leclerc was the nom de guerre of the aristocratic Philippe Francois Marie comte Leclerc de Hautecloque--an army captain who rallied to the cause of General Charles Andre Joseph Marie de Gaulle after the French surrender in 1940. He assumed the name of Leclerc to keep reprisals from being visited upon his family in Vichy France. He was a forceful officer so he and the American generals often had differences of opinion on how the war was to be fought, but he and General de Gaulle often prevailed--sometimes to our army's detriment!

Along the way we occasionally chatted with the French resistance fighters, called "Free French of the Interior--FFI" It was not easy to converse with them, but with gestures and a few bits of French, we managed to get our message across. Most often they just wanted to let us know what they were doing to help our cause--such as blowing up trains and railroad bridges, cutting phone and power lines, ambushing German convoys and patrols, and generally raising havoc with the enemy.

The British code messages to the FFI over the civilian radio channels were preceded by the beginning notes of Beethoven's Fifth Symphony. These FFI soldiers often let us know their allegiance by humming these notes and giving the Churchill's "V for Victory" hand signal.

Near Choisel, where B-Co bivouacked for one night prior to entering Paris, I had a long and rancorous discussion with the leader of a large communist FFI band--most of the FFI bands were communists. He spoke English well enough to make conversation possible, and he wasted no time in trashing the "Decadent Americans". We had delayed the Normandy invasion so the Germans could devastate the USSR and kill Russians; Lend-Lease was American propaganda; the Russians were building all of their jeeps, tanks, guns and planes and they were doing most of the fighting and dying.

At the time I was incensed, but in the cold gray dawn of history, many of his assertions were proven correct. The Soviet army was facing a German force twice the size of their army in France and they were building many of their tools of war, including their superb T-34 tanks, close support aircraft and massive amounts of artillery and small arms.

What he chose to ignore--or he may have been purposely misinformed, was that the United States had supplied monstrous amounts of war materiel on railroads through Turkey and on the Murmansk run--where we suffered terrible losses of men and ships

by the German air-force. Still, too few Americans give the Soviets credit for their major contributions in the winning of WWII--a magnificent effort that we all should acknowledge!

The liberation of Paris began on 19 August 1944, by Henri Rol-Tanguy, when his communist resistance bands attacked the Germans. He ignored Eisenhower's order that no uprising was to take place without his approval. Eisenhower had planned to bypass Paris, in order to maintain hot-pursuit of the routed Germans, and then liberate Paris at will at some later date.

This attack surely would have been crushed had not Swedish Consul-General Raoul Nordling engineered a cease-fire, which lasted for only slightly more than a day, but that was enough time for the sympathetic General Dietrich von Choltitz to save Paris from the utter destruction demanded by Hitler. He was taken prisoner by the FFI on 25 August--liberation day.

This communist uprising extended the war by forcing allied commanders to revise their well thought-out plans--but it is also true that the premature attack saved Paris from the systematic destruction demanded by Hitler. The Seine bridges, Eiffel Tower, power plants, water sources and major industrial areas had the demolition charges already in place.

It is likely that von Choltitz delayed the demolition--in part to maintain his retreat options--and that, plus the early communist uprising kept Paris from being devastated! ("Is Paris Burning", a book by Larry Collins and Dominique Lapierre--spells out the liberation in detail)

On 24 August Lt Leonard Fox--our Battalion Reconnaissance Officer--led an eight man contingent in two jeeps into Paris to classify six Seine bridges for the tanks of the French 2nd Armored Division. The 2nd Armored received the plaudits for the liberation, even though they were massively supported by the US 4 Infantry Division and attached American troops--including the 102nd Cavalry Group, and the 146th Engineer Combat Battalion. All were from V-Corps, First Army--not from Patton's Third Army, as many authors have stated!

Ernest Hemingway, Andy Rooney and Ernie Pyle were in Paris at that same time, but we did not see these war correspondents. At Rambouillet--near Paris--Hemingway led a group of FFI that captured a number of Germans and also provided on-the-ground intelligence. Although most of the intelligence was flawed, it still enhanced "Papa" Hemingway's ego.

Per Lt Fox in 2001: "The 146ECB--and possibly all of V-Corps was attached to 3rd Army at the time of liberation of Paris. I often wondered how the 146ECB happened to be involved with

Patton's 3rd Army at that time. The 146ECB was assigned to support the French 2nd Armored Division, whose orders were to liberate Paris."

CORRECTION 12 JUNE 2001 Per the 146ECB Historian--Captain Stephen Pipka: "After the fighting at Vire, near St Lo and Torigny, V-Corps was to advance to Argentan on 04 August. The situation was very confused in the Argentan, Ecouche & Sees area--the 80th and 90th US Infantry Divisions and the French 2nd Armored Division operating there under XV-Corps, 3rd Army. They were on the right flank of V-Corps."

"On 16 August the 80th and 90th divisions, plus the French 2nd Armored Division were attached to 1st Army's V-Corps for the attack on Chambois, NE of Argentan. As far as I know, the 146th Engineer Combat Battalion was never a part of 3rd Army then. Upon completing the mission, the 80th and 90th divisions returned to their assignment in 3rd Army, but the French 2nd Armored Division remained attached to V-Corps until after Paris was liberated. I can see why many troops didn't know what army they were in! On 22 August 1944, V-Corps mission of liberating Paris using the 2nd French Armored Division, the US 4th Infantry Division, 102nd Cavalry Group and attached forces. This was accomplished on 25 August."

Liaison officer Captain James Doyle and jeep driver Fred Heischman drove into Paris on 25 August to learn how the battle was progressing--as the French were not keeping us informed. Per Fred: "Paris was a madhouse. The FFI in their little black sedans were racing everywhere. General Leclerc was at a banquet in Hotel des Invalides--a large military complex--so Leclerc sent us to see his G-2 at the Montparnasse railroad station. There we managed to decipher their French, learn the situation, and report that information back to V-Corps".

Even after four years of German occupation, Paris was still a grand city. Many of the beautiful slender women could well have been fashion models. Conversely a number of women in ripped clothing--with their hair crudely chopped off close to their scalps--were being hazed by the civilians. They had fraternized with the German soldiers and some had even married them--at least on the weekends! I witnessed no beatings but saw bruises and lumps on some who had been severely thumped about by their countrymen.

Nothing was too good for "les Americaines". Champagne, wine brandy, hugs and kisses were dispensed with wild abandon as we passed through Paris on 25 August. 'Twas most enjoyable!

Leonard Fox saw General Charles de Gaulle leading a parade through downtown Paris on 25 August. Soon after, he thwarted the communist attempt to take control of Paris and then masterminded his own takeover. His fighters took over the prefecture of police and so de Gaulle controlled all of France!

On our trip through Paris on 25 August, 3rd platoon began repairing the cobblestone streets where the French resistance fighters had ripped up the heavy paving stones and piled them into barricades. We found that the civilians did a much better and faster repair job, so we formed a cordon around the area and stood around and watched them work. The stones were laid on a layer of flat sand and then had sand swept into the cracks--leaving little evidence of their recent usage.

Lt Leonard Fox was hiding behind a similar barricade, when a Frenchman scrawled a message on a French franc note, that said--as far as Fox could decipher--that there was a sniper in a hotel across the street.

Having the Frenchmen doing our repairs allowed us to converse with the locals--read women. Our Louisiana Cajuns had an overwhelming advantage because of their language familiarity.

We spent that night near the outskirts of Paris. Captain Howard, said that he hadn't seen such enthusiasm for pitching pup-tents since the battalion had left Camp Swift, Texas!

Bill Beller, John Murphy and Durwood Owens appropriated a jeep and slipped into Paris that evening. Bill was the jeep driver and so felt compelled to return to the company area, but the others stayed the night.

As a result, all were court-martialed, each fined \$100 and confined to the company area for three months. A \$100 fine in 1944 was not insignificant and would be equivalent to ~\$1,500 in 2014 dollars!

In November, A-Company and C-Company were re-deployed from their road maintenance job, to fight as infantry at Vossenack in the Hurtgen Forest, where every able-bodied soldier was needed for that effort. Their mission--rescue a regiment of the 28th Infantry "Bloody Bucket" Division, that was being decimated. When one of the way-wards distinguished himself by taking out a machine gun, Lt Kehaly recommended him for the Silver Star. Captain Ball denied the award because that soldier was supposed to have been confined to the company area and not have a rifle!

Truck driver Earnest Hall, often wondered how other drivers were able to backfire their trucks on cue--to gain the attention of the girls as they entered towns. The secret--turn the ignition key off and then back on while keeping the gas pedal

depressed. He tried it with spectacular results--he either turned the key off for too long or had the gas pedal depressed too far, because he blew off the muffler and tail-pipe in a blast that rocked the neighborhood and shook up the locals!

PARIS to the SIEGFRIED LINE

VIII

Shortly after passing through Paris, a group of us were sitting under the stars joking about what we could tell our families regarding the war. Except for our D-Day demolition mission, we had not been unduly impacted, so we decided that we'd say "It was just too horrible to mention" and so would not have to admit that we had done nothing particularly note-worthy.

While talking, a meteor to the east flashed into the sky and then snuffed out. We could not understand how a meteor could fly skyward in that manner. Days later we heard that V-2 rockets had begun striking London. Almost certainly, this is what we had observed.

Often the topic of conversation migrated to the stupidity of war and why our young men were fighting other young men who had no animosity toward one another. These conversations often took place after a platoon member had received a package from home--candy, cookies, cake or other goodies--items that encouraged a communal gathering. Cookies were usually beaten into crumbs from the trip across, but my mother's heavy, brandy-flavored fruitcakes were one offering that always arrived intact--and so was polished off with gusto.

We knew why we were fighting--because the leaders of France and Great Britain had not confronted the Germans in the mid-30s when the Rhineland was reoccupied in defiance of the Treaty of Versailles--a time when Germany was militarily weak and would have backed down.

A statement in this regard by General Douglas MacArthur is noteworthy, even today:

"The history of failure in war can be summed up in two words--too late":

"Too Late in comprehending the purpose of a potential enemy";

"Too Late in realizing the mortal danger";

"Too Late in preparedness";

"Too Late in uniting all possible forces for resistance" and

"Too Late in standing with one's friends".

Whenever we moved rapidly, the platoons were often deployed separately and were attached to a squadron of 38th Cavalry with only modest company oversight. At such times we were forced to rely on K-rations in place of mess-hall food. This was before a new improved K-ration was brought forth. The original was less than impressive. The C-rations were much better--and especially the ten-in-ones.

On occasions such as this, one of our gifted pilferers would liberate eggs and/or some French or Belgian chickens to augment our flavored sawdust. This was not an approved means of acquisition, but we did not advertise our thievery and although our superior officers were undoubtedly aware of some of these forays, we were never officially chastised.

In late August, my 3rd platoon and a platoon from the 2nd Ranger Battalion were attached to a troop of the 38th Cavalry Squadron--one of the premier fighting outfits in WWII--and the only cavalry squadron that received a Presidential Unit Citation. (The 38th and 102nd Cavalry Squadrons combined to form the 102nd Cavalry Group--a confusing relationship.)

For a time across France and Belgium, our small mobile force was close behind--or in and among the retreating Germans and usually in front of our infantry. We knew that the enemy was close-by when we were being targeted by their mortars!

We removed mines and road blocks while the Rangers and Cavalry provided our cover and did the necessary fighting. Several evenings we played softball with these Rangers--many of whom displayed multiple puncture wounds when stripped to the waist. They took a terrible pasting at Pointe du Hoc on the west end of Omaha Beach, where their mission was to scale the bluffs and silence the large caliber guns that were sited to fire along the length of both Omaha and Utah beaches.

Unknown to the Rangers, the guns had been removed from their original emplacements and relocated nearby in an alternative firing position, to escape allied bombings. After the Rangers had located the guns in a nearby woods, thermite grenades--placed almost under the noses of the German defenders--were used to destroy the gun's traversing mechanisms. Many Rangers were casualties on a mission that was based on faulty intelligence. Even so, they did prevail.

A Ranger lieutenant, in a long rambling discussion one evening, admitted in having two episodes of combat exhaustion. One was at Pointe du Hoc and the second in the hedgerow area--brought on by the stress of the fierce close-in firefights.

Unusual, I thought in such a superb force as were the Rangers, but apparently extreme stress is not too discriminating!

With a few exceptions, our D-Day intelligence had been excellent. Information given to our Gap Assault Teams regarding the location of the various Omaha beach defenses--even down to the individual obstacles in each Gap Assault Team's demolition area--was reasonably accurate. This included the weight bearing capabilities of the sand and shingle.

However, a major intelligence flaw was overlooking the battle tested 352nd Infantry Division that had fought in Russia and had been brought in to bolster the Omaha Beach defenses several months prior to D-Day. This was an intelligence goof about on a par with underestimating the major German buildup in the Ardennes just prior to the Bulge.

We usually slept in bedrolls under the stars and away from the towns in order to maintain security. The weather was clear and only occasionally were we washed down--as happened one night when I unrolled my bedroll--fartsack in GI speak--in a shallow ditch on a hillside so as to not roll down the hill. That night, rain filled the ditch and gave me an unplanned bath!

Later, as a line of skirmishers, 3rd platoon checked out a large woods for German stragglers. We arrived back at our assembly area without any Germans, but minus two of our men. On our next trip through the woods in an attempt to find them, we captured two Germans manning an MG42 machine gun, who swore that they had not killed our men--nor had they even seen them. I told them, that if they were lying, they would never live to see a PW cage!

I'm not sure how we could have missed these guys on our first pass, but obviously we did. Our two characters caught up with us a few days later, having spent the time in a French village. Undoubtedly there was at the least one good looking daughter in the mix!

During a lull in the activity, several of us attempted to emulate an Audi Murphy movie by firing an air cooled .30 caliber machine-gun from the hip. By holding the hot barrel with a heavy leather-gloved left hand and with the ammo belt slung over my shoulder, I--and several others--cut loose at objects a few hundred yards away on a brushy hillside.

This was an unstable gun mount, so the bullets scattered all over. We then spent considerable time flailing away with wet gunny sacks on the grass fires that were started by the tracers and incendiary rounds.

While on a Jeep reconnaissance run with Chester King, we spotted a poorly concealed Tellermine in the middle of the black-top road. I did not want to blow it in place, as that would have cratered the road surface. Since Tellermines often had an anti-personnel device added to discourage removal, I carefully exposed the mine's handle, attached a tent rope and pulled it clear from the safety of the roadside ditch.

This was a simple maneuver but I later learned that the Germans sometimes anticipated such moves and emplaced anti-personnel mines in the adjacent ditch--to be triggered by a pull-igniter on the Tellermine. It is important to be aware of such ingenious schemes, so as to not come up missing too many body parts!

I doubt that any WWII soldier would dispute the Tellermine's superiority over the American AT mine. Its larger explosive charge, lower profile and more sophisticated igniter made it an ideal AT mine.

On one occasion, one of our Jeep drivers failed to notice an American AT mine roadblock as he came barreling to a stop. He jammed on the brakes and his front wheel skidded over the top of the mine--pushing off the metal "spider" without detonating the mine. Had he made that mistake on a Tellermine, he may not have survived!

Their long, narrow, square-bodied Riegel mines--that my platoon discovered a few months later in an unfortunate episode that involved two destroyed D-7 Caterpillars at Gemund--between Monschau and Remagen--were also a formidable AT mine that was added to their arsenal late in the war.

Between Paris and Rheims, we came upon a seven foot high pile of trashy debris stacked around an oil drum in the middle of the blacktop road. A number of pine trees had been dropped to form an abatis fifty yards beyond, completing the roadblock.

Multiple-row AT minefields were visible in the flat fields on either side of the road to discourage detouring around that road segment. These appeared to be their standard AT minefield, but as it was laid out in soft ground, we were not inclined to attempt to remove the mines and build a bypass around that section, as it would have been too time consuming.

We pulled out two mine detectors to check the road shoulders but found that both were inoperable--not all that unusual, since they had been used little since Normandy. After checking for hidden AT mines, the pile of debris was pulled down from a distance with the truck winch. Meanwhile I deactivated and

removed a single Tellermine with a pull-igniter, well concealed in the abatis and we began removing the trees.

About that time, Lt Kehaly's platoon was a bit too gung-ho in their attempt to remove a similar abatis. Without properly checking for concealed mines, they grabbed the tree branches and heaved. The resulting explosion wounded several--a few seriously. That likely was also a Tellermine with a pull igniter.

While I went back to where my other two squads were working, in an attempt to get an operable mine detector, this squad was to pull out the trees while making certain that the truck remained on the blacktop. Upon my return I saw our dump truck squatting beside the road, looking like a badly mangled mechanical duck.

While snaking out the trees, the right front wheel had strayed off of the blacktop and had been sent into a low orbit by a Tellermine in the road shoulder opposite the junk pile. The Germans had expected us to veer off onto the shoulder, in bypassing the junk pile and be blasted. We outfoxed them initially and then fell victim to our own short sightedness.

The truck driver--Hubert C Rector from Oklahoma City--was ejected like a Roman candle up through the open top, landing on his back in the middle of the blacktop road. The canvas top was rolled all the way back, or he would have bounced around inside like a spastic yo-yo. We never saw him again, but in 1995 I learned that he had been hospitalized in Rheims with a rupture and a concussion.

He did not return to the 146ECB but was sent to Headquarters and Service Company of the 614th Ordnance Base Automotive Maintenance Battalion near Rheims. (As of May 2011, Hubert still had not received his Purple Heart, so his family and I attempted to get him his just due.) Unfortunately, Hubert died before we were successful.

The .50 caliber ring-mounted anti-aircraft machine gun had sailed away into the weeds and five M-1 Garand rifles on the passenger's side, had their stocks shattered. The floorboard was rolled over the brake and gas pedals like a window shade and the motor block and transfer case were fractured. Many of the engine accessories and the hood were elsewhere. The damage to a 2½ ton dump truck, by eleven pounds of TNT was surprising--although it may have been more as the Germans occasionally stacked several Tellermines to get an even greater blast effect.

The luckiest man on the scene was attempting to get a mine detector back into operation and was within four feet of the

mine when it detonated. Fortunately, he was sitting on the ground and bent over very low or he would have been decapitated. He had bits of gravel embedded in his face, had a massive headache and was partially deaf for several days--otherwise no problem!

The extended minefield on both sides of the road turned out to be only a dummy one. The Germans had used shovels to elevate sod chunks above the surrounding ground, giving the appearance of their standard AT minefield. However, we were not inclined to bypass that section anyway in the soft ground.

They surely got their money's worth from the two Tellermines that they employed and the time spent on their dummy minefield. They delayed us for three hours and put one truck, one truck driver, a machinegun and a number of rifles out of commission.

On the night of 04 September 1944--while still attached to a troop of the 38th Cavalry Squadron--B-Company built a 300' Treadway bridge across the Meuse River at Fumay, Belgium--as noted on our After Action Report of 04 October 1944.

A goodly number of townspeople and their children were our audience for the initial construction, as evidenced by several photos given to me in 1994 by Mme Edith Noiret on my 1994 return trip to my WWII haunts.

The few sporadic mortar rounds from the retreating Germans soon quieted and the remainder of the night was uneventful. The bridge was finished before 0800 and as soon as the tanks began to cross, my platoon and I grabbed some sack time. Upon arising two hours later, I noticed several of my men near the rear of a squad truck and thought it rather odd that they were awake and around so early.

I later learned that a French woman had been doing extremely well exchanging sexual favors for money, soap, chocolate, nylon stockings--or anything else of value. After servicing a portion of my platoon--one man twice--she joined the 4th Infantry Division as they crossed over our bridge, and undoubtedly was soon ready to retire.

Our After Action Report stated that B-Co built a 165' Treadway Bridge at Montherme, Belgium the next day, but I don't remember that bridge.

One night the 38th Cavalry Troop sited their guns to cover the main road. When a truckload of happy drunken Germans came by in the early morning hours--unaware of our presence--the gunner drilled it through the center of the radiator with an HE round. The truck burned down to its steel wheels and most of the men aboard were killed.

The next day we ran into the rear guard of these retreating Germans, who dropped mortar rounds around us. We unloaded and moved away from the road while the cavalry killed or captured them. One teenage German soldier--who had taken a bullet in the abdomen--was sitting and leaning against a tree. He was crying and pleading for medics, but was getting little sympathy from the troopers, who had recently been on the receiving end of his fire-power.

To date, I have found no mention in the After Action Reports of either the 38th Cavalry Squadron or the 146th Engineer Combat Battalion, that my 3rd Platoon and a platoon from the 2nd Ranger Battalion were attached to the cavalry at that time. However, the 38th Cavalry's After Action Reports did mention abatis that were blocking the road and had been removed. The 3rd Platoon disarmed and removed several of abatis about that time, so that may be the corroborating evidence that I had sought.

We often marveled at our bombers as they limped homeward with great chunks shot away by enemy flak. One B-17--I don't remember seeing a B-24 after D-Day--had most of the vertical stabilizer shot away, had several huge chunks missing from the wings and fuselage and was heading home on two engines.

Another B-17 with many gaping holes was trying to make it home on one engine. It appeared to be barely moving and was losing altitude. It must have been on automatic pilot and the crew surely had to bail out soon thereafter--if they had not already done so.

Within the total wreckage of another B-17--which must have come down almost vertically--was part of a barrel-chested torso covered with coarse kinky red hair. After a few such grisly scenes, I was happy to be a ground-pounder--even if the airmen did have great food and slept in real beds with clean sheets in "Jolly old England".

Lieutenant Bill Kehaly from A-Company was one of our more experienced platoon leaders. Prior to WWII, he worked in the mines and on construction--and so he had a wealth of experience. While his platoon was building a wooden bridge in Belgium, we had an animated discussion about the comparative strength in the placement of the wood decking. His choice--the bottom layer of 1" decking would be laid at a 45 degree angle to the stringers, with the top 1" layer at 90 degrees--while I maintained that 2" decking at 90 degrees to the stringers would be much stronger. I'm not sure why I remember that tidbit from long ago, but an understanding at that time surely would have shortened the war--would it not?

I was really a naive soul when I came to the 146ECB, having spent the most of my life on the farm or in school, without experiencing any of the seamy life. When my men were preparing to paint over the big block letters "BLOW JOB" on the side of our B-Company air compressor, I wondered why Captain Howard was so insistent on having the letters removed. I was then filled in with a few facts of life--which included a run down on some of the more delicate army vernacular!

Our movement was so rapid and the front so fluid that there were numerous occasions when we were beyond the established front lines. Captain James Doyle--the battalion liaison officer to our engineer group--was returning to the bivouac area late one night when his jeep approached a roadside sentry. As they drew near, his Jeep driver Larry Lademan whispered, "Captain Doyle it's a Kraut, Captain Doyle it's a Kraut". Doyle was only half awake, so Larry grabbed a rifle, took the sentry prisoner, made a U-turn and beat a hasty retreat.

Captain Doyle left the 146ECB in early November 1944 for duty in Fort Belvoir, Virginia. Two of his brothers had been killed in action and an army directive specified that in such cases, the surviving brother must be transferred to a non-combat unit.

This is similar to the movie "Saving Private Ryan", where Captain John Miller led a crew to find Private Ryan--the surviving brother. This movie was a reasonable portrayal of the initial Omaha Beach landings, even though it contains too many of Hollywood's gasoline-enhanced flaming artillery bursts to be realistic! Real artillery bursts show puffs of brown smoke, with very little flame.

On 10 September 1944, Captain Stephen Pipka, Lt Schindler and 41 EMS were attached to a Civil Affairs unit that became necessary when our rapid advance bypassed large numbers of Belgian civilians. For several weeks, Captain Pipka oversaw the running of Bastogne--south of the picturesque little town of Houffalize--while Leonard Fox became our acting S-2.

We travelled through St Vith and beyond the German border on 14 Sept 1944. All three towns were totally destroyed during the Bulge. We ended our trek near Manderfeld in the Schnee Eifel (Snow Mountain), where the 106th Infantry Division--The Golden Lions--had been decimated during the Bulge, after several of their units had fought valiantly.

Several of us stayed in a small roadside hotel that had housed German officers until shortly before our arrival. Individual place settings with warm food for lunch were still on

the table when we took over. Until that time, this was one of the few times on the continent where I had slept under a roof.

The hotel had gorgeous glassware, china, and silver. If I could have found an approved way, they would have migrated to Oregon. That probably would have been an exercise in futility.

A few months later, I acquired an MG-34 machinegun--a bit of pre-WWII German weaponry, with fine knurling on the trigger and handgrips. It was not as an effective weapon than their later MG-42, but was much more pleasing as a souvenir, so I built a wooden packing crate and sent it--along with their Sturmgewehr assault rifle--to Colonel Scott, the ROTC Commandant at Oregon State. A few days later, I mailed the MG34 flash-hider that I had failed to send with the main package.

When I saw Colonel Scott in 1946, expecting exuberant thanks, I found him perplexed as to the reason for the flash hider. Nothing else had arrived, as the explanatory note had been in the original package. Some Post Office creep had surely appropriated these souvenirs. Had they been removed officially, I would have been reprimanded by someone up the chain of command.

There were all kinds of munitions scattered around the Siegfried forts. The brass frowned upon our handling such items, as they could have been booby trapped. However, we quickly mastered the panzerfaust--the German counterpart to our bazooka. It was a self-contained system, fired by one man--as opposed to the American bazooka--and came ready to fire without any further preparation.

The warhead consisted of a five inch diameter shaped-charge weighing about five pounds and attached to a length of metal tubing. This tube with its propellant charge fit into a larger 2" diameter open-ended pipe, which held the adjustable sights and the trigger mechanism.

The device was held under one's arm and the sights aligned on the target. When the trigger was depressed it made an impressive BAANNG and the projectile shot forward, while a blast of fire came out the rear of the tube. It was a reaction type--not a rocket--and all of the forward momentum came at the time the propellant charge went BAANNG. Its maximum range was about a hundred yards and it was reasonably accurate.

I had an anti-panzerfaust bias then, but now believe that it was superior to our bazooka. It had a larger shaped-charge, did not require a two man team to operate and was simpler and less expensive to manufacture.

The German potato-masher grenade was primarily a concussion type and not as lethal as our pineapple grenade. A black metal cap on the wooden handle was pulled after unscrewing it a few turns counter clock-wise--it exploded after a 5 second delay. A handle with a gray cap that unscrewed by turning it clockwise could be substituted to make a simple booby-trap. When this knob was pulled, the grenade exploded instantly. We knew about this sneaky device and so suffered no casualties.

We fired their Sturmgewehr assault rifle. Built mostly from sheet metal stampings--with a cheap-looking boxwood stock--it was not a gun to grace one's gun cabinet. It fired a rimmed 7.92mm round--about the size of our rimless 7.62mm--from curved 20 and 30 round magazines. The barrel was mounted below the gas cylinder, requiring a high front sight. This positioned the barrel more directly forward of the shoulder, thus reducing the tendency to climb during automatic fire. The Russian AK-47 that was developed after WWII, may have used the Sturmgewehr as its model, as they are quite similar in appearance.

It was way ahead of its time in concept, in its simplicity, in modern manufacturing techniques and in its effectiveness. We were fortunate that these rifles had not shown in quantity, as I believe that they would have been superior to our M-1 Garand. It had a larger magazine and unlike the M-1, an audible "ping" did not advertise that there was no more ammo left in the rifle. (M-1 Garand clips ejected noisily after the eighth round had been fired.)

The sturmgewehr may have been planned to augment the 9mm machine pistol which because of its compactness was an excellent close-combat weapon. Its rapid rate of fire made a "buuurrrpp" sound--so we called it the "burp gun".

Their MG-42 machine gun had an even higher cyclic rate of fire--about twenty rounds per second. It fired so fast that the individual reports could not be differentiated. From a distance it sounded like news-paper being crumpled--such distance was to be preferred! Without dispute, it was the finest machine gun of WWII and had no equal in any army until decades later.

A 38th Cavalry trooper demonstrated the effectiveness of our .45 caliber Thompson sub-machinegun one night when a red deer got tangled up in their perimeter defense--complete with trip wires, concertina wire, and flares. Not knowing what was causing the ruckus, the trooper fired a burst in the general direction of the commotion. One round only hit the buck, but that was sufficient to put meat on the table. The Thompson sub was one of the better sub-machineguns in WWII.

There was little formal German resistance after we destroyed much of their army in the Argentan-Falaise pocket in August. Thereafter we moved so rapidly that the Germans were unable to establish defensive positions.

Although we were low on gasoline and were eating K-rations, I believe that our front line troops should have held fast once we penetrated the Siegfried Line--officially the West Wall--and done our best to hang on until we were resupplied. Soon after, the retreating Germans--began occupying these pillboxes and then were difficult to dislodge.

For the first few weeks on the German border, we acted as if we owned the turf. On one occasion, my Jeep was following Dan Taylor in his four-ton truck, pulling a D-7 dozer on a lowboy trailer across a forward facing slope close to the front near Elsenborn. He heard a loud bang and stopped to repair a blown tire. He looked around and found no tire problem but then heard another louder "blowout" to our left front.

That was when he discovered that this was incoming artillery! Dan jumped in his truck and wound up the engine until it sounded like an airplane. That was the first time that this engine had even approached the red line. The truck had been babied, washed and polished by a conscientious driver, who treated it as if it were an only child. Jeep driver Chester King and I--behind Dan on this narrow winding road--were mentally urging him to wind it up even faster and get the hell out of our way!

On a few occasions after Paris and through Belgium, we were on the receiving end of sporadic artillery or mortar fire, but after we entered Germany on 14 September these incidents became much more common. Most of this was haphazard fire and since their observers could not see the results and make corrections, it was not particularly effective. When observers could see the target however, it was more disturbing! I hit the dirt whenever I heard the sounds of incoming. A soft "puuunnnk" gave advanced notice that a mortar round was on the way!

Many of the cavalry and infantry officers did not bother to take cover from incoming artillery or mortar rounds--supposedly to bolster the morale of their men. I had no compunction about hitting the dirt--hopefully in a roadside ditch--whenever incoming was too close, as I felt that I had no need to prove anything.

Soon after VE Day, just as I walked around the front of a squad truck, a tire exploded with a monstrous BUULLAAM. I jumped into a roadside ditch before I realized that it was not artillery--the war was over! I never did know the cause of the

blowout--probably over inflation. Although I felt a bit silly looking up from that roadside ditch, several members of my platoon were in that ditch keeping me company.

When we first arrived at the German border, we consolidated our positions by placing cast-iron anti-personnel mines at the firebreak crossings in the managed timber tracts, to discourage German patrols. AP mines at a tract corner could deter passage of enemy patrols by having trip wires run across the two adjacent fire lanes.

I am unaware that we intercepted any Germans, but we killed many pigs and cows, as well as a number of their big red deer. They were similar in size and appearance to our elk, and since this was in the fall during rutting season, they were often killed in pairs.

These checkerboard forest areas were six to ten acres in size, with fifty foot-wide fire lanes between. We used the fire lanes as roads, but after the wet weather arrived they became a worthless muddy mess.

We joked about the size of the trees being harvested--as the log tops were only 6 to 8 inches in diameter--just what we are harvesting in Oregon some sixty years later! I was surprised to note the absolute cleanliness of the forest floor. All of the limbs--from large to tiny--were scooped up by the civilians to heat their homes.

Formal American anti-personnel minefields are recorded in great detail, so that they could be precisely located at a later time for removal. These minefields would be enclosed by a multi-strand barbed-wire fence with red triangular warning signs hung at intervals along the top strand. "Achtung Minen" signs indicated a German AP minefield.

Small informal AP minefields, that caused several of our casualties, were the ones employed by various units as a perimeter defense or to deny enemy access along obvious approach corridors. Such informal minefields are to be removed by the installing unit when they leave the area. Often they were imprecisely located on crude hand-drawn maps, making them extremely hazardous to locate on the ground.

Somewhere near Elsenborn, B-Company took over an informal minefield from an engineer outfit that had been moved out on short notice, without allowing the time to go over their layouts on the ground. Our first casualty was a sergeant, who tripped one of their homemade AP mine--spikes wrapped around several sticks of dynamite. Many fragments pierced his body--five

through his liver and stomach. He survived but did not return to our battalion after hospitalization.

A few days later, Sergeant Joseph Murphy saved me from a similar fate by spotting a tripwire just as I nudged into it. The crude map appeared to show an AP mine about 60 feet ahead. Murphy had dropped to the ground in an attempt to spot possible trip wires.

Murphy yelled "STOP" and just as I turned to look back, I felt the trip wire through my thick tanker coveralls. This was too close for comfort and was another spikes and dynamite affair waist-high in a fence 25 feet away.

Our trip wires had splotches of green and brown paint applied on the bare steel. When exposed to the elements, the unpainted areas rusted, resulting in a camouflaged pattern that was difficult to see when looking toward the ground, but easy to spot when silhouetted against the sky.

Sergeant Murphy, originally from the 5th Infantry Division in Iceland, had joined us in France as a replacement. A feisty little Irishman, daring but foolhardy, he took so many chances that his squad preferred not to be around him when mines were being emplaced or removed--or so I was told later by Sergeant Homer Jackson.

Murphy was killed a few weeks later about a mile from the front near Rocherath when one of our AP mines exploded in his face as he was arming it. He apparently pulled the safety pin while there was tension on the trip wire, a definite no-no. I too was at fault because I had allowed him to tie a lateral trip wire near where the main trip wire connected to the mine--a breach in mine laying technique that is rarely permitted and one to which Sergeant Jackson had objected.

There was a deathly silence as the small pine tree--which had supported the mine--was cut down by the blast and fell softly over on the ground. I ran over to Murphy but was powerless to help as several of his main internal arteries were severed. He died without regaining consciousness. For several ghastly minutes, I listened to the "swisshh-swisshh-swisshh" of his blood squirting internally with each heartbeat as his life ebbed away--a horrible sound in a completely hopeless situation.

The following morning, we carried his stiff body back to a graves registration unit. For letters from a Belgian Search Team who found his dog-tags and my response--see.....**Note 8**

On 09 December, Corporal Raymond J Pellar walked into the trip wire of an AP mine, while four of us were making a routine inspection. Pellar was out in front because he had been in the

original laying party. He insisted that Sergeant Jackson had set off the mine, even though Pellar was lying across the trip wire when we picked him up.

A fragment had penetrated his knee joint, which allowed the yellow synovial fluid to ooze out. Jackson had several fragments in his arm, and was sent to the Malmedy hospital--and then on to a hospital in Spa. He returned on 16 December--the first day of the Bulge.

We were kept busy for the first few months upon entering Germany--building bridges, repairing roads, laying AT and AP minefields; and using explosives to destroy the forts in the Siegfried Line, which were then bulldozed full of dirt to render them useless if they were recaptured.

These pillboxes were laid out to be mutually supportive--when attacking one, our men came under direct fire from several adjacent pillboxes. They were built in the 1930's, prior to WWII, by Todt construction crews.

The third platoon was charged with destroying a twenty pillbox strongpoint in Hofen, a mile southeast of Monschau. We had no clue as to the amount of explosives needed to destroy these behemoths, most of which had two meters thick reinforced-concrete walls and ceilings. One had a seven foot diameter, eleven inch-thick cast steel dome with firing slits at the top.

Our field manuals gave no clue to the amount of explosives required to destroy these monsters and our past training had not addressed concrete fortifications anywhere near that size--so we sallied forth by trial and error.

On our initial attempt, we placed a 50 pound case of TNT in the domed pillbox and touched it off. From past experience, fifty pounds of TNT seemed to be a healthy starting point even though I thought it might be a bit excessive.

There was a muffled "poof" and black smoke wafted out from the dome's embrasure slits, but no significant structural damage resulted. Had this pillbox been recaptured, its effectiveness would have been unimpaired. It had three embrasure slits, through which rifles or machine guns could be fired. Only two feet of the steel dome projected above ground level and it was anchored by seven 2^{3/4}" diameter steel bolts, embedded 27" into the rebar-reinforced concrete base.

Our TNT charge poofed this multi-ton dome WAAAY UP and it gave out a resounding CLANK as it buried itself four feet into the hard ground on its return trip to earth. This was a slight TNT overload! Chester King was photographed alongside it to demonstrate its monstrous size.

To save on TNT, someone up the chain of command suggested that we use a pile of captured, large-caliber, German artillery shells as the explosive. As expected, this proved to be totally ineffective, as the amount of explosives in the shells was pitifully inadequate. Only a few of the shells detonated and the remainder were scattered about and then were dangerous to handle--we moved them most gingerly!

Out of the blue, we were suddenly blessed with a windfall of German granular TNT in 100kg cardboard barrels. By trial and error we settled on a charge of six barrels for the largest pillboxes. A kilogram is >2.2 pounds, so these pillboxes were being charged in excess of 2/3 ton of TNT.

After our first attempt--that just blew a hole in the wall without splaying out the walls and ceiling--the TNT barrels were stacked back 2' from an exterior wall. This did a creditable job and usually flipped the concrete roof over like a pancake!

We overdid it on a few occasions--as was the case where an eight-inch slab of reinforced concrete had been positioned over a ceiling hole where a future steel dome had apparently been planned. A covering of dirt concealed this weakness.

That rebar-reinforced concrete blanket flew no less than 200 feet straight up into the clouds and we heard it going "swoossh, swoossh, swoossh", as it flopped over and over on its trip back to earth. This raised a cloud of dust and the German artillery then shelled the immediate area--which did little to endear us to the local infantrymen.

Some of the pillboxes were destroyed later by others, using less TNT by filling them with water prior to detonation. That would be effective, because water is not compressible. However we were not blessed with the additional time that would have been required--as it would have needed a monstrous amount of water and taken many more days--besides this was German TNT!

We destroyed an unusual pillbox northeast of Hofen's town center. After being built, a stone barn had been constructed around it to conceal its purpose. This allowed for an effective field of fire of its machine guns from the two east-firing embrasures--and may have been designed to fire east in order to provide a 360 degree strongpoint protection. It was completely disguised until the two barn doors were thrown open exposing the firing embrasures.

In the living area, I found a dirty greasy rag that turned out to be a hand-woven and crocheted bedspread. After several dry cleanings, it is almost as good as new and was used as a

table covering for our January 1946 wedding. It is now used as a guest room bedspread.

We loaded up that pillbox with our large charge and touched it off without realizing that a band of pigs was rooting around in the surrounding brush. A lovely explosion resulted, with stones flying all around the area, but the thick concrete pillbox roof flipped over on top of the pigs--trapping them. Several squealed for two days despite our efforts to locate them and put them out of their misery.

Thor Ronningen, from I-Company, 395th Infantry Regiment, 99th Infantry Division sent the following in a 1995 letter about Engineers, Pillboxes and Explosives at Hofen: "One day our lieutenant decided that we should dig a hole about 25 yards north of Gasthaus Schmiddem. About the time we got it completed we were fired on by a burp gun and four or five of us dove into the two-man hole."

"We radioed that we were going to come back to our lines but were told that we would have to wait, as "The Engineers" were about to blow a barn about 100 yards west of us. Just then the barn blew up and pieces of concrete, some as large as basketballs rained down all around us. Fortunately, no one was injured. Must have been your people. (3rd Platoon, B-Company, 146ECB). (The "pieces of concrete" undoubtedly were the exterior stones from the barn.)

As a further tidbit, Thor stayed in the Gasthaus Schmiddem from November 1944 through January 1945. I had sent him a photo of the town, taken in 1994, that had inadvertently included the Gasthaus Schmiddem. Thor said "It looks a whole lot better now than when we left it--all of the glass was gone, the back roof was caved in, bullet and shrapnel holes were all over and there were mortar holes in the front roof."

Thor is the author of "Butler's Battlin' Blue Bastards--a history of his battalion, under the command of Lt Colonel McClernand Butler, which held their position and fought so effectively at Hofen during the Bulge--even though the rest of the division was badly chewed up and were taken under the cloak of the 2nd Infantry Division!

On one sunny fall day--through our binoculars--we observed several German soldiers sunbathing 500 yards east on top of a pillbox in this Siegfried complex, that had not been captured. Since we were working hard to destroy their pillboxes and had no leisure time to sunbathe, we thought it inappropriate that they should be so carefree--so we called on a nearby Tank Destroyer to mess up their day.

The TD came over and zeroed in at a similar distance and then quickly swung over and fired two high explosive rounds in rapid succession. We did not know if their fire was effective, but when the dust had settled there were no sunbathers in evidence. We were the proverbial "Mean Old Dogs in the Manger".

Early one morning the new infantry outfit requested that we destroy two more pillboxes within this Hofen strongpoint. There was only one small problem--both were still in German hands! Capturing these pillboxes would normally have been an infantry job and I'm not sure how we were conned into this infantry mission--but the request did come down through channels. As a matter of record we failed, and these pillboxes were not captured until February 1945--after the Bulge had run its course.

Our initial request was to destroy a pillbox shown on our map-overlay about 200 yards forward of our front line and just below the crest of the steep forested slope leading down to Monschau--a mile to the northwest.

A dismounted ten-man contingent from a 38th Cavalry Squadron provided our protection and they planned to temporarily overcome the Germans while we placed and detonated the explosives. Our crew carried 400 pounds of granular TNT in eight gunny sacks to be stacked against the pillbox embrasure. This would have blown the heavy steel embrasure plate back into their living area.

The pillbox must have been shown in error--or it may have been so well camouflaged that we just failed to find it. While attempting to locate it--as we moved east in no-mans-land, with a heavily wooded area near the edge of a large canyon leading north-west down to Monschau to our left and with open fields to our right--I suddenly realized that although the cavalry had put out a point man, they had provided no left flank protection.

I immediately sent out two of my men. They had gone no more than 50 feet toward the canyon when they bumped into two Germans coming up the hillside trail, looking for us. From thirty feet away, Albert Tucker fired a full clip from his M-1 so fast that it sounded like a burp gun--but it is doubtful that he hit anyone. However, they disappeared down the trail while their compatriots fired away at us with evil intent.

I dove head-first behind a small pile of rocks, thereby splitting the forearm on my carbine stock, so that it pinched my left hand with every round fired. From that day forward, I carried an M-1 Garand or a Thompson sub, though the carbine

undoubtedly was a better weapon for a platoon leader--and more effective than the .45 Colts carried by the senior officers.

We fired away at phantoms for a short time, but being at a disadvantage and without adequate cover, we pulled up stakes and attacked to the rear. These Germans were lousy marksmen and so, no one was wounded.

Since we had not located the first pillbox, the powers that be suggested that we forget about it and destroy the pillbox whose location we all knew. It was on the western outskirts of the Hofen pillbox complex and 125 yards above the narrow road that we traveled when Jeeping in and out of Hofen.

Sited on a western-facing slope with a seventy degree firing angle, it overlooked the short section of our entry road where we would not be in defilade. On every trip to and from Hofen we could have been observed from their machine gun embrasure. For the fifty feet of the road where we were visible, we just ducked and gunned the Jeep on through.

For this job we had more time to prepare. I requested the infantry to give us a five-minute mortar barrage at half-hour intervals near the rear of the pillbox. When the Germans had become comfortable with this periodic firing schedule--which they probably would have accepted as normal--three of us would approach the pillbox from the rear, immediately after the last mortar rounds had landed. We then planned to neutralize the nearby defenders momentarily and then wave in the eight men with the sacks of TNT that had been "saved" that morning.

Initially all went well. While the final mortar barrage was still in progress, two of my men slipped down the right side of a slender finger of woods that projected within 100 yards of our lines. Meanwhile, sneaking down the left side of this wooded patch, I moved in quickly toward the rear of the pillbox as soon as the mortar fire had lifted.

There I saw a German soldier 40 yards away, near the pillbox rear entrance. He was replacing the canvas cover above his foxhole. Mortar fire had cut the ropes holding his tarp and he was attempting a refit.

After splitting the stock on my carbine that morning, I had borrowed Jeep driver Chester King's Thompson-sub. The stock had previously been removed--to make it easier to carry on patrols with an over-the-shoulder sling--and I had not shot it since.

Without fear of argument, a Thompson-sub without a stock is not a substitute for a rifle! I must have looked like the stooge in an old comic movie as I tried to assume a proper firing

stance. I had adequate time--the German moved about tidying up his area, completely oblivious to his surroundings.

Finally, I clamped the Thompson-sub under my arm, held low and plowed up a lot of intervening real estate as I walked up the .45 slugs. Having no tracers was not an issue--the impacts in the dirt were clearly visible.

I was really up tight and fired the entire thirty round magazine before releasing the trigger--another bit of superb American marksmanship! The total silence after the magazine ran dry was unnerving! But the silence was not for long--other Germans nearby hadn't spotted me, but they did a great job of shooting up several of our nearby infantry outposts.

I had no clue that they were there in force and may have been a bit too complacent, because we had not recently run afoul of Germans in a fighting mood. I had two more magazines but was not about to push my luck.

I reloaded and then scurried back where I hoped to find my men, and then spent several minutes whistling and clucking in an attempt to get their attention. Finally deciding that they must have been captured or killed, I sprinted a zigzag 220 yards back to our lines.

As I hit the dirt upon approaching the infantry outpost, I tripped a grenade that was part of their perimeter defense. Recognizing the pop of the grenade, I jumped up and ran ahead. As I was about to hit the ground again, I tripped another grenade--sheer panic and into overdrive! Both grenades turned out to be our concussion type, but I hadn't known that and my performance probably would not have suffered had I known.

When the firing began, my men thought that it was I who was being shot, and they scurried back to the infantry outpost. This demonstrates why this should have been an infantry mission. My training to suppress a small enemy group, before bringing up the TNT was limited, and I overestimated our capabilities. More aggressiveness on my part may have yielded a success--or an early demise!

FINAL SCORE: Pillboxes 2--Third Platoon 0!

These pillboxes were not captured until our offensive resumed in early February 1945--after the Bulge had been erased. In checking the area, we found it sprinkled with buried Schu mines--AP mines designed to blow off the foot of anyone unlucky enough to step on one.

Made of wood and plastic, with only a tiny steel igniter pin, they were almost impossible to locate with our mine detectors under the best of circumstances--but since so many

artillery and mortar fragments were scattered around on the ground, finding these mines would have been a hopeless exercise. I am glad that I had not been too gung ho on that earlier day and so have been blessed by being able to walk on two feet for the many ensuing years!

On a patrol during the Bulge, Albert Tucker stepped on a Schu mine but the pin was frozen solidly and it didn't detonate. Tucker was an eager volunteer on many of our patrols. On D-Day, he and John Heenan left their safe haven near the bluff on the eastern end of Omaha Beach and had gone back into the machine gun swept surf to rescue their Gap Assault Team's OIC, whose legs had been riddled by machine gun fire.

Both were awarded the Distinguished Service Cross and were later assigned to my 3rd platoon--where there was another DSC recipient. This is conjecture, but it is highly unlikely that another ETO Engineer Platoon had three DSCs "in house".

In late October, Lt Frances Slinger--the first army nurse to die from enemy action--was killed by artillery fire at the 45th Field Hospital near a crossroad near Kalterherberg--three miles from Hofen and two miles from the front. The hospital had recently relocated there and their commanding officer apparently was unaware of the hazards of locating a hospital near a road junction so close to the front.

Artillery concentrations were routinely dumped on road junctions by both combatants, so it is unlikely that the Germans were even aware that our hospital existed there. They were doing very little aerial reconnaissance and had not yet begun aggressively patrolling on the ground. The hospital was quickly moved to a new location near Spa, Belgium.

Boule'

About that time I saw the first German plane that I remember having seen on the continent. Chester King and I were on a routine reconnaissance run near Kalterherberg when an ME-109 flew down our road very low and heading east. We bailed out of the jeep and into the roadside ditch, but either the pilot had not spotted us, or he may not have been on a strafing mission. We saw no other German planes until the Bulge but his incident notched up our level of awareness.

We called the Monschau/Hofen/Kalterherberg area--on the German border--"buzz bomb alley". Some days we heard as many as fifty putt-putting overhead, heading towards Liege, Belgium--20 miles to the northwest. One hit about sixty yards from me and even though the flash warmed my face I was not injured.

I had heard it coming and when the engine quit abruptly, I jumped out of the Jeep and was at a 45 degree angle on my flying trip to the ground when it exploded. It had dropped into an ordinance repair depot beside the road at Kalterherberg and although one ordinance man was killed, it caused only modest equipment damage.

Initially, those that fell nearby detonated, but later the soft yellow explosive splattered on the ground, forming a slick paste when moistened by the rain. We heard that the Germans had too many men killed from premature explosions on or near their launching ramps and so had retrofitted the buzz-bombs with a time-delay mechanism that armed them only after they had cleared the front line by a short distance.

I had seen my first buzz bomb--called Vengeance Weapon #1--on 21 July 1944 near Portsmouth on my return trip to France, but they had been in use since mid-June. It was moving at high speed when its engine stopped abruptly and it then dropped into the dock area sending up a big column of black smoke.

They were very fast, with a rough sounding pulse-jet engine. While the engine was running, one need not be concerned, but once it quit, it came down almost vertically. Containing about a ton of explosives, they were a formidable weapon within cities and dock areas--but were not effective against troops out in the open. In 1980, I saw one on display at the Smithsonian Museum in Washington DC.

There was a lull in activity in early November so I was charged with an enjoyable task--taking two truckloads of men to

Paris for a 72 hour pass! We made it to Rheims late the first night, but while one truck driver and his men raced into a mess hall to get coffee, a drunken paratrooper stole their truck and smashed it into a tree a mile down the road.

The irony--that truck would have stopped soon thereafter, as there was enough gasoline remaining for just a few more miles. The truck driver and I stayed in Rheims while repairs were undertaken, while the rest of our group went on to Paris shoehorned into the other truck.

Next day, heading for the mess hall, I was in a testy mood, so when some rear-echelon 2nd lieutenant stopped me on the street and began chewing me out royally for not saluting, I was caught off guard. We never saluted near the front, as that might garner more attention than desired.

Finally awakening as to what was happening, I let him ramble on until he ran out of breath and then flipped back the collar of my tanker jacket, showing the silver bar and walked away.

Lt Charles "Rollo" Rollins, had given me a silver bar when I received a battle-field promotion after D-Day--so I had no silver bar for my cap. I can understand why that lieutenant may have been ticked off by my breezy attitude, as I waltzed by him on the street, entirely engrossed with my own problems.

Although clean, my un-pressed wool uniform was similar in appearance to Carl Malden's "Willie and Joe" cartoons in the Stars and Stripes. That lieutenant failed to recognize me when our paths crossed several times later that day!

The truck driver and I made it into Paris late that night. Paris was still the grand city that we remembered. However, the atmosphere had undergone a major change since we had entered on the day of its liberation, when we had been overcome by wine, women, hugs, flowers and many kisses!

We were no longer the liberating heroes, but just some more horny Americans wandering around in their famous city. We had expected the climate to be the same as it had been when we had assisted the French 2nd Armored Division in the liberation of Paris on 25 August 1944. Just unrealistic day-dreaming!

The following night another lieutenant and I located two neat American nurses who were happy to join us at the Follies Bergere. We spent a pleasant evening watching artful nudes--even better than the shows in London.

A young Frenchman, who spoke only a little English, moved over to our table between dances to strike up a conversation. He suddenly asked "what does it mean when an American stands on the corner and yells to his friend "Fuck you Joe"? Naturally we

were embarrassed but upon explaining his question, he replied "That would not be a problem in Paris--it would be a common mixed company conversation!"

The next evening while, window shopping in Pigalle, a pretty French girl struck up a conversation that ended with her being my tour guide. Because I was told that it was a great gift, I bought Chanel #5 for Dorothy, for my mother and for my sister Ethel, even though I had never heard of Chanel #5--or for that matter--Coco Chanel!

Paris was more interesting with a guide who was acquainted with the city and a sleek, pretty one was a definite plus! This was a fitting end to a memorable weekend--before heading back to K-rations, mud and reality.

Soon after, A-Company and C-Company 146ECB, may have been one of the first combat engineer battalions formally committed to an infantry combat mission in the ETO. On 06 November 1944, while working on a road maintenance project, they were given hurry up orders by General George Davis--Assistant Division Commander of the 28th Infantry Division--to rescue his 112th regiment in the Hurtgen Forest at Vossenack.

This territory--near Schmidt and north of Monschau had been won and lost several times recently by the "Bloody Bucket Division"--so called because their red keystone patch resembled a red bucket.

The struggle in this heavily wooded area had been the fiercest to date, eventually chewing up troops from the 1st, 4th, 8th, 9th, 17th, 28th, 78th, 82nd, 83rd and 104th Infantry Divisions; 3rd, 5th and 7th Armored Divisions; plus attached units including 38th Cavalry, 2nd Ranger Bn, 20th and 146th ECBs, without tangible results. Details of the debacle can be found on the Internet by typing "Scorpio Hurtgen Forest".

These attacks had been ongoing for more than a month, in an attempt to capture the strategic road net and the Roer River dams which--if blown--would have flooded the area downstream and disrupted our proposed attack from the Aachen salient further north. The soldiers of German Generalfeldmarshall Walter Model were fanatics in protecting this area, but unknown to us, they were protecting the base for their "Wacht am Rhein--our "Battle of the Bulge". This turf was finally captured by the 2nd Infantry Division in Feb 1945.

The Germans had superior artillery fire for the first time since Omaha Beach, which they fully exploited. The open terrain east of Vossenack sloped down toward their lines so their

forward observers were able to direct artillery fire at individual infantrymen in their foxholes.

But not all of the incoming was German. The situation was so hectic and the battle lines so fluid that American planes strafed the town after the 146ECB had recaptured Vossenack. None of our men were killed in this mix-up, but it was still a bit hairy. Our forward line along the front would normally have been marked with fluorescent panels, but the panels had not been available on such short notice.

So precarious was the 28th Infantry Division's predicament, that our men were not even allowed to change out of their rubber hip boots or to fully equip themselves with machine guns, rifles, ammunition and grenades.

They were told that they would find these items abandoned at the front, which in general turned out to be true. Igniters were missing from the first box of grenades that Lieutenant Leonard Fox delivered, but two boxes of grenades--that had been left by the infantry--were found in one of the captured houses, just in time for the tough house-to-house fighting.

Late the first night as they were reconnoitering the forward area, Captain Sam Ball--the A-Company commander--and Pvt Alroy Broadwell observed a German officer defecating in a nearby yard, completely unaware of their presence. Broadwell wanted to shoot him, but Captain Ball allowed "you shouldn't shoot a man while he was taking a shit--wait until he had finished"! They then decided to capture him for interrogation.

Captain Ball asked Broadwell--who spoke a little German--to tell the officer to come over and surrender. Broadwell must have had a perverted sense of humor, because he hissed "Come over here you German son of a bitch". The officer then ran off, while attempting to pull up his pants, so they had to shoot him.

This activity alerted other nearby Germans, whose flares turned night into day--dictating an early withdrawal. On their return, they surprised several Germans who were out in no-mans-land laying mines, so they shot one and the rest scattered.

The next day, C-Company picked up tank support and proceeded to clear the Germans out of Vossenack, while A-Company furnished right flank protection.

Several of our men noticed a radio operator who was standing in the doorway of the destroyed church, but only after this was mentioned to Captain Wall--the C-Company commander--did we learn that this was a German! He was wearing an American uniform; was smoking American cigarettes; had been educated in Boston and so was comfortable with the English language and our customs.

Sgt. L Z Coffee, Carl Smith, Marcos Zepeda, Elroy Webb, J R Bennett and others were positioned near the C-Company CP across the street just west of the church and they kept pressure on the Germans so that they did not counterattack.

In clearing the town, grenades were thrown in the basement windows. Riflemen would cover the exits and shoot or capture the scrambling Germans. Roy Durfey and Paul Gray became platoon leaders when Lt Rollins and Lt Schindler were wounded.

During this action, Frank Stelly from C-Company was shot through his thighs--probably by one of our tank's .50 caliber machine guns. He was carried out on a makeshift stretcher--an interior house door--but died shortly after from shock and loss of blood. In 1960 a farmer plowing his fields near Vossenack unearthed Frank's dog tags which caused speculation that it may have been someone other than Frank--however, several men who had helped evacuate Frank, verified that he had indeed been killed as reported.

A-Company's Doyle McDaniel was spotting enemy locations from a shed roof for our gunners and then from the top of a woodpile, but after some successes, he was too aggressive--or careless--and was killed.

Corporal Henry Kalinowsky from C-Co captured a number of Germans after he had fired all his ammunition. No problem--he took a number of prisoners with an empty rifle! Bill Beller had his truck destroyed by an artillery round while it was parked near the church. The blast peeled the steel sides into a "radish rosette". Luckily Bill was elsewhere.

While they were mounting an attack the following morning, Glen Ritter, Peter Vetro, and Richard Winfrey were in a bunch, as they moved across a street. Sergeant "Crunch" Crayton yelled at them from a nearby house to get out of the street because the Germans had the area well zeroed for their artillery. Before they could take cover, an artillery round fell in their midst and all were dead when Crayton reached them.

Nearby, another soldier tried to jump through a window, but was flipped back into the street when his rifle--which was slung across his back--caught on the window jamb. Tom Wilkins held that soldier's rifle while he and Tom crawled inside to escape the fierce artillery fire.

Tom's partner then wanted to leave because a dead German soldier--with his eyes wide open--was sprawled on the floor, but the artillery fire was a more pressing concern, so they elected to remain inside.

In other actions Edward Bishop, A D Boggs, Jaramillo Cleofas--medic, George Katsavakis, Owen McKeon--medic, Ladgie Moudry, Ashley Roberts and William Youngen were killed--a total of thirteen KIAs in just over one day of fighting.

The 28th Infantry Division's G-2 verified that 130 Germans were captured by this hip-booted motley crew. The 109th regiment, 28th Division relieved the 146ECB on 08 November 1944.

Several AP minefields were begun a day later to thwart future enemy counterattacks. The intense artillery and mortar fire dictated that it be done at night. Paul Gray's squad from Lt Schindler's platoon was one of the most effective in getting the job done post-haste without having his men disappear into the cellars--a rather common occurrence.

One of the unsolicited comments on the effectiveness of our "engineers-turned-infantry" came from an English-speaking German officer, who volunteered "We would have recaptured Vossenack if those damned engineers in their 'heep boods' (hip boots) had not been brought into the town!"

Carroll F Guidry related this action in his story:

"The Diary of a Combat Engineer":

September 14, 1944, moved from Maspelt in Belgium to Wintersheid, Germany and started on destruction of German unoccupied pill boxes so they would not be able to be used in case the Germans regained the area. It was a good thing that we did it, because a couple of months later they reoccupied this area and would have had ready-made positions. We performed normal combat engineering duties from September thru October 31, clearing roads, blowing pillboxes, clearing minefields, etc. On October 31, about 3 1/2 miles from Vossenack, we were issued hip-boots because we were cutting trees to build a raised road for the Tank Destroyers to go to Vossenack. Lt. Rollins came in his Jeep and said to drop what we were doing and that we would go to Vossenack, as infantry because some units of the 28th Division had pulled out. They were green troops and ran.

I operated the air cool .30 cal. machine gun. When they issued it to me I tried to pull back the slide, but it didn't work. Lt. Rollins went to his Jeep and took his and gave it to me. We all still had our hip boots on. I gave the machine gun to Deo, a Navaho Indian, in my squad, and we started the march to Vossenack on a trail. It was cold, mushy, yukky, terrible weather. Upon arriving on the outskirts from the west, we came upon a clearing from which we hit a cross road and the road to Vossenack. When we hit the road to Vossenack the Germans started hitting us with 88's. We formed two groups along side of the road and were leap-frogging heading towards town. Sgt. Bill Galliot got hit in the back. A piece of shrapnel cut him open from the butt to the neck. I thought he was dead, but it looked worse than it was. He was sent to the Evac Hospital. Old Deo threw down my machine gun in the slush and rendered it useless. We continued towards Vossenack. It took us the rest of the afternoon to get to Vossenack. We couldn't figure out how the shells were coming in so close. If it wasn't for the shelter of the ditches on each side of the road we would have all been killed. Capt. Wall decided to go to the

point, and while he was there he discovered an American officer, in front of the church on a field phone. He questioned the officer and suspected something and called the Artillery in the rear and asked them if they had a Forward Observer. They said no and Capt. Wall discovered that this was a German in an American uniform. I was told that he was taken prisoner.

Then Major Baker came and joined Captain Wall. Some sniper saw them both and took a shot at them, he hit Captain Wall in the hip and Captain Wall fired back and killed the sniper. Major Baker evacuated Captain Wall to the rear. The Company was taken over by Lt. Schindler. We got as far as the church. It was already getting dark. Sgt. Webb assigned the following soldiers in the church for defensive position. On the left side of the vestibule facing the church, was myself and Harrison Cope. On the right side was Edward Bishop and Willard Carr. While we were up in the vestibule, we finally realized that the Germans were in possession of the altar part of the church. Every once in a while we would hear a pop, and a bang. We thought it was a rifle grenade, but they weren't coming to our part of the vestibule. Then all hell broke loose in the vestibule on the right side. There was a fire fight going on. It lasted for about 2-3 minutes. Then everything was silent. We heard Bishop hollering all night. It was like when you pull a cats tail, high pitch sounds punctuated with cursing. It lasted until early morning. Then he finally died and all was silent. I remember Harrison Cope saying that he would remember that sound for the rest of his life. So would I. The Germans had by then occupied the whole church.

Harrison & I decided to remain silent where we were. I took a hard candy wrapped in cellophane as I needed something to suck on because my mouth was dry. It seemed to make a lot of noise. Just then Harrison pointed his rifle to my head and said that if I made any more noise he would blow my brains out. Needless to say I placed it neatly on the side with out making any noise and sucked my tongue. It sounded like they tried to get to our position all night but there was so much debris that they couldn't reach us. Harrison had a grenade in his hand and I had my M1 in my hand covering that what was left of the stairs. We were shelled all night and as the shells would hit, more debris would fall on us and the stairs. Harrison had a big piece fall on him and left it there, because he didn't want to make noise. Suddenly things went quiet.

Harrison said "C. F. I think we have a bee hive in this church". There was a sound like bees buzzing. I found out on a later trip to Vossenack, that there were six nuns saying the rosary in the cellar under the altar. Up until that time I could have sworn they were bees. I understand that when "A" Company took over the church they discovered the nuns and moved them to a safe area. As it started getting light the artillery got heavier. Both sides were planning to attack. And we were getting it from both sides. Harrison and I decided to get out while the getting was good, and the Germans were pinned down. Unknown to us J.R. Bennett the company sharpshooter was set up in the C.P. across the street, shooting the Germans as they left the church thru the front doors. When we appeared at the door to leave, he took a bead at my head when Carl Smith knocked the gun away, and saved my life. They had thought we were dead.

We ran to the C.P. on the other side of the street. I saw a box full of grenades and I stuffed them in my pockets and attached them to my belt. I was a walking time bomb. After about 10

minutes, the sergeant in charge of a tank that was in town--a Sherman tank in the 707 Tank Battalion--said to us "Let's go dog feet". I don't know why he called us that. So Lt. Rollins, Sgt. Webb, and myself started the attack. As we started to go to the first house I saw a guy coming out of the house. I fired two rounds at him, the rest of the squad fired also. The German ran back to the house. Lt. Rollins told the tank commander to put two rounds into the first house. After he fired the two rounds into the house, the tank started spraying the house with machine gun fire. Lt. Rollins raised his hand for a cease fire. Lt. Rollins jumped thru a window and was closely followed by myself and Sgt. Webb. We fired several M1 rounds into the cellar and heard "Kammerad, Kammerad" we told them to come up with their hands high. After they came out of the cellar we threw grenades into it to make sure, and did the same for each successive house until we cleared the town.

We had flushed several prisoners from the cellar. I saw the German that we saw outside the house on the floor by the kitchen door. I noticed that he carried two pouches that our medics carried, although he had no red crosses on him I don't know to this day if he was a medic or not. We turned the prisoners over to a squad that was collecting them. We did the same to a second and third house, and got more prisoners. As the tank was spraying the fourth house with machine gun fire, Lt Rollins fell down wounded. The guys brought him back to the third house to attend his wounds. I was left alone with the damn tank. He had already sprayed the house and he got of his hatch and told me to check out the house. I jumped thru the window head first and fired two shots into the cellar, and several prisoners came out with their hands up shouting "Kamerad, Kamerad". When they came out they look with amazement at my hip boots, which we still had on. I had to act mean and hollered at them because I was afraid that they might jump me if I was too meek. I gave the prisoners to the guy that was collecting them.

While still at the fourth house the tank was spraying the fifth one. I did what Lt. Rollins did and raised my two fingers at the tank commander to indicate to put two rounds HE (High Explosives) into the house. I did the same to all of the rest of the houses we cleared. I don't know which house it was but, I got separated from the tank. As I walked around the building to get to the back my squad was lined up abreast in front of the house looking at the house and behind to their right was a machine gun position. Unknown to me the tank had passed on the other side of the house. The machine gun was pointed towards the tank and they were looking that way. I had a dead bead on them, but I remembered the German which I had thought was a medic and hesitated. I hollered at the squad for them to get the machine gun but the Germans heard me instead and they picked up the machine gun (which was on a bipod) and was in the process of turning it towards me. I fired a couple of rounds and the tank joined in on them also. After that the squad finally saw what was going on and started also. They immediately threw their hands up and came out. They were lucky, none of them got hit. After that was done, my tank and I went to the next house we did the same thing.

After we gathered the prisoners I gave them to George Katsavakis, a fellow from the squad. It was the last time I heard of him. I always thought he was killed by the prisoners. I asked Hank Kalinowsky if he knew what happened and he told me he saw a body lying in the middle of the road as we were going back to the bivouac area that had been run over by tanks and was flat. He

thought it might have been George that had been killed by a mortar barrage that fell right before. When we got to the second to last house in the town, there were more Germans there than any other. They took off running out of the back towards an open field and a P-47 Thunderbolt came out of the blue and strafed them, cutting them down like wheat. We took up defensive positions for the night with the tank next to the house with the motor running. We received a message to go back to the church cellar and wait until we were relieved by elements of the 28th Division. After we got back to the church I was sitting there shaking and couldn't do anything else but shake. I guess it was an aftermath of what had gone on. They finally came and relieved us and we went back to our bivouac.

We assembled into the church, and were to be relieved by elements of the 28th Division. I don't remember when we were relieved but it must have been about 1:00 or 2:00 in the morning. We went back to our bivouac area and got some overdue rest and sleep. And as I recall, the next day or the next night we were informed that we were going to install a mine field, between Vossenack and the wooded area where the Germans were. The whole company was involved. We went in when it was dark. Went to Vossenack and went to the other side of the village and started laying mines. I was bringing the mines from the church area of the mine field. As we were putting down the mines, I noticed a lot of 88's were coming in, and in the wood line I noticed a lot of little flashes of light as the guns would go off. It seemed like the tanks were changing positions every once in a while. This went on as we were putting down the mine field. So they evidently knew that we were out there laying the mine field. We did that for two nights. And when we had finished several of us were wounded and 2-3 got killed. As I can recall things started to simmer down a bit, and I was under the impression that the war would be over soon, as there wasn't too much going on .

Meanwhile, my 3rd Platoon was in the Hurtgen Forest near Simmerath--ten miles south of Vossenack and about the same distance north of Monschau. Because we could not be located on such short notice, we were spared the glory of helping to root the Germans out of Vossenack!

We were attached to a troop of the 38th Cavalry Squadron and were laying AT mines forward of their position. The mines were laid in the snow at night on a forward-facing slope between the cavalry and the Siegfried pillboxes at the toe of the slope, some 600 yards to the east. Our After Action Report erroneously stated that these were AP mines. Can anyone imagine activating anti-personnel trip-wired mines at night?

On our way to our work area, a 105 battery began shelling the area to our immediate front to protect us against possible German patrols. The rounds went whitta-whitta-whitta as they passed over, and then BUULAAM"! One of the howitzers had set his distance improperly, and that round exploded behind us.

Before we could contact the artillery, they had fired several more salvos, each with an errant round. American 105s are most impressive when incoming in your vicinity!

On the second night one of our perimeter guards became confused and started firing away at his own platoon. No one was hit, but that wasn't because he wasn't trying! He was shifted to outpost duty at the last minute, when the assigned guard slipped away and slept.

When that goof-off appeared on our way back to our bivouac area I grabbed him by the collar and gritted "If this happens again, I'll kill you on the spot". I wouldn't have--of course--but I was so angry that I really believed that I meant it!

This was a court-martial offense, but I chose to handle it otherwise. This was his last known screw-up, and was the same soldier who had been stomped by Homer Jackson, for being late for reveille.

It was at Simmerath where I first saw the Proximity Fuse being used by a new type tank destroyer. It was larger and distinctly different from any TDs that I had seen previously and the bogie wheels were larger and evenly spaced. It also mounted a long barreled 90mm gun. Later, I found that it probably was an M-36 TD.

I was intrigued by the consistent height of the air bursts--all of which appeared to explode about thirty feet above the ground, near the Siegfried Line pillboxes at the base of the slope, 500 yards away.

When I asked the TD gunner how he could set his fuses so accurately to get such uniform air-bursts, he replied that a magnet in the shell's nose caused it to explode automatically at the desired distance above the ground.

I said that it could not be accomplished by a magnet--it would have to be done by some type of radio signal. But a radio transceiver (transmitter and receiver) built into an artillery shell--impossible! I had no ready answer and learned only later that my initial assumption had been correct.

Through our binoculars we observed German ambulances making multiple daylight runs to the Siegfried pillboxes at the base of the slope. This appeared suspicious and we thought that they might be bringing in ammunition, food, or other supplies in the ambulances, even though that would have been a violation of the Geneva Convention--and most German regular army units were quite scrupulous in abiding by its dictates. The proximity fuse may well have been the reason for all the ambulance runs that we had observed.

The US began working on the proximity fuse in 1940 and brought it into operation in late 1942. The Germans and British had also been attempting to develop the proximity fuse, but had failed. Its first use in the ETO was on 12 June 1944 against buzz bombs in England and later that fall at Antwerp--although our navy gunners had successfully used it against Japanese planes in January 1943, from the USS Helena.

In chapter 4 of "War as I Knew It", General George S Patton stated "the night of December 25 and 26 we had used the new proximity fuse on a number of Germans near Echternach and actually killed 700 of them." This action was during 3rd Army's move north to Bastogne during the Bulge, and was the first documented use of the fuse against enemy ground forces. It is my belief that we had seen the proximity fuse in use more than a month earlier!

Charles P Biggio Jr's piece in the May 2006 "Bulge Bugle", stated that I could not have seen the proximity fuse, as its use had been forbidden on the continent prior to the Bulge. He had the backing of several authors, but Edward A Sharpe--archivist at the Southwest Museum of Engineering, Communications and Computation--wrote: "After the defense of Antwerp, the Combined Chiefs of Staff removed all bans against any future use of the proximity fuse"!

This was well before the Bulge, and should remove any doubt that its use at Simmerath was likely. My belief is reinforced by the gunner's explanation of its operation, which--although it was flawed--was a reasonable explanation from an unsophisticated gunner!

Because the fuse had been used in England and Antwerp, this Tank Destroyer may have been there and have carried some 90mm proximity rounds to Simmerath. Regardless of how these rounds arrived at Simmerath, I firmly believe that I had seen the proximity fuse at Simmerath, as stated!

Proximity Fuze Jamming--W. W. Salisbury--SMEC

An interesting side of electronic warfare came to my attention about ten days after I joined Dr. Terman at the Harvard Radio Research Laboratory. Fred asked me to come to his office to discuss a new project. When I came in he showed me some small pieces of odd looking equipment and marked that these parts were especially secret and should be kept in the safe when not in use. I asked what application was intended and Fred explained: "These parts are radio activated fuses for artillery shells. Vannevar Bush and Alfred Loomis have suggested you for this job so I guess I'd better let them explain," He picked up the phone and I heard him say I'm sure Win can come right over.

When I arrived in Vannevar's office at MIT, Alfred Loomis was there. Alfred said, "We have a special secrecy problem. Dr. Merle Tuve at Carnegie Institution of Magnetism is developing a proximity fuse for artillery shells, He is very tight on secrecy, but he is telling the appropriate military people that his fuses cannot be interfered with. We are somewhat skeptical about this, but we have to be careful, because if the military users thought that these fuses could be jammed they would never get used. Vannevar and I believe that, contrary to Dr. Tuve, any electronics device can be interfered with. The only real question is, what is the cost in terms of knowledge and equipment? We want you to analyze Merle's fuses and make and test a jammer, if you can find a way. Merle Tuve is rather touchy about this, so do not contend with him. We will insist he allow you to make a test but you are to report all results to us, and keep your work completely secret from any military or naval personnel. We want the fuse to be used but we believe that if they have any weakness we should know it before any enemy does."

I agreed to take the project and returned to my lab to analyze the samples. A description of how the fuses were intended to work depended on the Doppler shift of reflected radio waves from the target causing a low frequency beat with the transmitted frequency. I devised a variable frequency transmitter which could be adjusted to the necessary frequency range and by means of a motor driven variable condenser, emitted a wave that varied at the approximate beat frequency, which depended on the velocity of the shell's approach to the target.

Dr. Tuve reluctantly agreed to a test at a fort in North Carolina, where he was testing fuses by firing them more or less vertically and observing the burst with a smoke puff rather than the usual explosive charge as they approached the ground. I came to Tuve's test site on the appointed day and he demonstrated by firing them while we were protected by a heavy roof of Palmetto logs. The gun used was available because it was considered too worn for military service. On this account the shells tumbled on the way down and took an amazingly long time for the trip up and back down. The fuses worked well and the test shells puffed smoke at about 30 to 40 feet above ground as they returned. After several demonstration shots, I observed the shell's radio signals on a special radio receiver which I had provided. I suggested that on the next few firings I would use my jammer. Tuve agreed, and I tuned my jammer to the observed frequency.

The next few shots all puffed smoke at about 4000 feet altitude, much to Dr. Tuve's dismay. He immediately suggested that we had hit a bad batch of improperly manufactured fuses. However when we tried several shots with my jammer turned off, the shells again puffed smoke at about 30 feet above the ground.

Dr. Tuve was still unwilling to admit that his fuses could be jammed and said he would report that he had encountered a few defective samples. I replied that, of course he was free to report the tests as he saw them but I would make my report independently. Merle was very angry with me, but he later forgave me and we became good friends.

I turned in my report and my jammer and nothing more came up until the Germans captured 20,000 proximity fused shells during the Battle of the Bulge. We then had a marvelous flap to build 200 of my jammers. However, the Germans had been told by their engineers that proximity fuse shells were impossible because of the forces exerted during acceleration in the gun, so they never recognized what they had captured. (Google "proximity fuse" for insight as to the operation of the fuse.)

From the time of our landing on the continent we had gained a healthy respect for the German 88mm gun. Although I didn't see the action, a verification of the 88's penetrating power was a knocked out Sherman tank near Hofen. A glass-smooth hole was punched through the extra steel at the base of the gun barrel, through the frontal turret armor and out the back of the turret. The total armor penetrated must have been at least ten inches.

Many soldiers were awed by this Krupp gun and all incoming that was not mortar was often dubbed 88s--which only rarely was the case! Their 88mm anti-aircraft gun went into production in 1936 and was first used in the Spanish Civil War. It was later modified for anti-tank fire by allowing its barrel to be depressed to the horizontal--and by the use of solid metal projectiles.

We had nothing to challenge it, until our 90mm gun became operational in 1944. Its armor-piercing ammunition was equal to the 88s, and further--it sported the proximity fuse!

Sherman tanks were more mobile, longer lived and more trouble-free than German tanks, but they were sadly outgunned and under-armored when they were forced to fight their German counterparts.

The Sherman's narrow treads were a problem in soft terrain--later corrected by add-on cleats, bolted to the outer edge of their tracks. Also, their propensity to throw the tracks when backing up on a side hill was a further problem.

In theory, the M-4 Shermans were not supposed to confront German tanks one-on-one, but were to break through the front and raise havoc in the enemy's rear areas--and this they often did with superb outcomes.

Our line companies liberated German mobile generators, that we used to power our radios--which allowed us to tune in on the various radio shows--including "Axis Sally", a smooth talking American woman--although, at the time, we were told that she was British. She mixed in enough accurate news--along with German propaganda--to give her modest credibility. Meanwhile, she was telling us how and why we were losing battles and the war; also how our wives and fiancées were enjoying themselves with 4F men on the home front, while we were away fighting.

She interspersed her propaganda with American songs, plus a beautiful and sentimental German army song--Lili Marlene--one of our favorites. This is about how I remember it from long ago: "Underneath the lamplight by the village gate--darling, I remember the way you used to wait--'Twas there that you whispered tenderly--that you loved me and would always be--My

Lili of the lamplight--my own Lili Marlene." There were several more verses, all of which were tear-jerkers and beautiful!

Sally was a real morale booster for us--surely not what she had in mind. An interlude of Sally's songs was our prelude to bedtime. After the end of WWII, Sally was convicted as a traitor and imprisoned for twelve years. She died in 1988.

In early December David Arndt, a medic from A-Company went AWOL again, to get in on some military action with the infantry! Our new battalion medical officer--Captain Stanley Goldman--made out courts-martial papers. He had replaced Captain Stratton, who at age 45 was considered too old for these rough conditions. Colonel Isley suggested that Dr Goldman talk to the medical colonel at V-Corps Headquarters who said "Sonny, sit down, that is not the way we do things around here".

Apparently Arndt was considered a V-Corps icon--an unusual medic who loved action. At Cherbourg he had been found in the attic of the city hall where he and another GI were whooping it up with two French women. They had hung out a French flag in celebration of the occasion. Our battalion had never gotten within thirty miles of Cherbourg!

About 10 December 1944, as a nervous tag-along member of a six man patrol from a 38th Cavalry troop--forward of the front and east of Bullingen--we found plenty of German activity across the bottom of a tree-filled canyon.

Trees were being cut down with saws and axes, and tanks and other heavy motorized equipment were moving around over straw covered trails, to muffle their sounds. While watching this activity from a concealed position two hundred yards away on the opposite side of the canyon, we listened to the big tank engines for some time and sensed that "something unusual was afoot".

When information regarding all of this German activity was sent to army headquarters, their response was "this is just a feint to trick us into pulling our troops away from our planned offensive near Schmidt in the Hurtgen Forest".

If it had not been so serious, an almost comical ploy was our leaders attempt to enhance our perceived troop strength in the Ardennes, in order to draw more Germans troops from the front further north at Aachen. They conjured up a non-existent infantry division to further promote the ruse. (Heard, but not verified--WR).

As a result, our high-level commanders were not suspicious when the Germans began bringing in more and more troops prior to the Bulge--this is exactly what our leaders had hoped--and they happily believed that their scheme was working to perfection.

There surely were a few red faces when the axe finally fell! Of course, we at the lower levels, were unaware of these machinations, but were kept alert by the persistent rumors that were floating around.

On our return trip from our canyon viewpoint, the cavalry used pull-igniters on three Tellermines left by a German patrol that had been chased off the previous night. Several enemy were killed when they tried to reclaim their AT mines.

The aggressive patrolling of the 38th Cavalry Squadron was a key element in their soon-to-be-defense of the Monschau area during the Bulge, where they repulsed a number of attacks by vastly superior German forces. Their aggressive patrolling allowed them to establish the likely enemy avenues of approach, while keeping the Germans from coming close enough to determine the cavalry's defensive positions.

While I occasionally had patrolled in areas forward of our front lines, I had never patrolled with the audacity of these 38th Cavalry troopers. They were fearless and not concerned that might bump into Germans. They probably would have welcomed the opportunity!

My platoon had laid AT mines along the road shoulders near Bullingen a few weeks earlier, but that was probably done to deter small-scale penetrations. Bullingen was on the route to be taken by Kampfgruppe Peiper. His forces captured a large quantity of our gasoline there, before heading west, towards Huy on the Meuse River.

On 14 December the 2nd Infantry Division launched an attack from the Elsenborn Ridge to capture the Roer River dams--to keep the Germans from flooding the Roer River plain and foiling our advance at Aachen. The "Indian Head Division" was making good progress in a flanking action--thus gaining ground that had been denied us in the September to November frontal assaults in the Hurtgen Forest.

V-Corps called off the attack on the second day of the Bulge--to keep our forces from being decimated by the massive enemy infantry and armored forces that were attacking there. The Bulge was considerably more than a feint--it was a giant leap beyond what any of us could have imagined and it caught everyone by surprise--even those of us at the lower levels, who suspected that "something unusual was afoot"!

THE BULGE

IX

On the morning of 16 December, the well-orchestrated German attack in the Ardennes--that they called the "Wacht am Rhein"--was launched. The name was a subterfuge to hide their offensive intentions behind a pretended defense. Hitler suspected a security leak within his Wehrmacht and so he limited disclosures of the attack plans to only his most trusted generals. He was unaware that the British had broken his Enigma Code, even though some of his advisors had suggested that this may have happened. "Impossible" said der Fuehrer!

There were so few radio intercepts concerning the upcoming Ardennes offensive that our top level commanders were caught off guard--even though many of us at lower levels were antsy about all of the enemy activity nearby.

In general, the Wehrmacht followed the mandated secrecy orders, but there were enough slip-ups by their air force and civilian transportation units to have given our commanders sufficient insight had they not been so supremely overconfident.

The 146ECB was bivouacked at Mutzenich Junction, three miles west of the front at Monschau--which was at the northern shoulder of the German build-up. Captain Arthur Hill--H & S Company commander; CWO Wm Langhurst--Assistant S-1; and CWO Al Sarrach--Assistant Motor Officer; dropped in at their favorite Malmedy restaurant on 16 December for dinner. This was the first day of the Bulge and the situation had not yet been sorted out. It was still being viewed by higher headquarters as a limited action to offset the pressure of our attacks further north near Aachen.

The restaurant owner had just gotten in fresh steaks that afternoon, so they all ordered steak. While waiting to be served, the owner requested that they move their jeep around to the rear, so that the German soldiers who had been seen in the vicinity would not shoot up his place. They complied and then polished off their steaks in a hurry and took off in a high lope for the battalion--fifteen miles to the northeast. A smart move, as Malmedy was near the proposed route of Kampfgruppe Peiper!

The 38th Cavalry was at the northern flank of the Bulge and just north of the 3rd Battalion, 395th Regiment, 99th Infantry

Division--who managed to hold their ground even though the remainder of the division was badly chewed up, and much of their command was shifted to command of the 2nd Infantry Division.

For several days this small cavalry force--plus 3rd Platoon, A-Co, 112ECB; A-Co 146ECB; and their attached 105mm and 155mm artillery--fought off several attacks by vastly superior enemy forces. Several times artillery fire was called in on their own positions to thwart the attacks. Canister rounds--a cannoneer's shotgun--were used with devastating effect when they were about to be overrun.

For their stout defense, all three units were awarded the Presidential Unit Citation--the nation's highest unit award. According to "Cavalry on the Shoulder", the 38th Cavalry was the only cavalry squadron to be so honored in WWII.

The 146th Engineer Combat Battalion had received a Presidential Unit Citation for the D-Day demolition mission on Omaha Beach, so an oak leaf cluster was added to A-Company's PUC. A-Company, 612th Tank Destroyer Battalion--of the mallard duck episode--who fought valiantly nearby at Hofen, received a Meritorious Unit Citation for their efforts.

Sergeant Rodney Lewis related the following to me in 2002: "The 1st platoon was short-handed because of illness--we were 25 men under Lt Bill Kehaly and were scattered out over several hundred yards. It appeared to be WWI all over again, since we were in trenches. We were on the right flank and a deep valley dropped off immediately to our right."

"Our outpost, in a house two hundred yards forward of the front, came under heavy enemy pressure and our men pulled back to our trenches. Tank fire was then called in which destroyed the house. One of our patrols--unseen in a briar patch--called artillery fire on their own position and then managed to escape. The Germans advanced to our left, but our other platoon stopped them and we were able to hold fast at the trench line"

Willard (Bill) Shoemaker, who had been a sergeant in my Gap Assault Team #8 on D-Day--and had been battlefield commissioned to 2nd Lt the previous week--was awarded a Silver Star for his actions at Monschau. His platoon in an outpost broke up a night time attempt to infiltrate their position. They were in the upper floor of a flour mill and they withheld their fire until the Germans were almost within spit-wad distance, thereby killing and wounding a number of them while suffering no casualties of their own.

The battlefield success of the 38th Cavalry Squadron in the Bulge, was due to a number of elements, including a seasoned

cadre that had fought from Normandy--but probably the most important factor was their commanding officer--Lt Colonel Robert O'Brien--a 1936 West Point cavalry graduate.

He was a fanatic in his dedication to patrolling the area forward of his lines--to the extent that his Cavalry Squadron eventually came to own that area! Initially, this was not the case but came to pass after several fierce firefights that inflicted heavy casualties on enemy patrols.

The following recounting of the Monschau defense is from "CAVALRY on the SHOULDER": "An example of the quick and deadly fights initiated by patrols, is the instance at the end of October 1944, when a B-Troop patrol lead by First Lieutenant Weldon J Yontz, fought a sharp action against a German patrol in the thick pine forests of the Ardennes. The cavalry point man, Private Herbert H Whittard, spotted the enemy first and motioned the cavalrymen into position to spring an ambush."

"Waiting in cover, the cavalry troopers engaged the enemy patrol at close range that killed or wounded all twenty-two of them. Prisoners later revealed that this enemy patrol was hand-picked from the reconnaissance company of the opposing German infantry regiment."

"This type of aggressive action was repeated often in the Monschau sector, causing enemy patrols to avoid contact and allowing cavalry patrols to make increasingly detailed reconnaissance reports and sketches of enemy positions. More importantly, it left the German commanders ignorant of the details of the cavalry's defensive positions."

"The preparation of the defense at Monschau may rank as one of the most thorough defenses by an American battalion-size unit in US Army history. The cavalrymen, taking stock of their equipment, time available and the aggressive spirit of the troopers, quickly established the defense which made maximum use of all available assets."

"The defense was unique in many respects. First, the establishment of patrol dominance denied the enemy detailed knowledge of the squadron's disposition and strength. Thus any attacking enemy would be forced to guess where the units were deployed, and where the squadron was weak and where it was strong."

"A second aspect of the defense was the unusual attention to ensuring integrated command, control and communications. To this end, the squadron employed 16 radio nets, incorporating over 60 radios. The high number of radios--several times the number found in an infantry battalion--supplemented a remarkable

wire communications system consisting of 65 telephones, 50 miles of telephone wire, and six switchboards."

"The wire command and control system integrated all squads, platoons, troops, and supporting artillery, into a single web. This effort is even more amazing, considering the fact that the squadron was not authorized communication specialists."

"The system was designed to function, even if a portion of it were destroyed. It also permitted very small units--in some cases individual four-man machine gun positions and two-man artillery observer teams--to continue to function and receive orders even if they were cut off from their headquarters."

"Additionally, all of the wire was buried deep to protect it from enemy infiltrators, accidental cuts, and enemy artillery fire. Finally, the entire wire system was duplicated, so that each line had a back-up in the event of failure. This communication system would prove essential to the coordinated defense across such a large sector of the front (about 6 miles) by so small a unit."

"The third unique factor which characterized the defense of Monschau, was the extremely precise and effective positioning of the available weapons, obstacles and units. Machine guns were one of the keys to the defense. The 38th Cavalry dismounted .50 caliber and .30 caliber machine guns from Jeeps and armored cars and carefully sighted over fifty of them in the terrain surrounding the town."

"The weapons were carefully positioned, so as to provide interlocking grazing fire along all of the likely enemy avenues of approach. They were further tied into obstacles of concertina wire and personnel mines along these likely avenues. Further, extensive use was made of trip flares to provide early warning of enemy approach. Flares were preferred because they prevented friendly casualties in case of mistakes, and they did not give the false sense of security associated with extensive minefields."

"All of the weapons were dug in, with overhead cover to survive artillery attack, and they were carefully concealed so that an attacking enemy had to literally be on the position to recognize it as a machine gun position. Finally the positions were integrated into the squadron command and control telephone net. A final point on the preparation of the Monschau defense was a typical characteristic of defense common to the United States army--the thorough integration and abundance of artillery support--105mm and 150mm howitzers, augmented by their organic 60mm and 81mm mortars."

"The effectiveness of the artillery support was later verified by a German prisoner. He reported that German troops in the Monschau sector were forbidden to leave their bunkers and foxholes during the hours of daylight. The German troops were reduced to observing their sectors through the use of mirrors in order not to attract rapid and deadly artillery fire.

This dedicated defensive preparation was tested at 0545 on the morning of 16 December 1944, when the intense German artillery barrage announced the start of the Battle of the Bulge."

On the night of 16/17 December 1944, the 1,500 man parachute force, under Lieutenant Colonel Frederick-August von der Heydte, dropped into the Hohes Venn in "Operation Stosser". His group had fought several vicious engagements with the 101st Airborne Division in Normandy and again in General Bernard Montgomery's flawed Market Garden offensive in September 1944--as portrayed in "The Band of Brothers".

The Hohes Venn is a swampy area on the headwaters of the Roer River. In November, three of us tried to cross through this swampy area. With our Jeep flat out in four wheel drive, we traveled about 50 yards, before dropping it down to its axles. We then had to jack it up out of the mud and build a corduroy road to get back on solid ground.

The paratroopers were a day late because of glitches in getting gasoline delivered and getting their troops assembled. They were scattered for 25 miles from Malmedy to Eupen because of inexperienced pilots and the minimal advance notice regarding the mission--dictated by Hitler as a security measure. The unsynchronized twin Jumo engines of their planes generated an interesting slow beat-frequency sound.

Many parachutes were found after the drop. I rescued an undamaged white one--also a large section from a brown and green camouflaged model. Both appeared to be silk. The camouflaged silk made fine neck scarves and several still reside in my dresser drawer to be worn occasionally, but I finally gave the white one to the Salvation Army, after it had taken up closet space for more than twenty years.

General Dietrich's 6th Panzer Army--the main German force in the Bulge--included four Panzer Divisions with the latest tanks, weapons and infantry. It included the 1st SS Panzer Division--Leibstandarte S S Adolph Hitler. The lightning strike to the Meuse River near Huy, Belgium was to be led by Joachim Peiper leader of Kampfgruppe Peiper, from this division. They then

would move north to Antwerp and envelop our armies, a replay of the 1940 French and British defeat at the beginning of WWII!

In the planning, Dietrich's forces were to have reached the Baroque Michel crossroads--midway between Malmedy and Eupen--on the 16th--which the paratroopers were to have captured by then. The 38th Cavalry's stand at Monschau blunted that effort, so Dietrich's forces were directed south toward Elsenborn, Bullingen and Malmedy.

Had Dietrich been able to force his way through Monschau, he very well may have rolled up our front and then captured the large gasoline dumps near Eupen. Had this come to pass, their armies could then have moved almost unimpeded north to Antwerp.

Despite all of the negative opinions about the stupidity of launching the Ardennes offensive and taking troops and materiel away from the Russian front, honesty must conclude that with a few fortunate breaks, the Bulge could have been a phenomenal German success and Hitler would then have been trumpeted as a great tactician!

Also, had the Siegfried-Line pillboxes at Hofen not been destroyed and bulldozed full of dirt by my platoon, the enemy may well have reoccupied them during one of their forays into Colonel McClernand Butler's 99th Infantry Division positions, and would then have been difficult to dislodge.

Some of the attackers appeared to have been heavily into the schnapps and were oblivious to the withering machine-gun and artillery fire. They kept on coming, until large numbers were killed, wounded or captured--or they may just have been fiercely loyal, highly motivated young soldiers.

At 1520 hours on 16 Dec, V-Corp's Colonel Pattillo called Major Willard Baker--our S-3 and ordered 146ECB to furnish a company of engineers to serve as infantry--to be attached to the 38th Cavalry Squadron at Monschau. A-Company was in the line at 1700 that evening, where they furnished support for the outnumbered troopers.

At 1525 Hours, Colonel McDonough--the 1121st Engineer Combat Group commander--called our headquarters and ordered another engineer company to be deployed as infantry.

The three B-Company platoons moved into position the next morning and for several days formed a barrier line, a short distance behind the front between Monschau and Elsenborn. Our purpose was to slow the advance of the the Panzer Army, should they penetrate our lines. My 3rd Platoon covered a 1,000 yard front in the snow, until relieved on 23 December.

We set up three 50 caliber machine guns in defensive positions and patrolled between them, but being in a semi-wooded area we had inadequate fields of fire and would have been captured or bypassed by any enemy attack in force!

Several men manned daisy-chain roadblocks on nearby roads. These are AT mines roped together, so they can be pulled across the road at the approach of enemy vehicles, but they are not effective unless they are adequately supported by covering fire. Trees had explosives strapped to their trunks in order to drop them at the approach of enemy vehicles and form abatis.

Engineers have only occasional needs for machine guns, but we had both the WWI vintage water cooled .30 caliber Brownings and the newer air cooled version--as well as the .50 caliber Brownings that were normally ring-mounted on our truck cabs for anti-aircraft fire. Our .30 caliber Brownings were light-years behind the vastly superior German MG-42. In the early hours of the parachute drop, one of our water-cooled Brownings fired one round only and then sat there mute--the water in the cooling jacket had frozen, jamming the action!

While on outpost duty, the 3rd Platoon had no clue as to the enemy's intentions, or what was actually taking place nearby at the front. We were located in a sparsely woody area away from our headquarters, but the wealth of rumors and the actuality of the paratroopers and reports of Skorzeny's men in American uniforms kept us alert. Unconfirmed rumors abounded!

Anyone moving around was challenged--this included even our easily recognized generals. Lt Leonard Fox--now a C-Company platoon leader--was taken prisoner by a patrol from the 38th Cavalry Squadron. He had not received the password for the day. After six hours, while his legitimacy was being confirmed, he was released.

Lt Refert Croon led a patrol of Joe Manning, Marvin Lowery, Warren Hodges and others, looking for the paratroopers. Lowery was killed in an ensuing firefight that killed two Germans and wounded several more--the rest surrendered. Nine paratroopers were killed and about sixty were captured--all by C-Company and HQ-Company--as A-Company and B-Company were deployed elsewhere as infantry. Fred Matthews was captured by the paratroopers, but he managed to escape during another firefight.

An unnamed engineer platoon established roadblocks on the road running north from Butgenbach, forcing the Germans to head west towards Malmedy. Otherwise the Germans could have rolled up our front as they outflanked us and moved on north. They could have easily overrun this small engineer unit, but a few

determined fighters can often halt a larger enemy force, if they are willing to stand and fight.

Above is in error:

Several years later, after reading "First Across the Rhine" by Colonel David Pergrin, I realized that the unit in question was the 291st Engineer Combat Battalion. I had believed that their roadblocks were around Bullingen and Butgenbach, when in fact they were near Malmedy--ten miles to the west. Such is the accuracy of second-hand information in wartime!

Even more important than establishing the roadblocks was their contribution in slowing Kampfgruppe Peiper by blowing a number of bridges and thwarting his intended drive to the Meuse River. Some of the bridges were destroyed just as Peiper's tanks arrived on the scene.

Early in the Bulge, we heard of the exploits of this engineer outfit, but I never knew its designation. I learned later that this was a battalion operation under the direct control of Colonel Pergrin. I believe that their stout defense was a major factor in blunting Kampfgruppe Peiper's drive to the Meuse River at Huy.

The 291st Engineers, along with the 30th Infantry Division, were bombed three times by our 9th Air Force during their days in Malmedy. Misdirected air strikes were not too unusual an occurrence when mists and clouds mask events on the ground--or when the front is poorly defined. These fatalities were related by Colonel Pergrin--the unhappy commander of a battalion of combat engineers.

Julius Mate--whom I had not seen since before the Bulge--related the following at our annual battalion reunion in 1993: "Early on the morning of 17 December, Sergeant Henri Rioux sent Nettles and another radio man to the battalion headquarters for breakfast. When the radio operators had not returned as expected, Rioux told Mate and James France to go to breakfast and to see what had happened to them. Later we heard that the paratrooper's planned assembly area was our radio shack, several hundred yards from our bivouac area--located away to keep from drawing artillery fire on our headquarters."

"On their way, they saw a parachute with an attached bag hanging in a dead tree. Seeing evidence of the paratroopers was not surprising since they had heard the planes overhead the previous night and our men had seen their green recognition lights. Mate attempted to recover the chute by pulling on the shroud lines, but the rotten tree broke and the trunk fell across his ankle, pinning him to the ground."

"After working free, they continued toward the headquarters and breakfast and then saw Nettles up ahead acting very strange. When they ran up to ask what was happening, six paratroopers with machine pistols stepped out of hiding, took them captive, disarmed them and then threw their M-1 Garand rifles into a nearby creek--where they were found later that day by a patrol led by Lt Refert Croon."

"Nettles and Mate were directed to make a double-pole support to carry a paratrooper who had compound fractures of both legs. At the end of the day, Mate's ankle was swollen and painful, so France and Nettles carried the wounded trooper."

"This small group kept moving during the day and slept under fir boughs at night. After wandering about for two days, they joined the main body of about 150 paratroopers and were then interrogated by a German officer who spoke impeccable English. He had studied at a Texas university and so not only knew the language--but also the American idioms and customs."

"They were combined with twenty others who had been captured from a laundry unit near Eupen. At night they slept in a tight pile to keep warm, as it was very cold. After a time when the body parts against the ground were growing cold, they all turned at a given signal. They kept up a running conversation to keep telling of the importance of moving toes and fingers to avert frostbite."

"One of the captives, who understood German, heard their captors discussing how they should dispose of the Americans by throwing grenades into their midst while they slept. When a patrol from the 1st Infantry Division engaged the paratroopers, the captives ran up waving their shirts and yelling 'Don't shoot--were Americans'."

Our new medical officer--Captain Stanley Goldman examined Mate and France and Mate was sent to a field hospital where he was found to have two ankle fractures. France and Nettles both suffered lingering foot problems which they believed resulted from the cold that they experienced during captivity. Mate was sent to hospitals in France and England and eventually to the US, to complete his extended recovery.

Early in the Bulge, Earl Buffington--from C-Company--was riding in Blaine Hefner's truck, as they won the race with a German tank to a crossroad near Malmedy. The tank halted and began firing at them as they scurried away.

Earl's arm was injured by a low hanging tree limb and he was hospitalized near Spa, Belgium. The limb also brushed off his "Omaha Beach Trophy Helmet" which sported two clean 8mm holes.

The bullet had passed from front to back nicking his ear and the side of his head. He was not seriously wounded, so he considered that a good omen and he refused to swap the helmet for a new one. However, his Trophy Helmet was never recovered.

Originally from the 103rd Engineers, 28th Infantry Division, Earl was transferred to the 2nd Infantry Division in April--and from there, he and Paul Burke volunteered for our D-Day mission. Earl was assigned to Joe Gregory's Gap Assault Team that landed on Easy Red beach.

Soon after Earl and several others were dropped off at the field hospital in Spa, he was told that the Germans were about to overrun the area, so Earl and a number of other patients scurried out the back. Upon being released from an English hospital, he was assigned to another engineer unit.

In a similar fashion Mugg Pawless, Julian Mathies and eight others fled out the back door of a hospital in Malmedy just ahead of the attacking Germans and later ended up at a temporary hospital in the Grand Hotel in Paris.

In November--at Vossenack in the Hurtgen Forest--Mugg was wounded in the heel by an artillery round. After returning from that infantry support mission, the wound was periodically sore and treatment was ineffective, so he was finally sent to an evacuation hospital.

When German tanks were heard snorting around nearby, he was moved to another hospital in Malmedy. Before his treatment could be completed, the Germans also cut short that hospital stay. Mugg couldn't don a shoe on his sore foot, so he put on seven socks, slipped on an overshoe and walked out into the snow with his fellow patients.

The next morning they wandered into a gasoline dump near Spa that was being evacuated. Mugg and Julian rode atop gas cans to Rheims where the Red Cross fed them doughnuts and coffee and took them to a hospital where Mugg's wound was dressed.

He was sent by ambulance to Paris where his wound was cleaned surgically and he was given penicillin. After a short stop in a Cherbourg hospital where his wound was again cleaned and antibiotics administered, Mugg eventually ended up in a hospital in England.

When that doctor asked what the x-rays had shown, Mugg stated that no x-rays had been taken. The doctor was surprised and the follow-up x-rays showed a small artillery fragment lodged in his heel--cause of the pain that had plagued him for months. It was removed and his recovery was uneventful.

The 2nd Infantry Division's attack toward the Roer River dams was called off on 17 December, to keep from being overrun by the massive German attack, and they and the 99th Division formed a defensive position along the Hofen/Bullingen/Butgenbach line.

That the 2nd Division could abort their attack and make the necessary readjustments, while under continuous heavy enemy pressure, was due to the superb leadership of General Walter M Robertson and his staff; and is why the "Indianhead Division" is recognized as one of the premier US Infantry Divisions of WWII.

For several days they also took over control of the greater part of the 99th Infantry Division, which had been scattered and severely crippled in the initial German assault. Lt Colonel McClernand Butler's 3rd Battalion, 395th Infantry, 99th Division at Hofen held its ground and was not involved in this command restructuring.

The 1st Infantry Division was brought in to bolster the southern flank near Bullingen and these seasoned troops along with the 2nd and 99th Infantry Division, and various attached troops stabilized the northern shoulder of the breakthrough.

This was where the 3rd platoon had laid a number of AT mines along the road shoulders a few weeks earlier. I'm not sure why it was done at that time and at that particular location, but suspect that it was only a precautionary move against local probing attacks--certainly not an expectation of a major German assault, as the Bulge would prove to be.

We were attached to a number of infantry divisions during our time on the continent, but without doubt the "Big Red One" did the best job of watching over us. I was amazed that they bothered to check our needs, when we were not directly attached to them, but were attached to the 38th Cavalry Squadron--which in turn was attached to their division. They must have had a check list for all of the attached troops and were most solicitous--very much appreciated!

About 20 December, while working on a large anti-personnel minefield near Elsenborn--designed to deny the Germans access to a natural infiltration corridor--a flight of British "Typhoons" came roaring in and rocketed the woods 800 yards to the east. We were a bit jumpy as their flight path was directly overhead and we thought that they might have mistaken us for Germans.

That would not have been unusual, considering the chaotic conditions along the front. We saw no indication that German forces were there--before or after the strike--but since we were close to the front, that is a strong possibility.

A prominent radiator bulge under the engines gave them a distinctive appearance and their engines made an unusual roaring noise--not at all like the sharp exhaust crack of the Rolls Royce Merlins in the Spitfires and Mustangs. I was told that these engines had 24 cylinders--four banks of six--as compared to the twelve cylinders of the Merlins. The twenty four exhausts blended the sound into the unusual roar.

The following is from C-company's Tom Wilkins:

"Lt Richard Schindler led a reconnaissance patrol in the snow on one cold winter day, seeking information for V-corps about a German Panzer Division. The infantry said we were stupid for driving past their outpost."

"Sergeant Roy Durfey and Claude Dobbs were in Lt Schindler's Jeep, and Norman Lightell and the rest of the squad were in the truck driven by Robert Richardson. Tom Wilkins manned the .50 caliber machine gun mounted on the truck cab."

"As they approached a house, a German soldier was seen to run inside. The men in back jumped out, while Tom remained on the machine gun. Lt Schindler's Jeep backed up and he called out in German for those inside to surrender. Thirty-seven did so, and were captured without a shot being fired. They were then led away to a PW cage."

"Later, Lt Schindler, Cecil Morgan and Roy Durfey returned to another house, where smoke had been coming from the chimney and where Durfey had seen a mule hitched to a two-wheel cart. Morgan kicked in the door and stepped inside with a Thompson sub and thirty-eight more surrendered."

"Not a bad day for a lieutenant and one squad of engineers! Before taking the prisoners away, Durfey unhitched the mule and turned it loose." (Tom Wilkins was not sure if this was during Vossenack or the Bulge. I believe the latter--WR)

In France, Schindler saw two Germans stringing telephone wire and who were unaware that Americans were nearby. Artillery fire was called in which killed them. Then he and Roy Holmes--the 1st sergeant in C-Company at that time--went out and recovered their pistols. Schindler suggested that they follow the wire and see where it went.

Roy said that he knew where it went and was not interested in pursuing it further--but if Schindler wished to do so, he could do so alone--and so he did! He hooked up the phone and tried to call up the German headquarters to gain information--but his attempt was unsuccessful.

When Captain Wall was wounded at Vossenack, Lt Schindler was the acting C-Company commander for a short time. Obviously, he

was an innovative officer and a determined leader, who was respected by all who knew him.

After WWII, he was a civil engineer who travelled all over the world, where he oversaw large construction jobs. He died in 1986 of an apparent suicide. A run-down on his family.....**Note 7**

Christmas day 1944, on the way to our AP minefield, a doe and a yearling crossed in front of our truck. We stopped and I told the men in back to shoot her. After ten or more rounds had been fired, I yelled "Cease Fire" just as the deer disappeared into the brush. The firing might have been interpreted as a fire fight with a German patrol, initiating a wasteful response.

The doe then wandered back across the road, so I shot her. There was a single hole in her hide--thus indicating a serious shortcoming in my platoon's marksmanship abilities--I should have spent more time with them on a rifle range! The fresh meat was a welcome change from our recent diet.

Several weeks previously, B-Co's various work parties returned to the company bivouac area one evening with five hogs, two cows and a deer. Someone had suggested that we have fresh meat, but had not coordinated the effort. The animals were a nuisance around our AP minefields--running into the trip wires and detonating the mines and killing themselves in the process. We only hastened their demise.

The hogs were fried first and the pork fat was then used to fry the rest of the meat. The meat was chewy and tough, but the change of diet was much appreciated. When we could get to our company kitchen for a hot meal, I piled most of the food together in my mess-kit (shit-skillet in GI parlance). Breakfast might include stewed prunes, oatmeal with reconstituted dried milk, scrambled powdered eggs, bacon and toast with jam.

It did not look too appetizing when so intermingled--but it tasted better than it looked, and it had a definite edge over those early gruesome K-rations. Also, having the food piled together helped to keep it from freezing.

Our cooks were artists in their ability to take smelly powdered eggs and powdered milk and turn them into something reasonably palatable. I am not sure what they used to perk up the powdered eggs, but they added a bit of vanilla and a pinch of sugar to the powdered milk. An improved K-ration showed at about this time. It was superior to the original--the crackers of which looked and tasted like lightly seasoned sawdust.

Platoon Sergeant Jackson was vocally unimpressed when given one of those early K-rations in lieu of "real food". At Hofen,

we had him strip down to his shorts and crawl on the big brass pan of a commercial butter scale. Converting from kilograms, his weight was determined to be 242 pounds--and that without any fat! One did not build up body fat on K-rations!

On the night of 26 December 1944, our bivouac area was shelled by artillery fire for about thirty minutes. We were in an area of large pine trees, so there were many tree bursts. I flattened myself at the base of a large pine tree, away from the overhead tree bursts and was happy when the shelling ceased.

As Jackson was heading for a safe refuge in a culvert--he called it a tin horn--he ran into a truck tailgate and chipped off the corner of an upper front tooth. It was a tight squeeze in the culvert as twelve others had beaten him there.

We believed that the damage was done by captured American 105mm howitzers. Several 99th Division 105mm howitzers were captured near the Wahlersheid Crossroads and these most likely were the culprits! The shelling probably stopped when they ran out of ammunition.

They must have had forward observers, for they took very few rounds to register. We believed that our position may have been pin-pointed by the paratroopers, because their scheduled assembly point was the forestry shack that was used by our battalion radio operators.

Several trucks had flat tires and the driveline of one truck was completely severed. A shell fragment smashed through the front panel of a headquarters desk drawer and spinning around inside, made a mouse nest out of the papers within. A number of shell fragments pierced the first-aid tent--one striking Ernest K Hansen in the chest as he was holding a plasma bottle over one of our wounded. A number were wounded, but there were no fatalities.

Lt Colonel Carl J Isley was the most seriously wounded--wounded while checking on our casualties. He told our medical officer--Dr Stanley Goldman--"that last one really knocked the air out of me". He was covered in blood and was given plasma, as blood for transfusions was unavailable on WWII battlefields. His recuperation required many months in a stateside hospital.

The battalion moved to Henri-Chapelle, per Isley's orders before he was evacuated. Major Clark--our former executive officer--became our new battalion commander. Colonel Skorzeny's "Americans"--who had infiltrated our lines and were captured wearing American uniforms and driving captured Jeeps--were executed by firing squads at Henri-Chapelle a few weeks later.

I arrived late at our bivouac area, but the only cover I could find was in the haymow of a barn. I did my best to find a spot to spread out, but as the space was completely filled with bodies, I could find no bare spot. After someone offered to loosen all my teeth if I didn't quit stepping on him, I crawled back out and shivered in the Jeep until dawn. The next morning B-Company returned to our original bivouac area and we continued working on the AP mine field.

New Year's Day morning in 1945 was clear and cold. While we were adding the red metal triangles to the barbed wire perimeter fence--to indicate an anti-personnel minefield--the sky was suddenly filled with twenty eight ME-109s flying northwest at 1000 feet. We learned later that they were part of "Operation Bodenplatte"--the plan to attack our airfields and destroy our planes on the ground--a continuation of the Bulge.

A number of our airfields near the front in Belgium and Holland were successfully attacked that day and several hundred of our planes were destroyed on the ground. German losses were only about a third of ours, but their losses--and especially losses of trained pilots--were those that they could ill afford.

Luckily, our P-47s were rendezvousing for a strike of their own, and they caught these ME-109s by surprise as they were flying towards Liege. It must have been some dogfight, but we saw only the tail-end of the action from our work area.

In twenty minutes--as we watched in fascination--we saw five ME-109s shot out of the sky. The first one fell 1500 yards away, and they kept dropping closer and closer, until the last one was only 300 yards from our work area.

The script was the same in every instance. The ME-109s were flying southeast--near the deck, heading for home--and were being slaughtered by the P-47s. Our pilots were more aggressive and must have had superior training and battle experience.

We didn't see any parts being shot off, but two ME-109s were spewing smoke--before crashing and sending up big black pillars. The fourth downed plane hit 600 yards away and several of us headed out to see what we could find--read Lugers or P-38s!

We had just started off, when another 109 came limping toward us, smoking and losing speed and altitude. The P-47 pilot kept boring in and firing short machine gun bursts from close in. The 109 was hidden by a group of pine trees when the pilot finally hauled back on the stick in an attempt to gain enough altitude to bail out. His plane rose only a few hundred feet--coming back into our field of view--and then stalled just as he jumped out.

We charged down the hill to the crash site, fully expecting to find a dead pilot in or near the wreckage--since we were certain that he had lacked sufficient altitude to eject safely. The pilot could not be found, but the wreckage was on fire and its magnesium castings were burning brightly. We poked around in the wreckage until the machine gun and cannon shells began to cook off and then hurriedly left the spot.

We searched the surroundings and finally found the pilot's chute in a pine tree about a hundred feet back in the direction from which we had come. Landing in the tree surely kept the pilot from being severely injured or killed. He had slipped his chute and had laid low until we passed, and then had backtracked up our trail in the snow. We followed his tracks, but lost them at dusk in our work area, where the snow had been heavily trampled.

After escaping death in such a lucky exit by parachute, we were saddened the next morning to find the young pilot dead within our AP minefield. He had crawled under the barbed-wire barrier and suffered modest wounds when he tripped one of the mines. We believe that he thought that he would freeze to death before morning, so he killed himself with his 9mm P-38.

Howard Cothren--2nd Platoon, B-Company, while on a three man patrol, blew off the front of his foot when he walked into one of our AP minefields a few days later. Wallace Gremillion from 3rd platoon heard of the accident and asked James Krahl to help him pick up Cothren and take him to get medical attention.

Krahl relayed the following on 11 December 1999 regarding this minefield accident: "This occurred near Monschau during the Bulge, while Cothren and two others were on patrol. Late one afternoon Gremillion came to me and asked if I would go with him to help get Cothren out of our minefield. We went out and took Cothren to a nearby aid station."

"After we arrived at the aid station Cothren reached out and pulled me to him and asked me to tell him the truth--'Have I lost my foot?' When I looked down, I could see that the front part of his foot and boot was just a mangled mess. I said the front part of your foot is gone. He said nothing--just laid back and closed his eyes."

The winter of 1944 was one of the coldest in many years, often dropping well below zero degrees Fahrenheit. However, except for those foot-freezing GI boots--we were reasonably comfortable and were not unduly impacted.

The thumb and index finger on my left hand often became completely unresponsive when that hand was cold. My post war

physician, Dr Albert Vervloet--a Japanese internee from the Netherlands in WWII--stated that the high fever and delirium that I had experienced in my early teens, almost surely was the result of polio. This has been confirmed by the post-polio syndrome--a muscle degeneration in both hands.

Our battalion had few medical problems during this period, although some who failed to change their socks often, contracted trench foot--but none were from the 3rd platoon. It was easily prevented by keeping a spare pair of woolen socks tucked inside of one's pants. Body heat dried them out and they could then be swapped several times during the day, while at the same time giving the feet a thorough massage.

During the Bulge our army lost many men to this malady and especially infantry soldiers, who--because of an innate desire to remain in one piece--could not move out of their foxholes and exercise to keep warm.

In addition to trench foot, our new medical officer--Captain Goldman--reported several cases of combat exhaustion that he treated with a combination of sedatives and rest, followed by several days of heavy labor within the sounds of battle near the front. Apparently it was successful.

To warm themselves, a group of B-Company men built a flimsy cardboard shack with a diesel-fired, steel-drum-stove, located in the middle of the floor. When one man tried to force his way into an already full shack, he was unable to do so and no one offered to swap places. Not to be deterred, he yelled "I'll show you sons of bitches" and he then threw a clip of M-1 ammo into the fire. The mad scramble for the entry almost demolished the shack, after which the perpetrator was run down and pounded.

We must have been a bit odoriferous, as we rarely had an opportunity to shower. Whore baths--water heated in our helmets over an open fire--were our only option for washing face, ears, neck, underarms, crotch and feet in that order. Our helmets then took on a dingy hue. Really cool, out in the open!

I often fantasized about luxuriating in a tub of steaming hot water, followed by a professional barber's shave. When the opportunity arose for a German barber to do the job, I had to mentally restrain myself to keep from bolting from the barber chair when I realized how close to my throat his straight-edge razor was operating!

Along the way I garnered blanket-wool-lined tanker coveralls and a tanker jacket. They were much warmer and a definite improvement over the standard woolen shirts, trousers and field jackets. During the coldest weather I slept in all of my

clothes, changing underwear when possible. I removed my boots and put on fresh socks before crawling into a bedroll consisting of several wool blankets and supported by a generous layer of interlaced pine boughs, to insulate me from the cold ground.

One morning I woke to find that a heavy snowfall had compressed the pup tent tightly around my body. Surprisingly, although we were often half frozen from riding in jeeps--always with the windshield down--or sloshing about in the snow, few of us were ever sick with colds or flu. After most of the Bulge fighting was over and the weather had improved, we finally were issued insulated shoe-pacs in lieu of those foot-freezing GI leather boots.

In his book "Citizen Soldiers", author Stephen Ambrose said that the American High command gambled that the war would be over in 1944 before we needed shoe-pacs. In retrospect an error in judgment--but C'est la Guerre, you can't win 'em all!

During the Bulge, the weather was so cold that the flamethrower liquid being used by a nearby infantry unit became a semi-solid and so would not squirt properly. Captain Arthur Hill--H & S Company commander, was asked to solve the problem.

A large canvas water-point tank with a network of steel pipes interlaced within the tank was used. The tank was filled with water and a fire heated the water in the pipes, which flowed by gravity through the heat exchanger, thus warming the water bath and the barrels of flamethrower gel within.

A small amount of gasoline was added to the gel to further lower its viscosity, which made it easier to pour. The warmed liquid was quickly trucked out to the infantry, for use before it cooled.

By early January 1945, we were gaining control on the ground after the Bulge had been suppressed. The Germans dressed in American uniforms--from Colonel Skorzeny's force--had been executed by firing squad at Henri-Chapelle, a few miles north of Monschau and the paratroopers had been rounded up and shipped off to the PW cages. Our infantry forces were gaining ground in the St Vith area and we had heard of the successful relief of our troops in Bastogne.

Although most of the news that funneled down to us, seemed to be favorable, all it took to journey to back to reality was to observe the graves registration men picking up the dead. One corpse in the snow--in front of a pillbox--was a big football-lineman-type infantryman. He was ~6'5" and 250lbs, and probably a BAR candidate. He had only stockings on his feet, so he must

have been wearing shoe-pacs. No one would have gone to that much trouble to rescue a pair of those foot-freezing G I boots!

At the site of a tank battle near Bullingen, I had reason to be thankful that I was not a tanker. The bodies being removed from knocked out Sherman tanks--Ronsons by their deprecators, since they never failed to light when struck--were wrapped in sheets. Corpses were so badly burned that some had no apparent arms or legs. The stench of burned human flesh is an odor that is not easily forgotten!

General Bernard Montgomery's self-serving news conference to the British press, in which he emphasized in detail how he had rescued eighteen American divisions from General Omar Bradley's 1st and 9th armies, finally sifted down to us. This happened during the Bulge after the German thrust had driven a penetration into our lines requiring immediate restructuring of the command, because the Bulge salient had separated Bradley's headquarters from his divisions.

Eisenhower's restructuring move was a proper one, but that--coupled with Montgomery's grand pronouncement--rankled Bradley, causing enough dissension between British and USA commanders that almost gave Hitler a victory of sorts by splitting up the allies. Although Montgomery's presentation was a bit too self-aggrandizing, it may have been Bradley's thin skin and wounded ego that was a large part of the problem!

I was then saddened to learn that Lt Trescher had been killed in November 1944. He was a platoon leader of the 2nd platoon, B-Company, and was killed by artillery fire while attempting to locate a German battery--that had been shelling his position--by analyzing the burst patterns in the snow. I had earlier heard that he was killed by an AP mine, but am not sure which is correct, as second-hand information is often in error.

I found it hard to believe that he was gone. He was such a fine caring gentleman, who watched over his men like a doting mother--and thus was nicknamed "Mother Trescher". He was very old--32--and a civil engineering graduate from Massachusetts Institute of Technology.

The news of his death came to me so late because each B-Co platoon had been attached to a troop of the 38th Cavalry Squadron of the 102th Cavalry Group and so were out of contact with our B-Co headquarters for an extended period.

Trescher had been at the Assault Training Center in North Devon when I joined the 146ECB in December of 1943 and was one of the original Seven Georges. He was also the OIC of Demolition

Boat Crew #D on Omaha Beach, so we had been together for more than a year.

He was more of a gentleman than the rest of us lieutenants--and although he tried to ignore our raunchy jokes, he enjoyed a good laugh and was a fun fellow in his quiet droll way. R.I.P. "Mother Trescher"--you will be remembered always with fondness!

When the Bulge finally wound down and the weather warmed, we had a super mud bath all along the front. The ground had been saturated before freezing and upon thawing it became a quagmire.

These roads were never designed to carry the heavy military traffic that was demanded of them. The blacktop had been laid over a thin layer of gravel and rock, with no heavy ballast rock beneath. After a number of trucks and tanks had passed over, the squishy mud welled up through cracks in the blacktop and spread out over the surface. In a short time, these areas became impassable mud holes requiring heavy-duty repairs. The creed of the engineers for road maintenance is "get the water off and the rock on--in that order".

The 3rd platoon tried shoveling the mud from the holes and filling them with pit-run rock. This made a solid roadbed for a few feet, but was too time consuming to be practical, and the number of holes was endless. We finally quit trying to maintain the appearance of a good road and dumped more and more pit-run rock on top of the mud, making a rough but passable road.

Lt Kehaly's platoon built a corduroy road over the blacktop and then covered it with pit-run rock. While this was marginally satisfactory, it also was too time consuming and the road edges were quite abrupt.

In January, an infantry lieutenant was wounded by a German AP mine near our area--likely their S-mine--"Bouncing Betty". His men called on us to sweep the immediate area for additional mines, but they became impatient with our mine-sweeping, and ran on ahead to where their lieutenant was lying. I carefully followed them, stepping in their tracks to avoid being an additional casualty.

We each then grabbed an arm or a leg and carried the lieutenant to safety by retracing in our footsteps. He was vomiting and one man kept his head turned to the side to keep the intracranial fluid from running out through the hole in the side of his head. He was semi-conscious, and would have remembered nothing. I am not sure if he survived.

That winter, I saw an almost perfectly formed hemisphere of white brain tissue lying in the snow. A German soldier had been killed and apparently then had a mortar or artillery round burst

nearby, which had blown away the side of his skull and dumped out the delicate white brain tissue.

Had it not been frozen, it would not have been so well delineated, as unfrozen brains are not all that sturdy. The detail was almost as good as the photographs in anatomy books, but was a cause for queasiness in this one, who was not an anatomy major!

In January 1945, plans for a new Allied offensive were taking shape. In preparation for a proposed crossing of the Roer River, we built a quantity of duckboards that were to be used over pontoons in that assault. When our infantry outflanked the German positions, the duckboards were not needed.

Meanwhile, Ranger patrols were making nightly forays into enemy areas across the Roer River. On one trip they found three Germans soldiers asleep in a Siegfried bunker. The two men on the outside were knifed and the one in the middle was left untouched. Imagine how that poor soldier would feel upon awakening and finding out that he was alive only by a shake of the dice! That was a heavy-duty mind game and one that would unnerve any normal human being!

THE RHINE at REMAGEN

X

After the Bulge had been contained, our offensive to the Rhine began in mid-February with the "Mad Minute", where every weapon along the V-Corps front fired toward suspected German concentrations for one minute. This included all of our rifles, machine guns, and mortars firing as many rounds as possible and Divisional and Corps artillery fired TOT (Time on Target), where all of their rounds hit the target area at the same time. This fire did not allow time for the Germans to take cover--it was over before they could react.

A letter arriving on 07 February 1945--my sister Ethel Harvey's 24th birthday--stated that she had contracted polio just before Christmas in 1944. She was in an iron-lung in a Portland, Oregon hospital for more than a year and was the most serious polio case in that epidemic to survive.

She had only limited use of her hands and arms, still her subsequent letters were upbeat. Although she was 13 months younger, we had been in the same grades all through grade school and high school. As well as being my sister, she was one of my best friends and a lovely lady.

Her two little boys of five and three years--Rick and Gary--were being cared for by my mother and father in Wamic, Oregon. Her husband--Guy Harvey--was given an emergency leave from the First Marine Division on Guam, but he divorced her later when it became evident that she would never walk again--a real scum bag!

She wrote optimistic letters and was a determined fighter! She later ran a Lakewood, Washington antique shop and porcelain repair service from her wheelchair--with help from Gary. With a blanket draped over her withered legs, her customers were never aware of her disability and she worked there until her death from pneumonia in 1982. Sadly, the polio vaccine came eight years too late!

It was in February when I saw P51 Mustangs as they dove on German troop concentrations in support of our infantry attack. They came in at a steep angle, swinging the aircraft from side to side in a violent evasive maneuver. This compared with the bulkier P47s that just bored straight in, with all eight of their .50 caliber machine guns blazing.

In spite of the P47's apparent disregard of ground fire, I saw only one "Jug" that had been shot down. He made a wheels-up belly landing, forming a "buttercup" out of his four-bladed propeller. The plane was not badly damaged, so the pilot probably was not seriously injured.

Although the Spitfire and Mustang Rolls Royce Merlin engines had a throatier crack than the radial engine of the P47, all of these planes were as superb in close ground support roles as were the pilots who flew them.

"Closing with the Enemy", by Michael D Doubler, relates in detail how General Quesada's 9th Air-Force's close air-ground cooperation enhanced our infantry's performance. As mentioned earlier, General George Patton used the 9th Air Force as his only flank protection, as he made in his rapid wide sweep around the Brittany Peninsula on his way east toward the Seine.

In early March, we moved eastward from Monschau doing minor roadwork as we advanced. At the small town of Gemund--between Monschau and Remagen--the Germans had blown a small bridge over the Urft River, which flowed into a man-made lake formed by the Schwammenauel Dam. Riegel mines--a new AT mine--were scattered all around the area. We attempted to check for mines, but there were so many artillery and mortar fragments on the ground, that our mine detectors were useless!

We constructed a Bailey bridge over the river, using the abutments of the destroyed bridge. While a tank column was crossing during the night, explosives under the near abutment detonated, bouncing the bridge into the air, which ripped out the bottom connecting joint in two steel side panels on the right side of the bridge, causing it to tip precariously in that direction.

Bailey bridge steel girder-panels are held together by four large-diameter steel pins passing through matching holes in the top and bottom corners of each adjacent panel. To get the bridge back into temporary operation, we placed a TNT charge on the corresponding bottom-pin connection on the opposite side of the bridge and blew it away.

The bridge then dropped down symmetrically onto the shallow river bottom, held together by only the two top girder pins on either side. The bridge formed a shallow "V", with the bottom of the "V" resting on the river bottom.

However, our explosion set off AT mines that had been sown along the river bottom to discourage fording. This sent a shower of kindling into the air, requiring replacement of a number of floor planks. The bridge was out of commission for a

short time until we could set new planks. It was tricky for our tankers to navigate our make-shift bridge, as it was modestly steep on the far side, but as these tankers were old hands, they crossed without too much difficulty.

We concluded that the Germans had either placed mines under the near abutment before blowing the bridge--or may have rigged a delayed-action explosive charge there. The demolition's blast had blown fresh dirt all over the surrounding area, neatly covering up any trace of their hidden explosives.

We now prepared to erect another Bailey a short distance to the right. We quickly lost a D-7 Caterpillar to a Riegel mine, which damaged a track, blew off the belly pan and did a good job of putting the Cat-skinner--Glen Hunter--and one D-7 Cat out of action.

This was our introduction to the German Riegel mine, which seemed to be about the equivalent of a Tellermine in explosive capability. About 36" in length and with a 5"x5" cross-section, they appeared to be simpler and less expensive to manufacture than the more sophisticated Tellermine. A further advantage--a single Riegel mine covered three times as much roadway width as did a Tellermine.

We brought up another D-7 Cat and Cat-skinner Edmond Sauer began pushing out a 12" layer of dirt to cushion the blast from any possible mines in his path. When Sauer found that the belly pan--that had been blown off of the first Cat--was in his way, he had a minor mental lapse and moved off of the dirt cushion to push it aside.

BLOOOEY--another D-7 bit the dust, also Ed Sauer! He sailed up in the air and came down across the Cat tracks and I believe that he broke several ribs. We located another Cat from somewhere, the area was dozed out and a second Bailey bridge was soon assembled and put into operation.

I have forgotten the discussion that ensued, but I am sure that Captain John K Howard--my B-Co commander--was less than pleased over my loss of two D-7 Cats on 05 March 1945. Most company commanders--or platoon leaders, for that matter--would not be ecstatic to have that information on their records--and especially so, since our battalion lost just three D-7 Cats during our eleven months on the continent, and my platoon and I trashed two of that number in about an hour.

On a reconnaissance trip near Gemund, my jeep driver--Chester King--and I found a large stockpile of explosives and ammunition stacked in a long pile along a narrow lane, with heavy overhead

tree cover. This likely was placed there during the Bulge and probably had been previously catalogued by others.

After inventorying the dump, I wandered over to a modern house that was nestled in the nearby woods. I poked around in the basement garage, but finding nothing there of interest, I sauntered up the back steps and suddenly found myself staring into the startled faces of three young German soldiers who were sitting at a kitchen table and looking out the window--at me!

My M-1 rifle was in the jeep, so my only available weapon was brashness! I kicked open the kitchen door and roared "RAUS--meanwhile yelling orders to my men to give the impression that I was not a lone idiot!

Stepping inside, I picked up a Mauser rifle and then relieved them of a .32 caliber Beretta, a 9mm Walther P-38 and a Hitler Jugend knife inscribed "Blut and Ehrer"--Blood and Honor. King was given the Beretta and I kept the P38.

Walking alone without a weapon, was not one of my swifter moves, but these young soldiers had been separated from their units and were likely tired of the war. They would now be well cared for in a PW cage.

Our battalion moved to the Rhine north of Remagen and we then moved further south, bi-passing Remagen. We continued on south, as the main effort was to clear the Germans from the west bank of the river before we attempted to force a crossing.

On 08 March 1945, while my platoon was erecting a Bailey bridge near Burgbrohl--eight miles south of Remagen, to replace a blown highway bridge--we heard that on the previous day, the 9th Armored Division had captured the Ludendorff railroad bridge across the Rhine at Remagen. A few of the German's prepared charges had detonated, causing minor structural damage to that previously inflicted by bombs and artillery, but the bridge survived and was immediately used to move men and equipment east across the Rhine.

As we were putting the finishing touches on our Bailey, we saw two separate flights of two planes each, flying very low and heading toward the northwest. The second run was so close-by that I could see the outline of one pilot's nose through the canopy, and I waved enthusiastically as he flew by. We were on a steep hillside and that plane was only slightly above my eye level. I had heard rumors of a newly operational American fighter-bomber and was sure that the blue-gray planes--without any insignias--were ours.

I'm not sure how I failed to notice the unusual engine noise--or the lack of propellers--but these were Messerschmitt

262 twin-jets. They were the only fully operational jet planes in any air force during WWII--although Germany had first flown the first Heinkel jet in 1939, and Britain their AirComet in 1944.

Days later, I saw them again at Remagen and discovered their true identity. They flew in pairs very close to the deck on their way westward and then climbed to 3000 feet to make an eastward high-speed bombing run on the Treadway bridge, that was built in order to have a back-up to the Ludendorff.

Several of their bombs came perilously close to the floating bridge and generated magnificent plumes, but did no real damage. Our 90mm anti-aircraft fire was missing them by hundreds of feet, and the .50s and smaller calibers missed even further.

Watching the apparent curving path of the tracers was quite a show, until the 90mm shell fragments began falling all around, causing us to scurry for cover. By flying the course that we had observed, these jets could have glided back into their own territory east of the Rhine had our anti-aircraft fire gotten lucky and managed to disable them.

Four P-38 fighter planes were circling high above, but they realized that they were outclassed by the blinding speed of the ME-262s and didn't even bother to give chase.

In March 2001, Ken Hechler--a member of a four-man group of combat historians, who were happened to be nearby when the bridge was captured, and who wrote "The Bridge at Remagen"--told me that soon after its capture, three American P-51s were sent to protect the bridge from German air attacks, but all three were shot down by our own anti-aircraft gunners. That may have be the reason for the P-38s standing guard high above--it would be hard to mistake the P-38's twin-boom fuselage for an ME-262!

Clayton Gross--a friend of my Portland dentist--shot down an ME-262 south of Berlin six weeks later. In one of his three successive P-51s named "Live Bait", he was leading a flight of four P-51s at 10,000 feet, when he spotted a 262 coming in for a landing at a field near the Elbe River, completely oblivious to the Mustangs high above.

Clayton went into a steep dive, but gained so much speed that his controls became unresponsive. He tried everything, including hitting the throttle to regain control, but to no avail. When his Mustang finally began responding to his efforts at the lower altitude, he found that he was almost directly behind the German.

His machine gun burst set the left engine afire and blew off a section of the left wingtip. The German pilot pulled his

plane into a steep climb, gaining speed and pulling away from the P-51 as he did so--and he then bailed out when his plane suddenly lost power.

On 07 October 1994, the American Fighter Aces Association were the guests of the German Fighter Pilots Association in Geisenheim, Germany. A young man walked up to the American table and asked, "Does anyone here know an American pilot named Clayton Gross?"

Gross stood and said that he knew Clayton Gross quite well, since he was Clayton Gross! Smiling, the young man said, "I think the man you shot down is in the other room". Clayton was brought to a table of German veterans where a man with thick gray hair rose and through an interpreter, introduced himself as Kurt Lobgesang. He had been a 19-year-old pilot on that fateful day in 1945.

He was wounded in the hip but suffered no further injuries in the bailout. That was his last combat mission, but he had already scored 19 victories. Gross said "I'm glad that you're still alive" and he then embraced his former foe.

On 17 March 1945--ten days after its capture--the Ludendorff Bridge suddenly collapsed without apparent cause, drowning a number of the troops from the 276th Engineer Combat Battalion and the 1058th Port Construction and Repair Detachment who had been repairing the damage. Five years later a "Lieutenant X" and I had several extended conversations concerning the bridge collapse. He had been a member of the 276th when the bridge fell. We were then members of the 329th Engineer Combat Battalion in Tacoma, Washington under the command of Lt Colonel Everett E Martin--in civilian life a professional electrical engineer with Tacoma City Light.

I had forgotten the lieutenant's name and so called him "Lieutenant X". In 2002, I discovered his identity by digging through the army reserve records and found that for several years, Roger Robertson had lived only a short distance from my home in Lakewood, Washington--a suburb of Tacoma. I had left the 329ECB and lost track of Roger. He died in 1967 and so we never reconnected.

He was on the bridge when it collapsed and he related the following:

"His battalion had been repairing and replacing damaged structural members and were about to cut out another chord when a major--who had been a civilian bridge engineer before his army stint--ordered them to stop. He said that the bridge would collapse if that member were removed. Quite an argument ensued

with the commanding colonel, who insisted that the removal would be routine and ordered repairs to continue."

"The major was just as adamant, and he promised to see the colonel court-martialed if he persisted in removal of that chord and the bridge did fall into the Rhine. The member was cut and Roger then heard a series of loud popping noises as rivets in the nearby truss members failed from the added stress."

"The span dropped into the river--just as the major had predicted--and the adjoining span followed soon thereafter! Roger was temporarily pinned under water, but floated free when the adjacent span collapsed. The major, and a number of men were drowned, so he was unable to carry out his threat."

The bridge had been damaged by German placed demolition charges, artillery, bombs, and nearby V-2 strikes; but after talking at length to Roger, I was convinced as to the accuracy of his story, even though the official version attributed the collapse to the heavy damage suffered from bombing, artillery and V-2s.

Until recently, I had found no support for Roger's story, but if accurate, the actual demise of the Ludendorff Bridge is at variance with all of the accounts that I have heard or read--and if true, the real story may have been concealed by the colonel who wrote the official account of the bridge collapse. Apparently, he did a good job of hiding an embarrassing incident in which he was culpable!

In 1999 I read where Holly Cornell--an Oregon State engineering graduate and a principal in the engineering firm of CH2M-Hill--had been the executive officer of the 1159th Engineer Combat Group at Remagen. James Howland--another CH2M-Hill principal and also an Oregon Stater--told me that he was aware that Cornell had been at Remagen at the time of the bridge collapse, but had not heard mention that the bridge may have fallen because of a failure to follow sound engineering practices during the repairs. Cornell died in 1998 and so I missed another golden opportunity.

As of 2013, I was still attempting to run down leads that would have shed further light on the collapse--and to see if it could have been due to an error in engineering judgment by those carrying out the repairs. This was not an attempt to assess blame, only to address some unanswered questions and correct the record after an intervening span of years.

However--in my opinion--it would have been unusual for the bridge to fall of its own accord at the same time that the questionable truss member was being removed--and especially so

since the bridge had weathered so many bombs, artillery, V-2s, and explosive charges during the previous weeks.

Ken Hechler--in one of our later phone conversations in 2001--told me that in reviewing his research, the information given to me by "Lieutenant X" may well have been correct; but that I should attempt to verify that information by doing research at the National Archives and at Carlisle Barracks.

Also, I should attempt to locate Lt Hugh Mott and Sergeants Dorland and Reynolds from the 9th Armored Engineer Battalion, who cut the wires to the bridge's demolition charges. I tried to do all of the above, but until recently, I had been unable to unearth any evidence that would lend credence to my beliefs.

Lieutenant Mott had stated that he watched with awe as those repairing the bridge "hacked at the loose supports, moved things around with cranes, clipped off bolts with their blow torches and hammered and pounded from morning to night and then pounded some more after dark. They sure used a lot of heavy equipment and they really hammered the bridge blue in the face." It sounded as if he too had reservations about the care being taken during that repair job and may have confirmed my suspicions.

Recently, Lt Colonel William A Lake from the 102nd Cavalry Squadron sent me a copy of the May/June 1945 Cavalry Journal, Volume LIV, No 3, page 15--which stated that security patrols of the 32nd Squadron of the 14th Cavalry Group--who were defending the Ludendorff Bridge at the time of its collapse--gave the following eye-witness account of the bridge collapse.

Sergeant Alfred W Enlow, in charge of a 30-man platoon guarding the bridge against acts of sabotage, stated: "At the time the bridge started to collapse, I was looking at it and right in the midst of shaving. I never saw such a sensational sight in my life. There was no shellfire nor were there any explosions. The bridge just trembled and shook, and in a mighty cloud of dust fell into the river". This furthers my belief that the failure was due to faulty engineering repair practices!

Many reasons have been postulated to explain the bridge collapse, but none make sense to me! To read a number of them, Google in "World War Two movie: The Bridge at Remagen, Part 2".

In order, the reasons listed are as follows:

1. The failed German demolition damaged one side of the bridge
2. Planks over holes added fifty tons of dead-weight
3. Tanks and vehicles shook up the bridge as they passed over
4. German bombs and artillery damaged the bridge
5. Engineering equipment weighed heavily upon the bridge
6. US artillery and anti-aircraft guns shook the nearby ground

Except for item one, the remainder are completely dumb! This bridge was designed to haul railway trains with many hundreds of tons of freight and could easily withstand such stresses.

A number of ferries, and the Treadway bridge on which we eventually crossed the Rhine were only a short distance from the recently collapsed Ludendorff Bridge. It was a "spaghetti of a bridge", and carried a great amount of traffic. It was built while under heavy artillery, bombs--and V-2s attacks launched by Werner von Braun. The V-2s destroyed bridging equipment on shore and killed several engineers near the impact area, but did not damage the floating bridge.

As an aside--in 55 BC--Julius Caesar's army built a bridge over the Rhine a few miles upstream from Remagen, in an effort to subdue the warring Germanic tribes east of the Rhine. The current there was modestly swift, so this must have been quite an undertaking.

Ten days after his legions began cutting down trees, the bridge was completed. Eighteen days later--after the mission had been concluded--his troops crossed back over the bridge and it was destroyed.

A few years later his troops built another bridge nearby for the same purpose and again--after emphasizing his agenda with clubs and swords--that bridge too was destroyed.

XI

Shortly after crossing over the Rhine, Lt Refert Croon--assistant S-3--came back to the bivouac area really stinking up a storm. A German plane had strafed their road and he and his driver had dived into a nearby ditch, which unfortunately was filled with fresh cow manure. Croon was covered with manure up to his eyebrows! Captain Goldman--our medical officer--helped to restore him to his former sweet-smelling self!

Soon after, 1st Lieutenant William Kehaly--one of our more capable platoon leaders--was made commander of another Provisional Truck Company, to bring gasoline to the front. He was given a commendation by General Huebner--the new V-Corps Commanding General--who had been the Commanding General of the 1st Infantry Division on D-Day and for some time thereafter.

About that time we adopted a little nine year old underfed gypsy boy. His parents had been murdered by the Nazis but he had escaped from the concentration camp. On the inside of his left forearm was tattooed a long black identification number.

We outfitted him in a cut-down G I uniform and by osmosis he learned the American slang and a number of inappropriate swear words. After a few weeks, the steady diet helped fill out his gaunt frame. In spite of our care, his past training was too ingrained and without remorse, he stole from his benefactors whenever and whatever he wanted.

Clyde Riddle got gassed one night and swan-dived off of the top bunk yelling "I'm a buzz bomb and I'm going to splatter you sons-of-bitches". He did indeed splatter, but only Clyde Riddle! He garnered a broken collar bone, plus a few bruises and contusions from his short flight. Some platoon--the 3rd--how could I have been so lucky? Actually, I enjoyed my time with these men--they truly were a great bunch!

Along the way we liberated several exquisitely crafted German staff cars that initially may have been Italian or French. They were often found in barns concealed under the hay. We abandoned them when we ran out of spare tires. We also drove a truck with the three-pointed Mercedes emblem, but its four cylinder engine was so gutless that we dumped it along the road.

We saw--but did not operate--a vehicle that was powered by a wood-burning contraption that was attached to its back frame and was about the size of a kitchen range. Partially burned wood gave off a gas which powered these machines.

In addition to the cars and trucks we acquired a few shaft-driven BMW motorcycles and a Kubelwagen--the German equivalent of our Jeep. It was not as powerful as our Jeep but was lighter, faster and more fuel efficient.

This practice of driving captured vehicles was frowned upon by the big brass, but their edict was only partially enforced. This loose oversight came to a roaring halt one day when several A-Co men were racing down the autobahn--a four lane, limited access highway system east of the Rhine that was constructed in the late thirties. It was superior to any US highway until years later, when we built our Interstate Highway System.

Steve Brockovich--on a BMW motorcycle--was racing two cars. He was out in front and burning up the road, when he belatedly noticed that the bridge ahead had been blown. He sailed over the edge and probably was seriously injured. One of the cars stopped in time, but the other followed Steve over the edge, fell on him and fatally crushed him. Immediately an order came from on high to destroy all of the captured vehicular booty--either by dousing with gasoline and torching, or demolishing with explosives. Many long faces!

On one of our moves, several men were riding in the back of B-Company's four-ton truck, pulling a D-7 Cat on a lowboy trailer. Thomas J Labarge III became queasy from the exhaust fumes and decided that he would walk back along the trailer tongue and ride on the trailer. He fell and was run over by the trailer, killing him instantly. I was following close behind and helped load his warm, limp body in my jeep. He was from the first or second platoon--and a fine soldier who just happened to make one fatal error!

We traveled almost non-stop through a number of bombed out cities in the Ruhr--Lind, Kassel, Naumberg and Halle--Germany's major manufacturing region. We were completely awestruck by the total devastation caused by Allied bombings. There were many more half-bricks than whole ones and the rubble had been turned over and over again and again by bombs--even after the buildings had been totally destroyed and gutted by fire.

Destruction in the center of these cities was utter and complete. Still, the German civilians were busy cleaning and stacking bricks, half-bricks and any other building material that could be salvaged. We were impressed by their stoicism and work ethic. On a number of occasions, nearby workers could be seen staring at the destruction and muttering "alles kaputt"--which meant that everything has been destroyed. This was a very insightful comment, as it surely was true!

Food was in short supply for the civilians, so they formed lines near our garbage cans and reclaimed our uneaten food. This was an embarrassment for them and for us. Many of our more caring members deliberately overloaded their plates so as to have more food to give directly to those Germans standing in line. There were no overweight Germans, reinforcing their plea that many were starving.

In a letter from William Anderson in 1996--my first contact with him since 1945--he said: "In mid-April, Lt Barr, Lt Cohen, and he--each from different battalions in our Engineer Group--were transferred to Military Government when we passed through Halle in the Ruhr Pocket". This was necessary in order to care for the massive numbers of homeless people who were wandering aimlessly about without food or shelter.

There were many thousands of German POWs, displaced persons and civilians--as well as those poor souls liberated from the concentration and slave labor camps--who required immediate medical attention, so their welfare was a major concern for the Allied armies. The sudden collapse of the Wehrmacht helped to swell their ranks to unmanageable levels. The possibility of a disease outbreak--coupled with potential civil unrest--made the establishment of a Military Government a high priority.

After the military government functions passed to civilian control, Bill Anderson continued on in various positions--first with Cultural Affairs where he watched over Germany's treasures; with UNRRA for displaced persons; and with International Refugee Organization (IRO).

Bill left Germany in 1956 and spent twenty-two years with Bechtel Engineering in California. After working with the United Nations assisting Asian refugees during a summer vacation, he was offered a full time UN job--which he accepted. After retiring from the UN in 1984 he was called back and did similar volunteer work with refugees. What a full and rewarding life!

In April 1945, we had the opportunity to view Buchenwald--one of the German Death Camps, that I believe was liberated by V-Corps, 1st Army--and not by 3rd Army, as has been stated by a number of authors. V-Corps was moved from 1st Army attachment, to 3rd Army on 06 May 1945, so this may explain the confusion.

Buchenwald contained about 21,000 prisoners, where thousands of Jews and others were worked to death for the Third Reich. Sixteen year-old Elie Wiesel and his father were at Buchenwald in 1945, but his father died a few months before the camp was liberated.

Captain Arthur Hill--H&S Company commander and one of the first Americans into the camp--took photos and reported on what he had seen and smelled--the stench of many bodies that were piled up like cordwood. I stupidly did not take the opportunity to view the camp, as that would have allowed me to refute the Dummkopfs who insist that The Holocaust was a myth!

The SS guards and local civilians were forced to carry the emaciated corpses to a common grave so they could not insist that they were unaware of the atrocities taking place in their backyard--I believe that many civilians were truly unaware of these atrocities, as the SS guards kept the camp off-limits!

We passed through Leipzig where two of our infantry units--enveloping the city from opposite directions--fought a short pitched battle, before they realized that the opposing small-arms fire did not sound like German. We halted 15 miles east, where we sat for about ten days before heading south to Czechoslovakia.

On 25th April the 69th Infantry Division made their historic meeting with the Russians at Torgau on the Elbe River, a short distance further east. From 18 to 25 March 1945, 600 men from the 2nd Bn, 273rd Infantry Regiment, 69th Division were attached to our battalion for road maintenance.

They were not all that enthusiastic about their first encounter with D-handled shovels--still I'm happy that they got their names in colored lights for being the first American division to make contact with the Russians. Phil Silvers, as Sergeant Bilko--in the TV series of the same name--was shown on reruns in year 2000. He wore the 69th Division shoulder patch.

On 26 April, Captain Arthur Hill, CWO Albert Sarrach and I were on a reconnaissance run--in an attempt to locate the Russians--when we met an old camouflaged German truck that stopped as we came near. We were a bit uneasy as we were several miles beyond our fluid front lines and there were plenty of armed Germans around.

A stocky fellow in a strange uniform jumped from the truck, grabbed me in a bear-hug and swung me around wildly, shouting "Tovarish, Tovarish, Tovarish"! I was told that it means comrade.

The rear door of the truck then swung open and a group of soldiers piled out--a number of whom were women. They furnished the vodka and we provided the cigarettes. We had our pictures taken with these Russians and Captain Hill gave one officer his wrist watch.

We then traveled a few miles east to Karlovy Vary (German--Karlsbad) where the main force--complete with many horses and captured German vehicles and wagons--plus a few of their own--were quartered. Soon after entering the town, these Russians paraded down the main street looking like the professional soldiers that they were. There were no German civilians in sight, as they were deathly afraid of the Russians. Photos of Hotel Hopfenstock and Hotel Post in the background pinpointed the location as Karlovy Vary.

On a similar foray a few days later, Chester King and I rounded a corner and ran headlong into a German Panzer unit--apparently waiting to surrender to the American army, rather than to the Russians. As we were heavily outgunned and so not inclined to fight, we gunned the Jeep on east as if we owned the place and no one challenged us.

Had I been blessed with a supply of guts, we might have tried for Lugers, P-38s or any other souvenirs. We returned back to our lines by a different route so as to not confront all of that potential firepower again.

A short time later Captain Hill and Lt Schindler made a roundabout entry from the southeast into Karlovy Vary, where several German convoys surrendered to them. The town was under military rule as all of the civilian officials had fled.

Hill discovered that an allied prisoner of war camp was fifteen miles northeast, so he appointed a burgermeister to run the local government and told him to contact the officials at the camp and let them know that our ambulances and trucks would soon be on the way to bring out the POWs. A large group of prisoners were soon brought back for care and treatment.

Arthur Hill--director of the National Legion of Valor Museum in Fresno, CA--has returned to the Czech Republic several times in recent years to take part in their liberation celebrations which are held every five years.

On his 2001 trip, he learned through an interpreter at the Karlovy Vary Archives, that a group of 17 Americans followed his 1945 path a few days later and all were captured and executed by German SS troops. Several downed American fliers also met the same fate. Luck had been on his side in 1945!

On 05 May we passed through Grafenwohr--a German army training camp--where Colonel Skorzeny's "Americans"--complete with American uniforms, cigarettes and Jeeps--prepared for their special Bulge mission. We were nearing Pilsen and "VE Day" was just three days away!

Pilsen had been heavily damaged on 18 April 1945 in a daylight raid of twenty-seven B-17s that strung their bombs down through the city center, killing many civilians. A pretty brown-eyed girl--whom I squired to a few local dances--had several family members, including her grandmother killed in that raid.

The target was a warehouse, erroneously believed to contain German weapons and ammunition. The closest bomb struck 175 yards away--and the remainder fell in a mile-long-string through downtown Pilsen.

So much for our Norden bombsight "that can drop a bomb in a pickle barrel from 10,000 feet". This is not meant to belittle our then Army Air Corps, but this was not one of their better days. Could it possibly have been the flak?

Much of the city was damaged, but the only totally shattered areas were the railroad yards and the Skoda Works--a huge factory that made guns and other tools of war. The machine tools were in shambles and all heavily rusted. Nothing was operational in the Skoda complex that covered several acres. Roofs were gone and such destruction must have been the result of several intense air raids.

The railway station had been completely destroyed at a time when a large force of German troops was passing through. It was a successful raid, in that it made pretzels out of the railway tracks in the switching yards, destroyed a number of locomotives and killed many German troops.

Our battalion worked several thousand prisoners--3rd platoon about 400--rebuilding the Pilsen water, sewer and electrical systems that were destroyed by our bombing raids. Many of the prisoners were teenagers, but there were enough seasoned German craftsmen among them to act as supervisors, and these experts guided the efforts of the crews.

A mutually agreeable swap of food was common. Their lunch included a very tasty, sour, dark German bread in which the flour had been augmented with ground-up potato peelings; Danish ham and cheese; and their superb ersatz chocolate--all very good! Ours included white bread, spam and other canned meats and ten-in-one cookies.

The change of fare was appreciated and it helped us to learn bits and pieces of the German language. In spite of the many handicaps in this war-torn land, the work progressed surprisingly well.

One day I noticed that one of the German was lounging around while the rest of his group were working. When I mentioned this to Corporal Hershel Livesay--one of our guards--he told me that this was a German officer who had insisted that according to the Geneva Convention, he was not required to work.

Not being too swift on the Geneva Convention, I told Hershel that I didn't care who he was, I wanted to see him working when I returned. I'm not sure how Hershel was so persuasive--perhaps it was the bayonet--but the next time I checked, that officer had worked up a good sweat.

C-Company was bivouacked at Bory Airfield on the southwest outskirts of Pilsen. They were guarding seventy or more airworthy FW-190 and ME-109 fighter planes which had fallen into our hands at war's end, because the allied bombing had deprived Germany of their gasoline supplies and so had grounded most of their planes.

One day three young American fighter pilots--complete with their floppy Air-Force caps--sauntered into the building and requested approval from Lt Roy Holmes to look over the planes--"just to satisfy our curiosity".

Roy told them to look, but not to touch! After a short interval one of the plane's engines suddenly revved up and the plane was soon airborne. After climbing to a flying altitude, the pilot did a few maneuvers and then flew back to the field.

He apparently failed to maintain adequate flying speed on his approach and the plane stalled and crashed nose-down near the end of the runway. The pilot was trapped in the crushed cockpit and burned to death before the horrified eyes of his two companions--who had to be forcibly restrained from attempting a rescue.

Dorothy and I toured Pilsen in 1987 and discovered that the railroad station had been rebuilt almost exactly in its pre-war image. Before and after photos are nearly identical--except for the period motor vehicles in the foreground.

Prior to their annexation to Germany in 1939, Czechoslovakia had been a republic with a constitution similar to that of ours. The Czech civilians were appreciative of our presence and openly expressed their feelings with flags, parades and public demonstrations. Especially favored were men from the Second Infantry Division--"The Indianhead Division"--who had been the liberator of that section of their country.

Although my platoon and I were not involved, the 146ECB was charged with the repatriation of captured soldiers and civilians from several of the western USSR Republics. As I observed the

operation it was apparent that most of these people were not anxious to return home and insisted that they would be summarily executed by the Soviet regime--because they should not have allowed themselves to be captured!

At the time we thought that they were overreacting, but in the cruel light of history, it is obvious that they were right on target. Bayonets were used in some cases to force them to board trucks back to their former homes. It is sad that we didn't listen to them and fashion a more suitable refugee repatriation program.

One of the better books evaluating the Russian peasant's mood during WWII is "The Service"--memoirs of General Reinhard Gehlen. Gehlen was Chief of Intelligence Service for Foreign Armies East. As such, he had the opportunity to evaluate both the Russian people and the German high command.

It was his opinion that if Hitler had not overridden the advice of his generals and demanded a military decision rather than a more reasonable political/military one--and had he not allowed Himmler to foster horrible atrocities on the Russian peasants, they would have joined forces in the overthrow of their repressive communist government!

Many ancestors of these peasants had been German émigrés in the distant past. Their enmity and partisan activity after being brutalized by the SS, helped to tip the scales of war against the Germans. General Gehlen worked with our CIA at the end of WWII, before directing the intelligence service for the West German Republic.

"The Service" gives a fine perspective of the actions of the USSR during and after WWII. There is a great amount of insightful information about this period in history, much of which--until recently--had been buried in the deep dark secret Russian military archives. This interval from the end of WWII until the mid-70s was one in which the threat of an all-out nuclear war was scary and very real!

Soon after our arrival in Pilsen, an officer's club was in operation near our headquarters and a short time thereafter, several Soviet lieutenants began dropping in to sample the superb Czech Pilsner beer. We made them at home and engaged them in small talk using basic German--with gestures, arm waving and sketches to get our message across.

Although there were a few disagreements about Lend-Lease and who won the war, they were a friendly bunch and we had no serious differences. These young officers were well groomed

with clean, neat uniforms--the type of soldiers who would be on American billboards to sell corn flakes or shaving cream.

The atmosphere turned into a cold-war chill a week later when their field grade officers arrived, because after that time these young officers not only would not talk to us, they would hardly acknowledge our existence.

General Patton's suggestion that Americans and Germans join forces and chase the Soviets back inside their own borders, may have been the reason for the chill. Eisenhower chastised Patton, but that only underscored Patton's understanding of the Soviets! After another similar comment by General Patton in September 1945, Eisenhower relieved him from command of the 3rd US Army!

We watched a demonstration of Cossack horsemanship and saber technique at Rokycany--between Pilsen and Prague. A number of small-diameter willow twigs six feet tall were driven into the ground sixty feet apart and stretching out for a few hundred yards. Atop each twig, "college beanie-type caps" were placed.

The rider--leaning low over his horse's neck--swept his heavy saber to the rear as he galloped past. The caps dropped down a few inches after each pass. Three runs were made without a bobble and each time the caps would drop down a bit further. That big saber must have been razor-sharp as the twigs barely wiggled--a man could have been decapitated by a single swipe!

Their horsemanship was as good as I had ever seen--even in US rodeos. Among their other tricks, they slipped around under their horse's belly and back up into the saddle, while the horse was at a full gallop.

A further attraction was the Russian dance where--from a bouncy squatting position--they kick alternate legs forward while their arms were folded across their chest. This must be a difficult dance and one requiring great upper leg strength.

American soldiers are the epitome of entrepreneurism, so shortly after we had occupied the former SS barracks on the Radbuza River in Pilsen to be our headquarters, a distillery was set up to produce white lightning. The other portion of the equation had to be women and a whorehouse soon flourished nearby until the combination became too successful and attracted the attention of the big brass--who then shut both of them down. These men were only trying to determine a need and fill it--the justifiable effort of any true entrepreneur!

Weeks after VE Day, Bob Hope, Jerry Cologna, Frances Langford--and others in the troop--entertained us in the Pilsen town square near the big stone church. This was the first USO

show that I had seen and it was much appreciated. Bob Hope was a great guy, who was universally appreciated by our troops.

On 04 July, Czech President Eduard Benes, General George S Patton and other dignitaries were in the reviewing stands near the old stone church in Pilsen's town square, as our battalion passed in review.

A short time later, Jack Benny, Ingrid Bergman, Martha Tilton and Jerry Adler performed in Pilsen--but this was after a number of us had been transferred to the 20th Engineer Combat Battalion.

Many men from the 146ECB with low ASRs--(Going Home Points)--along with men from other engineer battalions--were transferred to the 20ECB in early July. The battalion headquarters was in Klatovy and B-company was in Planice, a small town eight miles further east and fifty-five miles south of Pilsen.

All of these men were short on ASRs, so there were no men from the 20ECB who had fought in Africa and Sicily--and only a few from Omaha Beach on D-Day. Lt Colonel Edward T Podufaly, a 1940 West Point graduate, was the commanding officer and Captain Michael Sands was my new B-Co commander.

Captain Sands told me that the 20ECB was the oldest engineer battalion in the US army--having been formed under General Washington at Valley Forge. (not confirmed)

The Czech civilians appreciated being free again, even though this was the Sudetenland whose ethnic Germans had given Hitler an excuse for the takeover of Czechoslovakia in 1939--prior to the attack on Poland.

Months later, the Russians officially stated that Soviets in American uniforms were the real liberators of Czechoslovakia! Weird--still the efforts of the USSR in winning WWII were considerable! Had not twice the number of the German troops been on the eastern front on D-Day, our invasion could well have foundered. Also, had those German troops been in Normandy for the hedgerow fighting, we would have been bled dry and may have been forced to mediate with Hitler.

B-Company was bivouacked in pyramidal tents on the outskirts of Planice' and our company headquarters was in a building near the center of town. The owner's friendly and pretty daughter--Jirina Kozeluhova--received a good deal of attention from the troops. She was a good athlete and so joined us in softball, volleyball, pingpong, swimming and occasionally a little kissy face! After rediscovering her in 1987 with the help of a Catholic priest--we corresponded until her death in 1992.

Captain Sands said that Jirina was a communist sympathizer, who was passing information to the Russians--but that is totally false! Jirina had fallen in love with Captain Chester Davis from B-Company, but her mother was devastated when Jirina told of her plans to marry and move to the US.

Her mother finally convinced her that she should remain in Czechoslovakia. That was the right decision, as Jirina lived a rewarding life as a pediatrician in the northern city of Most. Her husband--George--was chief of gynecology. Both daughters became physicians in Prague--Vera Sevcikova a pediatrician and Alena Finferlova a stomatologist.

Captain Sands arranged it so I was again the platoon leader of the 3rd platoon. His primary claim to fame in WWII came when he was in a truck, pulling a bulldozer on a lowboy trailer and out in front of the Eighth Armored Division.

When he discovered that he was the point man for his entire division, he attempted to turn the truck and trailer around, but got them stuck crosswise on the narrow road just as the infantry appeared on the scene.

The infantry colonel was a bit testy about having the road blocked by his own 53rd Armored Engineers, but the real barrage came a short time later when a four star general--with a high pitched voice and an ivory handled revolver on his hip--drove up and inquired "Who's responsible for this mess--what's your name lieutenant--you'll be a private in the morning?"

Sands saluted and said "yes sir, yes sir, yes sir", and scurried away without giving his name or any other incriminating information. The truck and trailer were soon untangled, the traffic jam unraveled, and "Old Blood and Guts" was again on his way eastward.

In another incident, Captain Sands was on detached duty to the 3rd Army. A heavy engagement had produced a number of casualties and as Sands walked by a collecting station, he recognized a red-headed fellow lying on a stretcher as a newspaper reporter from his home town. They chatted for a few minutes until General Patton walked up and told the army newsman to have his stretcher-bearer dig out five dollars, because his tie was not properly tied.

He then turned to Sands, with the same demand. Sands said "I am not in your army, I am on detached service from General Montgomery". Patton was miffed, as he and Montgomery were often vocally at odds! Patton stalked away, as he realized that Sand's stance was correct. However, a confrontation with "Old Blood and Guts Patton" took more backbone than common sense!

The farm girls near Planice' worked long hours cutting hay with long wooden-handled scythes, raking it into piles with wooden-toothed rakes and then carrying the hay to the barns in baskets balanced on their shoulders. This must have helped to keep them trim.

After such a hard day's work it was inconceivable that they could still find the energy to dance the polkas until the wee hours of the morning. If you didn't know the steps--no matter--they would swing you around properly anyway! The dances were well attended and a smashing good time was had by all.

Shortly after our arrival in Planice', squad Sergeant Elmer Morrison consumed an extra ration of booze at one of the dances and almost succeeded in cutting Howard Kizer's throat after Kizer had knocked him down again! This was a long standing feud, stemming back to another fist fight with a similar outcome at Camp Swift, Texas during their training days.

Still the rough, tough little Kizer would not give damaging testimony against Morrison at the ensuing court-martial. He had not seen who had cut him--had seen no knife--and knew almost nothing significant about the incident!

When the court-martial failed to convict an obviously guilty Morrison, Captain Sands was livid and summarily shipped Kizer out of the company. When Morrison asked Kizer why he hadn't squealed, Kizer said they would settle their differences man-to-man after they had returned to the States.

A few years after his separation from the army, Elmer C Morrison and his identical twin brother, Elvin C Morrison botched a hold-up at a Texas bar and killed the bartender. They spent several years in a federal penitentiary, and upon their release, both committed suicide within a few months of each other.

This was sad, since Elmer had been a fine squad leader who never drank while on duty. His brother Elvin however, had spent time in the guardhouse while in England for severely injuring an Englishman with a broken-off glass bottle in a pub brawl--so some of his violent nature may have rubbed off on Elmer.

Soon after, Conley Curry--our 3rd platoon truck driver and professional platoon drunk--was court-martialed and dishonorably discharged after one more of his wild drinking escapades, where he terrified a Czech family with a pistol. He lost all of his army benefits--very sad.

He had been a clean, neat and hard-working truck driver and was not a problem when he was kept separated from his liquor.

In my opinion--despite his drinking problem--he should have been given consideration for his worthwhile service in WWII.

Our initial post-war engineering project with the 20ECB was to rebuild three small earthen dams with concrete spillways that had formed a delightful park-like setting on a small stream near Marianske-Lazne (German--Marienbad), fifty miles northwest of Pilsen. This was a picturesque resort town in rolling hills with a forty acre man-made lake upstream. I heard that this was one of Hitler's favorite retreats.

After VE Day, three soldiers--who were boating on the lake--got their snoots full and fell from their boat and drowned. Only two of the bodies were recovered. The dam was loaded with explosives and touched off. The water quickly drained through the breach and the third body was found.

However, the outrushing torrent washed away the three small earthen dams downstream, and trashed the area. The bill from the Czechoslovakian government was more than one million dollars. Our government chose not to pay and B-Co, 20ECB was tasked with rebuilding the small dams and tidying up the area.

CORRECTION--In August 2000, Captain Sands told me that it was three British soldiers who had drowned, and that a Mosquito bomber had flown in low and dropped a bomb that blew a hole in the dam. The British were given the bum's rush and B-Company was brought in to clean up the mess.

We took over several small resort hotels and private homes and set up shop. The beds had warm goose-down coverlets. Until that time, I had not experienced this warm lightweight bedding and vowed to get several when I returned home. I'm not sure of the quarters arrangement, but we probably just displaced the owners. This was in the Sudetenland, where the many ethnic Germans had given Hitler the excuse at Munich to demand that Czechoslovakia be added to the Third Reich.

Three lieutenants--Rino Bei from Burlingame, California, John Delpha from Indiana, and I were housed in a nice old house. We had our own full size beds and even had three maids to tidy up the rooms, so we didn't have to make our beds. We were not used to the luxury of houses with beds and additionally, the maids--one of whom was the wife of a German army captain--were nice looking and were very friendly!

Upon our arrival, one of our first projects was to provide a day room, complete with the fabulous Czech Pilsner beer. We persuaded the brew-master to sell us the first beer from the vat in which the alcohol content was almost 11%--compared the 2% beer that had previously been available.

The crusty old sergeants, who were used to swilling down beer by the pitcher, soon found that after a few glasses they couldn't hit the floor with their hat! There were more wobbly legs at the end of an evening than at a high school prom where the girls had slipped on their first pair of high heels!

We rebuilt the small dams and the concrete spillways, and cleaned up the area, making it almost as neat as before it was trashed. When all of the clean-up work had been completed, we rejoined our battalion on the Danube near Regensburg for a training session on a new improved Treadway Bridge. We were preparing for our part in the planned invasion of Kyushu Japan--projected to take place in November 1945.

The training was uneventful except for a number of bodies that floated by. Most were apparent suicides--Germans who were fingered by their own people as war criminals or profiteers and who had then taken the easy way out.

While on the Danube, I wangled a ten day leave to the French Riviera. I hitched a ride on a general's private plane that was returning empty from Munich to Paris. This was an education on RHIP--Rank has its Privileges. The C-47 had overstuffed chairs, a heavy sofa and a fine table--as well as a well-stocked bar.

The young pilot allowed me to take over the controls from the co-pilot's seat. The C-47 was easy to fly, even though all of my previous flying experience had been in small single-engine airplanes.

From Paris I rode to Cannes where I had a great room in the Miramar Hotel, overlooking a beautiful sandy beach on the Mediterranean--it really is as blue as mentioned in the songs!

I almost swallowed my Adam's apple when I saw my first French bikini--three pieces of cloth, slightly larger than rifle cleaning patches, with the hold down strings! The well-tanned bodies beneath were at least 9s or 10s, and the owners--who may have been professionals--were well aware of the stir they were creating. The Mediterranean was warm and I swam in the surf every day--probably as much to ogle the T & A, as to swim.

A bus tour to Monaco was an interesting interlude--just viewing the lovely half-square-mile principality was well worth the trip. I contained myself and did not gamble, but watched several of my friends gamble away their money. Too quickly I returned to the 20th Engineers.

By the time I returned, our battalion had moved from Regensburg to Frankfurt and begun construction of an army hospital on the outskirts. I had been on the job for only a few

days, when one bright and shiny morning, a Major Brown dropped by and asked to see a Lt Wesley Ross!

He stated that the Supreme Headquarters was having a problem with their Top Secret Cable linking the ETO Supreme Headquarters with Washington, DC and wanted someone--me--to find and correct the problem. I may be in error as to the name of the major who brought me to the headquarters. The major's superior--to whom I also talked--may have been a Lt Colonel or Colonel Brown.

They apparently had locator cards, showing that I was an electrical engineering graduate. It would have done no good to plead that I was an EE power major and so had almost zero communications experience. Lack of experience is surely why I was able to find and corrected a problem that had baffled their real experts--I had no communications knowledge from which to second-guess common sense!

On our way to Supreme Headquarters--located in the massive I G Farben building--Major Brown briefed me. For more than a week, the Top Secret Cable--connecting their headquarters to the Pentagon--had been failing twice daily during the hours of its heaviest traffic--around noon and again in mid-afternoon.

I can only guess at the screaming red-faced rhetoric being bandied about at top levels in the Signal Corps--both in Frankfurt and in Washington. **This was not an insignificant outage. Supreme Headquarters was labeled "THE PENTAGON of EUROPE"--as every phone call, wire transmission or telex from all of the central European commands made their way through this communication facility!**

As we drove into the Signal Corps area, I noticed a frenzy of activity near the big busses which contained the Signal Corps equipment. Huge copper cables were being strung over the ground to correct an incoming-line voltage-drop, that had erroneously been concluded to be causing the failures. Since I had no idea how the equipment operated, and so had no clue as to what might ail the system, I wandered about asking a multitude of questions from any and all, but getting no wiser with time.

I then asked to see the German power plant engineer, who told me that their generating system had been coal-fired, with 8% supplemental hydro. Coal was now unavailable, so the 8% hydro-power was all that was now being generated. The entire output was being used by our army--and most in the I G Farben Complex, which housed The Supreme Headquarters.

Viewing the graphs--which are "the stock-in-trade" at any power generating facility--gave me no further insight. I had hoped to stumble onto a solution, but saw nothing unusual.

The outgoing voltage in the cables from the power plant to the busses was absolutely stable, and although the current (amperage) did show a slight rise in the outgoing current after mid-morning and again in mid-afternoon, at the time, I did not consider that to be significant

After trying to strike an intelligent pose, my eyes almost popped out of their sockets when the engineer showed me the frequency curves--I had hit the jackpot! The frequency curve was flat at the normal 50 hertz (50 cycles/second) until 0930, when it began a slow downward drift. By 1130 it was near 47 hertz. It began to pick up slowly after noon and continued a gradual upward climb until 1430, when it was near 50 hertz--and then began to drop again. By 1600 it was again near 47 hertz.

It was obvious that the frequency drop was the cause of the system failure, as the failures happened only when the frequency had drifted down near 47 hertz.

USA generating systems operated at 60 hertz, while those in Europe were at 50 hertz. The frequency would be maintained near its nominal value for several reasons. A simple example would be for the electric clocks--or any other electrical equipment that was frequency sensitive.

In any hydro-electric generating system, attempting to extract more power than is available from the potential energy of the falling water, can be done for a short period by capturing some of the kinetic energy of the rotating machinery.

Since there is no free lunch, this apparent energy bonanza is gained by absorbing rotational energy from the turbines and the connected generators--which reduces the rotational velocity, and thus lowers the system frequency.

This enlightenment came from Dr Eugene Starr--my electrical engineering professor at Oregon State--who was a consultant for the Bonneville Power Administration from 1939 to 1954 and their Chief Electrical Engineer from 1954 to 1961.

I thanked the engineer and then scurried back to the Supreme Headquarters to see if any more manna from heaven would fall into my lap! The I G Farben Building was a massive seven story structure of six wings emanating from a central curved corridor. It contained hundreds of rooms, each of which had several light fixtures.

This was a significant electrical load, and the signal corps equipment was in addition. There were other smaller loads around the complex. However--as I was told--there had been no change in the electrical demand for an extended period, but only

recently had the cable problem surfaced. Something was missing from the equation!

After an intensive search for recent additions, I finally found that the Red Cross had brought two doughnut kitchens into the complex within the past two weeks. Each had a connected load about equal to that of a household electric range. Nailing the doughnut kitchens down as the root-cause, the electrical heaters for the grease pots were switched on at 0930 to be ready for the noon rush and again in mid-afternoon for the late afternoon crowd.

This corresponded time-wise to the slow rise in the current curve, coupled with the gradual drop in system frequency that I had observed. This would be the response expected from a modest overload on any small electrical generating system.

I still was at a loss as to what was happening in the signal corps busses, but I knew that the drop in frequency was the cause of the secret cable outage--resulting from attempting to use more electrical energy than was being generated.

That two Red Cross doughnut kitchens could cause a debacle of this magnitude is almost unbelievable today, but this was the immediate postwar Germany, which had only recently been stomped into submission, and where reconstruction had only just begun!

My inquiry and report took three days, with a recommendation to stagger the loads on the doughnut kitchens, and turn off the lights in the I G Farben Building offices, whenever a room was unoccupied--no matter how short a time it would remain so.

The implementing order came out immediately and suddenly all was well with the Supreme Headquarters Cable System--and with me! As a result of this success, I was offered an immediate raise in grade to captain, with another to major in six months if I would postpone my separation and remain in Frankfurt. I have forgotten what my duties would have been, but it would have been an interesting interlude, as there were more than eighty generals at that headquarters!

However, I was eager to go back home and so I declined their exceptional offer. I soon acquired a fantastic wife, followed by three children: Terrill Ann, Arthur Gregory, and Kathleen Jane; six grandchildren--including Sergeant Izaac Ross, who served with Rakkasan in the 101st Airborne Division in Afghanistan--and ten great grandchildren later, I have no regrets regarding my decision.

However, six months is not forever and I suspect that Dorothy might have postponed our wedding for those few months. The opportunity to have seen and rubbed shoulders and talked

with some of the leading officers of WWII may have been worth a six months delay in my return to civilian life--but who can say?

In 1987, while retracing my WWII tour, I spent some time in Frankfurt. The I G Farben building had been renamed Creighton Abrams Building. After much questioning, I found no one who had even heard of the cable incident; but I did find that one of General Creighton Abrams famous quotes, was: "They have us surrounded--the poor bastards!" The University of Frankfurt now occupies this grand building, with its six wings connected to the curved corridor.

After VE-Day, the components of the I G Farben Industrial Complex were dismantled and its headquarters building was used to house the American Supreme Headquarters. This action was taken, because I G Farben had been an early supporter of Hitler; had supplied massive funding at the Nazi Party's inception; was a major military materiel supplier for the Wehrmacht; used slave labor in its plants; and had manufactured Zyklon B Gas that was used to murder Jews and others in the various death camps.

Ten years later in Ketchikan, Alaska I ran headlong into the answer for the cable dilemma while calibrating a newly installed x-ray instrument. The calibration was going poorly, and from the audible variation in the autotransformer hum, it was apparent that the system frequency was varying.

I called the Ketchikan's electrical system engineer and asked how closely he maintained system frequency. He said that he was able to hold it to very close tolerances, but when I pinned him down, he said it would be between 57 and 64 hertz.

That would be an unacceptable level of frequency stability on any US power system, but apparently it had been adequate for the electrical equipment in Ketchikan. However, on this x-ray instrument, the frequency variations caused intolerable swings in the x-ray output.

The constant-voltage-power-supplies of that era maintained a steady output voltage, even when the incoming voltage varied significantly. What I now discovered, was that a slight change in the system frequency caused wild changes in the output voltage--even when the input voltage to that power supply was absolutely stable! When the frequency decreased slightly, the output voltage dropped dramatically. Conversely, a slight rise in the frequency caused the output voltage to rise to unacceptable levels. Again, the wild variations in the power-supply's output voltage, occurred on an incoming line that was absolutely stable!

A stable voltage to the x-ray instrument--which was required to provide an unwavering x-ray output--dictated that the constant-voltage-power-supply be bypassed. The power-supply in the "Top Secret Cable" at the Supreme Headquarters almost surely had similar frequency/output-voltage characteristics, as the one in Ketchikan, and the problem in Frankfurt could have been solved in a similar manner by simply bypassing the constant-voltage-power-supply and hooking the cable system directly on to the incoming line. Genius had flowered ten years too late--but such is life in the far west--and so, whatever works!

We had expected to have a short leave in the USA before being involved in the November 1945 "OPERATION OLYMPIC"--the invasion of Japan's southern island of Kyushu--and so we took a deep breath when Japan surrendered in August 1945! President Truman has been criticized for dropping the atomic bombs, but I have no regrets.

The incendiary bomb tolls far exceeded the atom bomb deaths. Their army was three million strong, plus millions of civilians who were prepared to fight to the death with clubs, knives and pitchforks! We would have suffered monstrous fatalities, had we invaded Japan as planned. The plan for the invasion of Kyushu--"OPERATION DOWN FALL"--was not declassified until 1978....**Note 9**

In November 1945, I received orders to return to the United States. A number of men--who had been in my Gap Assault Team #8 and my 3rd Platoon were still my charges. The profound empty feeling in bidding them farewell, was extremely gut wrenching!

Corporal Hershel Livesay broke the ice with his gentle goodbye. "Well you son-of-a-bitch, if I never see you again, it will be too soon". I had forgotten this tender long-ago moment, but Hershel refreshed my memory at our 1994 reunion--I grabbed his field jacket and flipped him over my shoulder and onto the ground. He said that his remark was just to keep from crying--which expressed my sentiments exactly. Sadly, Hershel died of a heart attack the following year!

On 17 November, 1945 I boarded a drafty "40 & 8" boxcar of WWI vintage for the several day trip from Frankfurt to Camp Tophat in Antwerp. All of the "going home camps" were named for cigarettes and Tophat was then a brand of cigarettes.

This was the same type of boxcar that transported troops and horses in WWI. The one in Compiègne, France was used for the signing of the armistice after the "Great War" and is the same one in which Hitler accepted the French surrender in 1940.

Aboard were thirty hommes, but no chevaux, so though we were under the 40-man rated capacity, the car was crowded. A coal

stove kept those nearby nice and toasty, but those on the outside nearly froze.

As we rolled into Camp Tophat, the Andrews Sisters were belting out "Rum and Coca Cola--workin' for the Yankee dolla" on the camp loud speaker. What a wonderful sound!

On 24 Nov 1945, we left for Boston on the Justin S Morrill--a Liberty ship. The trip took long enough for me to win \$650 while playing poker with three colonels, who did not believe that anyone could have so many consecutive good hands--just blind luck! That amount would be worth about \$12,000 in today's dollars. At one time, I had been ahead over \$1,000, but frittered some of it away at the colonels coaxing!

The colonels had been playing dollar limit poker and their antes, bets and raises all were a dollar. When they asked two of us junior officers to join them, we said "OK, but only if the game were changed to pot limit". When I had a good hand I stuck it to them and they didn't have the good sense to fold!

To this poke, a one month's pay had been added earlier, when Lt Charles Rollins--from C-Co--bet that the war would not be over by 06 June 1945--one year after D-Day. Further unintended contributions were made by "Rollo" and others at our evening poker sessions. I had saved over \$4,000 from allotments and poker winnings to begin married life with Dorothy Wickens one month after I arrived back in the USA--a great move!

We debarked at Camp Miles Standish from where I had departed twenty-six months earlier and were hustled by train from Boston with a short stop in Chicago. There we experienced a subzero chill factor from a fifty mph wind sweeping over Lake Michigan. It was almost as cold as the sub-zero days during the Bulge.

I arrived at Fort Lewis on 15 December 1945 and was retired from the active army two months later with the following awards: EAME Service Medal with a bronze arrowhead for the D-Day mission and five bronze campaign stars for Normandy, Northern France, Rhineland, Ardennes, and Central Europe; Purple Heart; Presidential Unit Citation; and Distinguished Service Cross.

I was then assigned to a reserve engineer battalion in Tacoma and later was transferred to a ready-reserve marksmanship unit when I missed two consecutive engineer summer camps while I was away enjoying myself and shooting with an army rifle team.

For some unknown reason, I was not called back to active duty for the Korean War. Instead, I served as OIC of a reserve rifle marksmanship program. The high scorers in the 10th Corps Rifle Matches at Fort Lewis competed in the 6th Army matches at Fort

Ord, California and those top scorers attended the National Matches at Camp Perry, Ohio--on the shores of Lake Erie.

In 1963 I won the National Reserve Rifle Championship with a score of 791/61Vs. My competitors included reserves from the Army, Navy, Marines, Air Force, and Coast Guard plus all the various Army National Guard Units from the US and overseas.

Three regular service army and marines beat my fourth place score in a field of 2202 competitors. We four broke the national open record of 790/69Vs that was set the previous year.

The target format was changed in 1965 and so--although my army reserve record would not be noteworthy today--my record was never officially broken. Also of interest, the highest M-1 Garand scores were more than ten points higher than that of the bolt rifles--a far different result from today's scores!

In 1970 our 6th Army Reserve Rifle Team was the leader after the first three stages of an all-army match at Fort Benning, Georgia--slow fire standing plus rapid fire sitting at 200 yards and rapid fire prone at 300 yards. We lost our lead while pair-firing at 600 yards, where two shooters fire alternately.

We finished in third place among about thirty teams--a number of whom were from the Army Marksmanship Training Unit at Fort Benning, Georgia. The AMTU officers were biting their fingernails, fearing that a lowly Army Reserve Team might beat their vaunted professionals--whose only reason to exist was to win. And so, a victory that almost was!

I retired from a sales-engineering at Picker International in the fall of 1986 after a forty year stint in medical imaging sales to doctors and hospitals, and Dorothy and I retraced my WWII travels the following year. Dorothy had an emergency root canal on our first day in Frankfurt which caused us a one day delay--not a great way to start a vacation!

We rented a car in Frankfurt and toured Czechoslovakia, Germany, Luxemburg, Belgium, France and England in the reverse order of my "no-charge travels in WWII"--because auto rental costs were much more favorable in Germany than in France.

As we were waiting at the entry post on the Czechoslovakian border near Domazlice'--70 miles south of Pilsen--Czech police, accompanied by guard dogs raced ahead with sirens wailing, intent on capturing someone who was attempting to slip across the border.

The border zone had been cleared of vegetation to make surveillance easier. I heard that antipersonnel mines were emplaced there, but I saw none. Czechoslovakia was a police state and the Russian army was in control. Dorothy was worried that we might never make it home to Oregon!

We entered Domazlice' after dark and being unable to speak Czech, we tried arm waving and sign language in an attempt to find a restaurant. After several failures, Dr Pavel Sysel--an English-speaking doctor who had recently graduated from medical school--happened by and walked us to a restaurant.

We were embarrassed when he insisted on paying for our dinner, as he had already saved us from starvation. Paul's grandparents had drowned when their ship was sunk near Singapore early in WWII and we two were the first Americans with whom he had spoken. Several Czech soldiers were curious in observing their first Americans in the flesh.

We had a pleasant conversation over dinner and he then led us to a modern appearing hotel where we were introduced to our room with wall-mounted single bunk beds. His note on our car's windshield the following morning ended with "I love you and I love the U.S.A." Very touching! Paul was about to enter the army for one year of mandatory service. He later began his medical practice in the Klatovy hospital--a short distance from Domazlice'.

I had been warned by the American consul in Frankfurt--as well as by the Czechs at the border post--about making currency transactions at other than at the official exchanges--said to be

a jail offense. When I was approached by our waiter during breakfast in Klatovy with an offer several times more favorable than the standard exchange rate, I politely declined. He was quite insistent that there was no danger to me and then followed us out to the parking lot, still making his pitch. Being fearful that he might be a government plant, I again demurred.

We were watched, and quite noticeably so in the small towns. We had discussed travel plans with several people in Klatovy before leaving for Prague. Upon entering Planice'--the first town on our route--a man with a clipboard at the roadside, apparently wrote down our license number and description and then disappeared.

I stopped in Planice' again in 1994 when a group of us 146ECB veterans and wives retraced our WWII travels, but could find no one who spoke English and so could not review our past history there. Possibly the fear of their communist government discouraged conversation, or more likely no one understood or spoke English.

The small towns were delightful, but it was difficult to buy food because no one understood English. However, we could make ourselves understood enough to buy staples and their wonderful crusty bread. Unwrapped bread was stacked uncovered in open bins and the loaves were carried away in one's arms like long, thin chunks of firewood. Fantastically tasty!

Prague was in the midst of a major urban renewal project and most of the old downtown area was almost impassable. Still, it was easy to see that the finished product would be an impressive tourist magnet.

A few days later in Pilsen--as we were looking over the train station--I found that it had been rebuilt almost exactly in its prewar image. Except for the vintage cars in the background, one could not tell the images part. It was a pile of rubble in 1945 from intensive bombings.

While attempting to find a person who spoke English, a nice little lady signaled for us to wait while she found Mirek Stadler--her eighteen year old grandson--who spoke English and who then proceeded to show us around Pilsen, including the great underground beer storage caves under the city. Mirek spent several weeks with us in 1992 while touring the USA. He is now a sales representative, where he makes good use of his ability to converse in five languages.

We traveled to Marianske Lazne--the small town fifty miles northwest of Pilsen--where our B-Co, 20th Engineers had rebuilt three small earthen dams on a stream that was fed from a nearby

man-made lake. The small down-stream dams were washed away when British soldiers blasted the dam of the lake, in an attempt to recover the body of a soldier who had drowned in a boating accident.

Johnny Perl--a Czech whose mother had been murdered by the SS when she would not disclose his location--and who had then joined the British Army when he was fourteen--was our volunteer guide for two days. He worked in Prague for Swiss Air and took his yearly vacation there.

He showed us around the area and we located the three small dams on the creek that we had rebuilt in 1945. We three had dinner in a nice hotel before leaving the following day for Bayreuth. Fascinating fellow!

In Frankfurt, we viewed the Creighton Abrams building--named after General Creighton Abrams, who was a superb armored commandeer in WWII--it had been the I G Farben building before 1945. The American Supreme Headquarters was located there after WWII and it was there that I had corrected a problem with the Signal Corps "Top Secret Cable" to the Pentagon, that had been failing twice daily for no apparent reason. I had hoped to unearth evidence of my successful sleuthing foray forty-two years earlier, but was unable to find any corroborating evidence. Predictably, no one had even heard of that long ago cable problem.

Surely a fracas of this magnitude would have been mentioned somewhere in the wild-eyed, red-faced screaming communications between the Supreme Headquarters and the Signal Corps in the Washington, DC and possibly within several other governmental agencies as well. However--as of 2014--I have been unable to unearth any supporting evidence, even though I am sure that it must exist somewhere down in the deep, dark bowels of some governmental archive.

I had written to Stephen Ambrose on the possibility that he may have uncovered information about this Top Secret Cable in the course of his research on General Dwight Eisenhower--but without success. General Eisenhower was there in 1945, as well as General George S Patton and many other generals.

We spent a few days in the Butgenbach/Bullingen/StVith/Hofen/Kalterherberg/Monschau/Simmerath area, where my platoon did roadwork, laid mines and used tons of TNT to demolish a number of the Siegfried pillboxes at Hofen, prior to the Bulge.

We stayed in Paul Dahmen's hotel in Bullingen. In 1944, Paul was a young boy who was befriended by American troops, and so

he was forever grateful and did his best to return the favors in various ways in his hotel and restaurant.

We met Bill Meyers--editor of the 99th Division's paper called the "Checkerboard"--along with a number of other 99th Division men, who were being shown the Bulge battlefields by Will Cavanaugh--a British WWII historian.

I watched, as John Krystyniak--a Pennsylvanian--located his 1944 mortar pit at Losheimergraben, along with the decaying remains of several of his 81mm wooden mortar crates. His position was overrun early in the Bulge and he barely managed to escape capture. He and his daughter Margaret were delighted to find that he recognized so much of the area after 43 years.

On the way from Liege to Paris we stopped to look over the old Roman fortifications at Rocroi, the Rheims cathedral and several WWI battlefields, that still showed evidence of their earlier trenches and fortifications .

We made a trip to Fumay, where my platoon built a Treadway Bridge across the Meuse River on the night of 04 September 1944, while a goodly number of the townspeople were our interested audience. Some elders remembered our bridge and Mme Edith Noret gave us photos that she had taken--showing the completed bridge, just as the first tanks began crossing on the following morning. We were invited to her home and sipped wine and ate tidbits.

On our trip through Paris, a pretty young woman on a motorbike flipped me the bird near the Eiffel tower. I'm not sure why, but she may have taken offense at my driving, or maybe it was the German license plate.

Louis XIV's Palace at Versailles was most impressive--both by its opulence and size. We were especially enthralled by the Galerie des Glaces--(The Hall of Mirrors)! The Louvre was also impressive and among other items, I saw the Mona Lisa--which I thought was nowhere nearly as grand as paintings by Rembrandt or Leonardo da Vinci!

We traveled to Bayeux to view the famed Bayeux Tapestry and then looked over the Omaha and Utah invasion beaches. We walked through a number of the WWII cemeteries and believe that the German cemetery at la Cambe was the most appropriately subdued--even more--so than the American Cemetery above Omaha Beach.

This was a sobering moment--realizing how many young men were sacrificed in a war that could have been averted, had the leaders of Britain and France been near "Churchillian" when German troops marched uncontested into the Rhineland in 1936. The Germans were under orders to march back out if their presence was contested.

After visiting St Malo, we drove to Ouistreham, returned our rental car and ferried to England where I learned to drive on the wrong side of the road--very unnerving and especially so on their narrower roads and at the roundabouts!

We saw the Stonehenge and the impressive Roman baths at the city of Bath and then motored through Ilfracombe to Woolacombe and Saunton Sands, where we had been the engineer troops who built fortifications, to be destroyed by troops training to be the first invaders on 06 June 1944--our D-Day.

We had trouble locating a motel in London, and almost had to sleep in our car, before getting lucky and finally finding one--then flew home.

Several days later, I learned that our WWII commanding officer--Lt Colonel Carl J Isley--had died of lung cancer on Thanksgiving Day 1987. As well as many others, he smoked the cigarettes that were in our 10 in 1 rations--very sad that the cigarette companies were allowed to dispense a known carcinogen!

In May 1994, twenty 146th Engineer veterans and their wives began retracing our WWII ETO trip, starting in England at the site of the Assault Training Center. Saunton Sands Golf Course which had contained our headquarters and constituted a modest part of the ATC had been rebuilt as if we had never gutted it.

Several of us played a round of golf with our hosts and talked at length with a WWII fighter pilot. These pilots were the true heroes of WWII and if not for their gallant efforts, Britain would have been overpowered in the air war and then could have been invaded and conquered in "Operation Sea Lion" in the fall of 1940. This was shortly after the Dunkirk fiasco, and at a time when they were militarily helpless--before Churchill's doggedness had generated a following that allowed his countrymen to persevere against almost insurmountable odds!

The fiftieth anniversary of D-Day--at the Omaha Beach cemetery on 06 June 1994--was attended by our 146ECB group and about two thousand others. It was a moving ceremony and although I was never a President Clinton supporter, I thought that his speech was a moving one. However, I heard that the airborne troops booed him during a similar speech at Utah Beach--probably because of his known antagonism to the military.

When Hillary came by pressing the flesh I remarked about her nice looking outfit. She seemed surprised, but smiled and said "well you don't look so bad yourself". I also shook hands with President Clinton and with Treasury Secretary Lloyd Bentsen--all of whom appeared to be warm and personable humans. When I returned and related this story to "Redneck Roy Arnn"--one of

the men in my 40-man Gap Assault Team, who had stormed Omaha Beach on D-Day--he said that I should cut off my right arm!

For nineteen days, we toured France, Belgium, Luxembourg, Germany and Czechoslovakia in a comfortable rented bus with an on-board toilet. We spent time in the Monschau/Hofen area and then motored to Vossenack--where A-Company and C-Company had fought for two days in November 1944 to support a regiment of the 28th Infantry Division, that was being overrun.

We then viewed several destroyed pillboxes that had been blown up by my 3rd platoon at the Hofen strongpoint and visited with a women writer, who was interested in our WWII experiences.

We were enthralled with Monschau, which had suffered only modest wartime damage--mostly during the Bulge--and was now a delightful tourist attraction. The Germans were most hospitable and helpful in answering our many questions. Apparently an intervening half-century had healed most wounds!

We traveled to Czechoslovakia, and stayed for three days in Pilsen. This was after the breakup with Slovakia, so the area that was known as Czechoslovakia, was now the Czech Republic.

I attended a 2nd Infantry Division reunion in Pilsen and surprised Dr John P Wakefield--a dignitary and historian--when I mentioned that the 2nd Division provided about 150 volunteers who had been attached to the Engineer Gap Assault Teams for the D-Day demolition mission. Dr Wakefield was unaware that these volunteers existed and was very appreciative to learn of them!

Several of us visited with earlier friends. I renewed my friendship with Pavel Sysel and his Uncle Vladislav during brunch before heading from Pilsen back to Germany. Pavel was the doctor who had guided Dorothy and me to a restaurant and then to a motel in Domazlice' seven years earlier on my first return trip to review my WWII travels. His uncle Vladislav was a Catholic priest who had been imprisoned for ten years by the communist regime. He writes occasionally to keep in touch.

Dr Stanley Goldman and several others spent a few days in Prague where the refurbishing of the down-town area had been completed. In 1987 that entire area was in shambles, although even then it showed promise of being a neat tourist area with many nice shops, hotels and restaurants under construction. Prague dates back to Roman times, and has a number of old interesting structures including the Hradcany Castle and the Charles Bridge. We toured through Bayreuth and on to Frankfurt and then flew home to the greatest country on earth.

NO BIAS!