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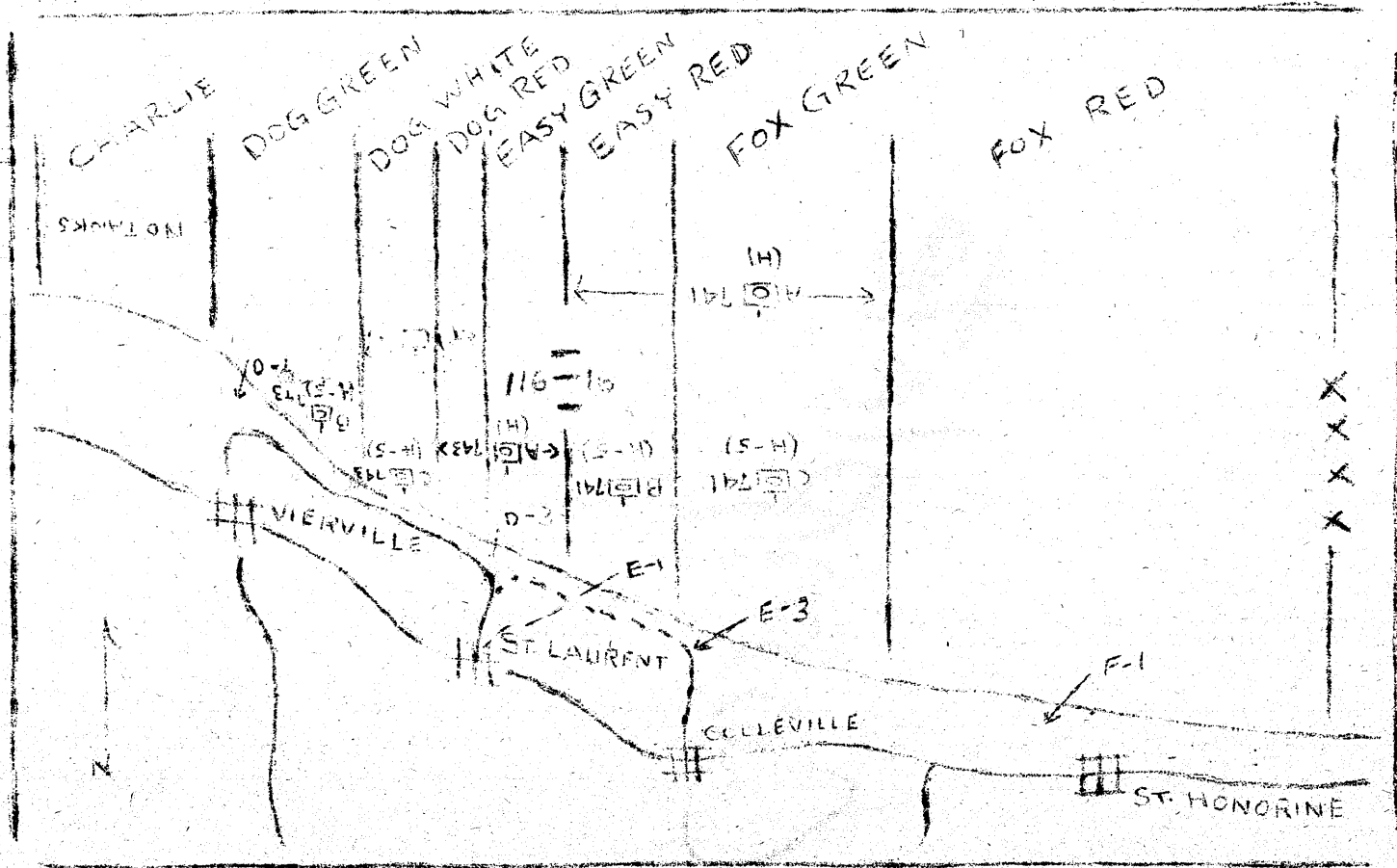
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ARMOR IN OPERATION NEPTUNE
(ESTABLISHMENT OF THE NORMANDY BEACHHEAD)

Committee 10



MAP 6

ARMOR IN OPERATION NEPTUNE
(ESTABLISHMENT OF THE NORMANDY BEACHHEAD)

A RESEARCH REPORT PREPARED

BY

COMMITTEE 10, OFFICERS ADVANCED COURSE

THE ARMORED SCHOOL

1948 -- 1949

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MAY 1949

PREFACE

The purpose of this report is twofold: first, to record the role of Armor in assaulting the NORMANDY beaches and expanding the beachhead; and second, to present conclusions and recommendations relative to such employment. The committee compiled the report from information secured through after action reports of the tank battalions engaged, interviews with participants, and published works concerning the operation as a whole. The study revealed that the tank destroyer units were not used on their primary missions since no enemy armor was encountered; and that the armored field artillery reinforced divisional artillery supporting infantry. Therefore, the actions recounted are limited to the separate tank battalions because only they were in the role of armor.

It should be remembered that in such a tremendous operation, with its accompanying confusion, records are apt to be inaccurate and incomplete. The attempt to follow small units, such as the fragments of tank battalions, through this invasion, disclosed an unexpected dearth of detailed material. The non-availability of after action reports of the infantry which the tanks reinforced limited both the completeness and accuracy of the study. The committee checked and re-checked the actions and incidents to arrive at a logical conclusion as to actual events.

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PART ONE
INTRODUCTION

CHAPTER I

PREPARATION FOR INVASION

The purpose of this report is to collect and set out in chronological order all available facts pertinent to the employment of armor in the landings on the NORMANDY coast. It will cover the period considered as the invasion landings and establishment of the beachhead, which is taken as the sixth through the eleventh of June 1944. The data on which the report is based were obtained from interviews with personnel who participated in the operation, from after action reports, and from other documents listed in the bibliography.

This introduction will discuss in board outline the preliminaries of planning and training for the invasion of NORMANDY. This operation was to be known as Overlord but was called Neptune when the time or place of execution of the plans was included.

Overlord Planning

An idea of the events leading up to the assault and the establishment of the beachhead during the initial six days is necessary background for this report. The Overlord plan included the planning, training, and logistics for the invasion. COSSAC, Chiefs of Staff, Supreme Allied Command, initiated work on the project in January 1943.

COSSAC, with its original plans for Overlord, was still extant in October 1943. In November and December, 1943, the combined Chiefs of Staff met with Prime Minister Churchill and President Roosevelt at the Sextant conference in CAIRO and later, with the addition of Marshal Stalin, in TEHERAN. Resulting revisions of the plan involved simultaneous assault landings by separate American Corps with British and Canadian forces a few miles to the east. Relative to the actual landings, this report will deal only with the American forces.

There were many factors which necessarily delayed the launching of the assault. The greatest of these, by far, was the critical shortage of landing craft. There was even a shortage of the more substantial craft required to transport troops from the American Continent to the United Kingdom to build up the invasion force. This shortage was overcome by the following means:

- (a) Stepping up production in the United States and United Kingdom.
- (b) Reducing the quota for the Pacific and Far East.
- (c) Concentrating the invasion to the NORMANDY coast instead of simultaneous landings on the south coast of FRANCE.

After August 1943, the United States forces in the British Isles increased from 75,000 to 1,533,000 by D-Day. Corresponding quantities of supplies of all kinds had to be ferried across the Atlantic. It is worth noting that within a maximum of thirty

days after disembarking, divisions were fully equipped and ready for action.

Preliminary Military Operations

Actual operations preparatory to the invasion were as extensive and as long range as the planning. In the air, the strategic bombing of the continent by the Royal Air Force at night and the Eighth Air Force in daylight was in full swing as early as July 1943. Between that date and D-Day, the strength of the United States Air Forces alone increased from two thousand to ninety-five hundred planes. Until the spring of 1944, the main weight of our air assault was directed at German industry and communications. Three months before D-day, air assault began to prepare the way for the invasion. One of the primary aims was to dislocate communications to such an extent that the Germans would not be able to move their strategic reserves by rail. These reserves consisted largely of armor. The proof of the success of this air assault was that during the initial expansion of the beachhead the United States forces met little German armor.

One of the most valuable preliminary military operations was the landing at DIEPPE which gave a costly but nevertheless invaluable idea of the kind of opposition ground forces might expect. Secondly, a mock armada put to sea to try to draw the German Air Force and Navy into battle and to find out what opposition we might expect. Either the German intelligence did not pick up the armada or they were unable to meet it. At least it

did not draw any opposition but the presumption that there would be no air or navy opposition to the actual invasion could not be drawn.

United States Forces arriving in the British Isles were already trained, but the task of perfecting the training of the troops for an amphibious operation was a major responsibility of the Combined Staff functioning there. This presented considerable difficulty. Firing ranges were limited and sufficiently large training areas to hold exercises on a regimental or divisional level were not available. No precedent existed for an operation on the contemplated scale, and large scale tests were mandatory. The bulk of this planning, training, and preparation devolved on V Corps Headquarters since it was the largest United States Army Field Force Headquarters then in the United Kingdom. These preliminary phases were carried on by V Corps continuously, starting in July 1943. There was no basic data at hand upon which to base the training of the forces for the coming operation. It became obvious, therefore, that the defects could be remedied only by large scale testing.

A full scale amphibious exercise in which each group -- Ground Forces, Services of Supply, Air Forces, and Navy-- could cooperate was essential. In addition to the size of the area necessary, there was also the problem of finding a beach where conditions were similar to those to be encountered on the NORMANDY beaches. Eventually the area of SLAPTON SANDS was selected. Here the conditions of currents, surfaces, cliffs, and tides, were

considered identical with those existing in the invasion assault area. Subsequent exercises proved that the area was ideal.

Exercise Duck was planned and executed to land a division in an assault upon the SLAPTON SANDS area, with another division in the follow-up force. It was planned and executed in detail, as for an actual operation, and was carried through all the phases of mounting, embarkation and assault. Lessons learned from Duck were brought out in critiques. The exercise proved conclusively that more than one division could be mounted in any one of the ports available. The final plans were based on these findings. Actually, the American part of the invasion followed the plans devised for exercise Duck. Several smaller scale exercises followed and numerous Corps troops engaged in amphibious training at SALCOMBE and DARTMOUTH, practicing embarkation from landing craft as well as assault technique.

Exercise Fox was a second large scale amphibious exercise planned and executed on a Corps level. It involved the embarkation of two divisions and an assault upon the SLAPTON SANDS area. It was carried out in March 1944, after as detailed planning as would be required for an assault upon the continent of Europe.

These two exercises, Duck and Fox, were carried out with normal tanks, which beached off landing craft, as it was decided to keep the DD, Duplex Drive, tanks a secret from the bulk of the Army until D-day. Tank battalions did, however, take part in these exercises in the ratio of one tank battalion to one infantry regiment.

With the arrival of DD tanks, it became necessary to train the tank battalion to which they were issued. This training was carried out not far from the SLAPTON SANDS beach under the direction of Colonel Severne S. McLaughlin, Third Armored Group Commander. For secrecy, this beach was also used for other special training. The Corps Engineers trained here in demolition and construction activities specifically designed for the NORMANDY beach obstacles. Firing from off shore from landing craft was also tested. To keep secret the nature of this training, the area selected was sufficiently far removed from SLAPTON SANDS to avoid observation by the remainder of the troops. The DD tank training consisted of teaching the tank crews to launch their tanks and using the duplex drive, to drive them ashore under their own power on the surface of the water. Once ashore, they abandoned their bouyancy equipment and proceeded as normal tanks.

As an example of a typical battalion's training without DD tanks in England, we will follow the movements of the 747th Tank Battalion commanded by Lieutenant Colonel Gilbert Stuart Fries. The Battalion arrived in GLASGOW, SCOTLAND about 26 February directly from the United States. Immediately after arrival, they drew their pre-shipped equipment. The only significant shortage was the 105-mm assault guns, which were not available; standard M4A3 tanks were issued in lieu of these. These were used in NORMANDY until the assault guns became available, about two weeks after the landings.

While the Battalion had trained for extended maneuvers in the United States, it had no prior training for the loading or logistical planning incident to the invasion. A list of the LCTs on which they were to sail was provided. Lieutenant Colonel Fries, with his staff, organized the boat loads fundamentally by platoons. Since each craft must be loaded to capacity, supply trucks, half-tracks, and other miscellaneous vehicles provided the balance of the load. Each was organized so that the loss of any vessels would not impair the future operations beyond proportions of the actual loss. Sections of Headquarters made separate packets: where possible an individual of each section was in another packet; and each platoon and company headquarters was on a separate craft.

Since the British LCT has a considerably larger vehicle loading deck than the American LCT, the 747th, as well as most armored and motorized units, shipped on British LCTs. A typical load is illustrated by the LCT on which Captain Scott, D Company Commander, sailed. It contained six light tanks, one half-track, and the three two and half ton trucks attached to the platoon. Battalion Headquarters' personnel were spread with platoon packets. S-1, Captain W. J. Hyde, was with a platoon of C Company. Colonel Fries was with the assault gun platoon. S-3, Captain Frank N. Heywood, was with the reconnaissance platoon.

Each load also provided for the logistical self-sufficiency of the unit for initial operations. Colonel Fries and his staff

devised ammunition racks for the tanks. They designed these extra ammunition racks to be built on the floors of the turrets just behind the gun.

Although the Battalion had the mission of Corps reserve, it was scheduled to lead the second major wave in landing. All tanks were waterproofed and all personnel were prepared to wade ashore. Each vehicle was combat loaded. Each platoon was prepared to operate as an independent unit for a short period of time. Such independence came through attachment of three trucks from the Service Company to each platoon. These trucks carried gasoline, ammunition, and rations for approximately five days.

Besides the logistical planning and preparation, the battalion received a smattering of training in many diverse fields. They conducted training in waterproofing and tested results in wading pools. B Company participated in amphibious assaults at SLAPTON SANDS with the infantry during the last half of April and first half of May. The Battalion had had no training with infantry, so some of this was provided, including indirect fire control. Finally, the troops occupied dug-in positions on the English moors while the tanks over-ran them. The object of this training was to demonstrate to the infantry that they were safe in fox-holes, and that they could then destroy the accompanying infantry.

Time was not available for any actual tank-infantry team training. They had not practiced this in the United States either.

As Corps reserve they might not need it. When they went into action this cooperation had to be achieved on the battle field.

Logistics

The scale of the logistical problem may best be understood by the fact that it was intended on D-day and D-plus one to land 20,111 vehicles and 176,475 personnel. The vehicles included 1,500 tanks, 5,000 other tracked fighting vehicles, 3,000 guns of all types and 10,500 other vehicles from jeeps to bulldozers. As may be imagined therefore, the main problem became one of shipping.

While the problem of assault craft was being resolved, the build-up of American troops and supplies in the United Kingdom continued under the direction of Lieutenant General John C. H. Lee. Planning for Bolero, the name by which this logistical program was known, had begun in the United Kingdom as early as April 1942. The small original staff was divided for the North Africa operation Torch, but expanded in 1943 and 1944 as the Overlord task became larger, until by D-day, the communications zone establishment contained 31,500 officers and 350,000 enlisted personnel. By July 1943, some 750,000 tons of supplies were pouring through English ports each month, and this amount was steadily increased, until in June 1944, 1,900,000 tons were received from the United States. Much of this material was used to supply the troops already in England, and other amounts were stored for use as Overlord progressed; but the stock pile earmarked for the American

forces over and above basic loads and equipment, was a full 2,500,000 tons for the invasion alone. By 1 June, the number of United States Army troops in the United Kingdom had risen from 241,839 at the end of 1942 to 1,562,000.

The operation of transporting supplies from the United States to the United Kingdom was facilitated by the fact that cargoes were discharged through established ports and rail lines. Additionally, large quantities of material required for the invasion were made directly available from British resources within the United Kingdom itself. This condition could not exist on the continent, and plans were accordingly made to overcome the difficulties envisaged. It was recognized that the major tonnage reception on the continent would be over the NORMANDY beaches in the first two months, with the port of CHERBOURG being developed at an early date. Successively, it was anticipated that port development would proceed in BRITTANY, the major effort in that area to be an artificial port at QUIBERON BAY, with complimentary development of existing ports of BREST, LORIENT, ST NAZAIRE and NANTES. While these were being brought into use, the flow of supplies over the beaches was to be aided by the two artificial harbors, Mulberry A and Mulberry B. As the campaign progressed, it was anticipated that the bulk of American supplies would flow directly from the United States through the BRITTANY ports. Ports to the north, including OSTEND and ANTWERP, would be developed for British use. These expectations did not materialize due primarily

to enemy strategy. That both the American and British supply systems were able, in spite of this, to support the armies to the extent they did, shows the flexibility of these organizations. Subsequent questioning of German commanders indicated that they were amazed at the flow of supplies. The impossible was achieved; there was a steady and continuous supply to the forces, not only after they landed but actually with the troops as they came ashore. One important factor was the complete ignorance of the Germans as to our artificial harbors, a secret as closely guarded as the time and place of the assault itself.

Embarkation and Launching of the Assault

Movement from the marshalling areas to the ports and hards for embarkation began the thirtieth of May, and was under control of the Transportation Corps, Service of Supply. Troops were called from the camps, where they had been concentrated by boat serials, as the ships and craft became ready for the loading. Embarkation was accomplished during the last few days of May and early June. The American forces loaded at the ports and hards in the PORTLAND, PLYMOUTH, FALMOUTH, HELFORD RIVER, TORBAY, SOUTH-HAMPTON and WEYMOUTH. Craft were furnished by the United States Navy through the Eleventh Amphibious Force, under control of Western Naval Force 122. The ships and craft were loaded in accordance with loading tables which had been prepared as a part of the operation plan. The diagrams, which showed the exact place aboard each craft to be occupied by each piece of equipment and

vehicle, were followed. Embarkation was accomplished in an orderly manner, and as a result of the completeness of detail in the plans, was completed according to schedule without any major difficulties arising.

As the ships and craft were loaded, they left the ports and hards, and proceeded to anchorages where they awaited the completion of loading the assault forces, and the signal to put out to sea for the movement to the French coast. Convoys were formed, and at the proper time, put to sea to join other convoys before heading for the assault coast.

The provisional D-day was 5 June, but the weather forecasts which came in on 3 June were so unfavorable that General Eisenhower postponed it for at least twenty-four hours. By that time, part of this assault force had already put out into the Channel, but so heavy were the seas that the craft were compelled to turn about and seek shelter. By the morning of 5 June, conditions in the Channel showed little improvement but the forecast for the following day was a bit better. The latest possible date for the invasion on the present tides was 7 June, but a further twenty-four hour postponement was impracticable. At 0400 on 5 June therefore, General Eisenhower made the final decision and the convoy sailed again, scheduled to make the assault landings at 0600 hours 6 June, twenty-four hours and thirty minutes later than the original plan had contemplated.

Summary

This, in broad outline, covers the planning for Overlord, the logistics for the operation, the training for the troops in the United Kingdom and the sailing of the assault force. Subsequent chapters will pick up the armored units in their landings and trace their actions in the establishment of the beachhead. The training of these units might have been more thorough; their numbers might well have been greater; but their action was successful in spite of these handicaps.

PART TWO
UTAH BEACH

CHAPTER TWO

ASSAULT LANDINGS ON UTAH BEACH^{1,2}

To gain a clear picture of the UTAH BEACH activities in the overall operation, we should consider it in three phases. First we will consider the background for the specific selection of UTAH BEACH; second, the pre-landing activities off the beach; and last, the actual landing on the hostile shore.

Background

The tactical planning by the Allied High Command had been dominated from the beginning by the need for adequate port capacity, on which the later build-up of forces in the lodgement area largely depended. Therefore the capture of the port of CHERBOURG became imperative. It was recognized that a landing on the CONTENTIN PENINSULA proper, on beaches northwest of the VIRE estuary, would be highly desirable in order to insure the early capture of this objective.

UTAH BEACH, located directly east of STE MERE EGLISE, on the CONTENTIN PENINSULA, is a smooth beach with a shallow gradient and compact grey sand between high and low water marks. Direct access to the beach is blocked only by the ILES ST. MARCOUF. The beach is backed for nearly ten thousand yards by a masonry sea wall which is almost vertical and from four to eight feet high at the proposed landing point. Gaps in the wall marked the beginnings of roads leading inland from the beach, but these gaps were blocked with defensive obstacles. Behind this wall, sand

dunes from ten to twenty feet high extend inland from one hundred fifty to one thousand yards. Beyond them were the inundated areas whose western banks and exits could be easily defended by relatively small enemy forces. On the beach itself, rows of obstacles had been emplaced at a distance of fifty to one hundred thirty yards to seaward. These obstacles were in the form of steel or wooden stakes or piles slanted seaward; steel hedge-hogs and tetrahedra; and "Belgian Gates" which were barricade-like gates constructed of steel angles and plates and mounted on small concrete rollers.

The "Belgian Gates" were used also to block roads or passages where mobile obstacles were needed to make defensive lines continuous. The fixed infantry defenses were sparsely located in the UTAH BEACH area because the enemy relied on the natural obstacle provided by the inundated area directly behind the beach. Defenses immediately behind the beach, along the sea wall, consisted of pillboxes, tank turrets mounted on concrete structures, "Tobruk Pits", firing trenches, and underground shelters. These emplacements were usually connected by a network of trenches and protected by wire, mines, and anti-tank ditches. A more detailed analysis of this beach is given in Appendix B.

The COSENTIN PENINSULA lay within the defensive zone of the German Seventh Army, commanded by Colonel General Fredrich Dollman. Allied intelligence estimates between March and early May 1944 placed the German force occupying the peninsula at two infantry divisions, the 709th and 243rd. Further intelligence

reports early in May indicated that the enemy had been strengthening his coastal defense units to bring them up to the level of field divisions in strength and equipment. It was not believed, by Allied intelligence early in May, that the Germans had panzer battalions or reserves of regimental strength in the COTENTIN area. On the basis of these reports, the enemy was estimated to be capable of (1) rigid defense of the beaches, manning the crust of the coastal fortifications and obstacles with the 709th Infantry Division reinforced; (2) reinforcing the 709th in the assault area with elements of the 243rd Infantry Division commencing at H-hour; (3) piecemeal counterattacks with a maximum of four battalions and a battalion combat team on D-day; and (4) a coordinated counterattack with motorized armored reinforcement from outside the COTENTIN PENINSULA at any time after D plus 2 days.

The mission of capturing CHERBOURG was assigned to the VII Corps, commanded by Major General J. Lawton Collins. The VII Corps assault on the east COTENTIN was to constitute the right flank of the overall Allied invasion. Field Order #1, 28 May 1944, read: "VII Corps assaults UTAH Beach on D Day at H Hour and captures Cherbourg with minimum delay." The major units of the VII Corps were the 4th, 90th, and 9th Infantry Divisions. The 4th Division, principal seaborne unit in the assault on UTAH BEACH, was heavily weighted with attachments for its special mission. Among these attachments were the 70th Tank Battalion, 746th Tank Battalion, 87th Chemical Mortar Battalion,

the 1106th Engineer Combat Group, the 899th Tank Destroyer Battalion, one battery of the 980th Field Artillery Battalion (155-mm), plus antiaircraft artillery units and a detachment of the 13th Field Artillery Observation Battalion. This division was to assault UTAH BEACH at H-hour, establish a beachhead, and then drive on CHERBOURG in conjunction with the 90th Infantry Division, which was to land on D plus 1 day.

The 82nd Airborne Division was to land by parachute and glider in advance of the beach assaulting forces. The mission of this division was to secure the western edge of the beachhead by capturing STE. MERE EGLISE, a key communications center, and by establishing deep bridgeheads over the MERDERET RIVER, on the two main roads westward from STE. MERE EGLISE, for a drive toward ST. SAUVEUR-LE-VICOMTE. The 101st Airborne Division was to clear the way for the seaborne assault by siezing the western exits of four causeways from the beach across the inundated area. This was to be accomplished by air-drop and glider landings. At the same time the division was to establish defensive arcs along the southern edge of the invasion area and establish bridgeheads across the DOUVE RIVER at two points for later use in the drive to weld the VII Corps (UTAH) and V Corps (OMAHA) beachheads, in the vicinity of CARENTAN.

The VII Corps, or Task Force "U", comprised approximately 865 vessels and craft in 12 separate convoys. It sailed for the transport area, 22,500 yards off UTAH BEACH, on 5 June 1944.

At 060200 June the marker vessel was passed at the entrance to the transport area; and at 0229 the Bayfield, headquarters ship for Task Force "U", anchored in its assigned berth. Primary and secondary control vessels took their stations. H-hour was to be 0630.

Early planning provided for the assault of the ILES ST. MARCCUF to capture what was suspected to be a hostile observation post or casemate for minefield control. These islands presented the main obstruction to the approaches to UTAH BEACH and had to be taken prior to an assault of the main beaches. At 0430 (H minus 2 hours) detachments of the 4th and 24th Cavalry Squadrons, under Lt. Col. E. C. Dunn, landed on this obstacle, encountering only heavily mined areas which caused some casualties. All elements of the detachment were ashore by 0530. No enemy troops were encountered.

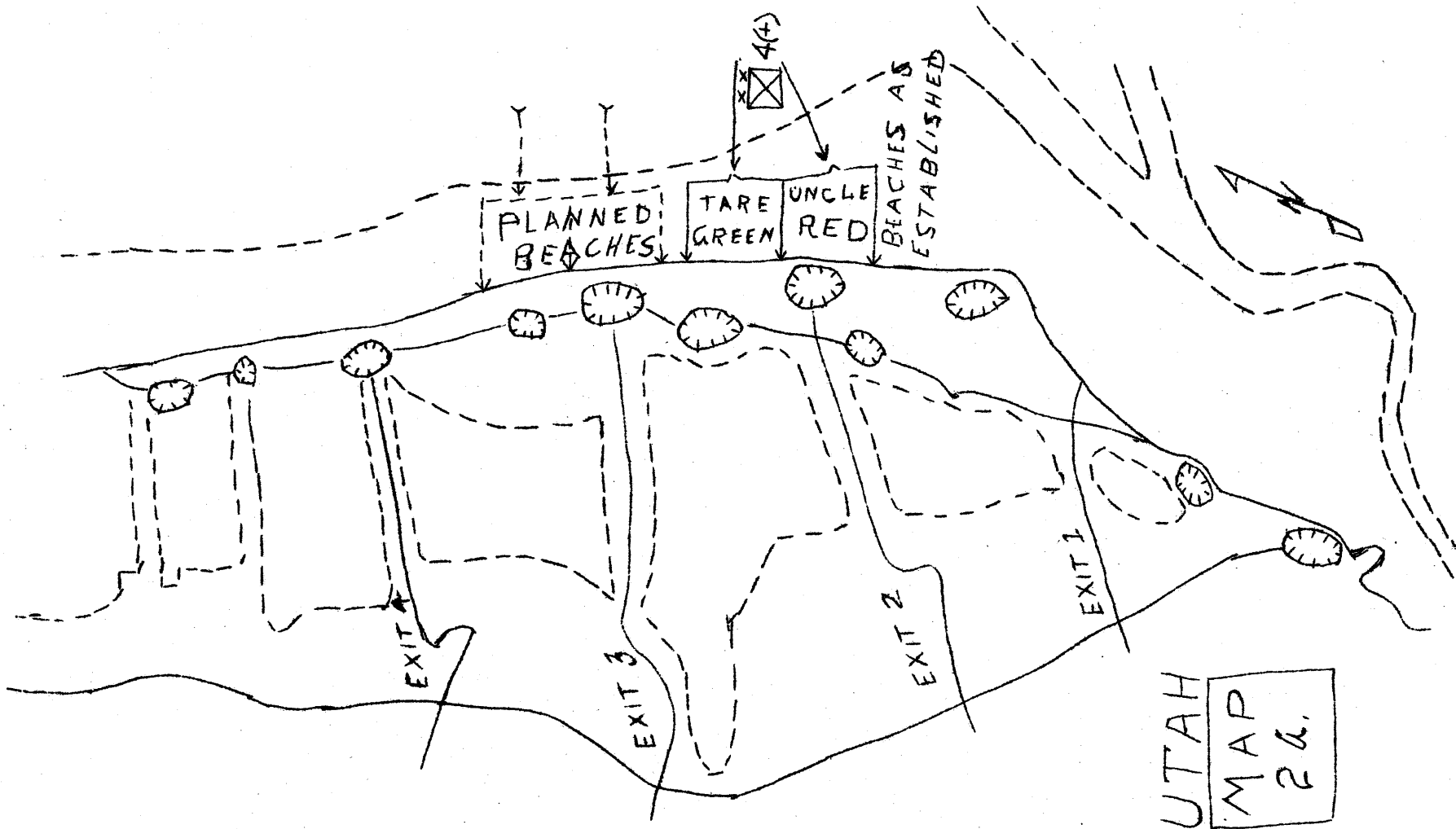
Meanwhile the unloading of troops into assault landing craft proceeded uneventfully in the transport area. After the transfer, LCVPs circled the transports awaiting the order to rendezvous for the movement to the hostile shore. At 0550 (H minus 40 minutes) warships, of the Bombardment Group of Task Force 125, began firing on enemy shore batteries. A few minutes later 276 Marauders of the Ninth Air Force made their first strike on the beaches. At 0455 the Green beach primary and secondary control vessels and the Red beach primary control vessel left the transport area for the beach. The Red beach secondary control

vessel fouled her screw and was unable to proceed. The DD tank-carrying LCTs were supposed to launch the tanks at 5,000 yards, but to save time they were brought to within 3,000 yards of the beach and then discharged. Planning provided for two waves of infantry in LCVPs; and intermediate wave (1A) of DD tanks; Wave 3 of LCT(A)s; with Demolition units in LCVPs and LCMs landing with Wave 4 at H plus 17 minutes. However, due to the late arrival in the transport area, loss of one primary control vessel, and inability to make up time because of slow speed, the DD tanks actually landed at H plus 20 minutes. A late decision was made to move some demolition units from the 4th to the 2nd wave thereby starting demolition work 12 minutes earlier. During this time the transfer of the troops of the first four waves had been completed and the craft assembled in their assigned rendezvous areas and were proceeding toward the beaches.

UTAH BEACH, for control of the landings, was divided into two sectors subtitled as follows: on the right, Tare Green beach, opposite the strongpoint at LES DUNES DE VARREVILLE; on the left, Uncle Red beach, 1000 yards farther to the south.

When the LCVPs were from 300 to 400 yards from the beach, the assault company commanders fired special smoke projectors to signal the lifting of naval gunfire support. Almost exactly at H-hour the assault craft lowered their ramps and six hundred men walked into waist-deep water to wade the last 100 or more yards to the beach. The actual touchdown on the beach was therefore a

few minutes late, but the delay was negligible and had no effect on the phasing of the succeeding waves. Thirty amphibious tanks from the 70th Tank Battalion, launched 3000 yards offshore, arrived on the beach. These tanks, by virtue of their armor protection and great fire power, greatly assisted the progress of the assault across the beaches. The first troops to reach shore were from the 2nd Battalion, 8th Infantry. The 1st Battalion landed a few minutes later. Both came ashore considerably south of the designated beaches. The 2nd Battalion should have hit Uncle Red beach opposite Exit 3. The 1st Battalion was supposed to land directly opposite the strongpoint at LES DUNES DE VARREVILLE. The landings, however, were made astride Exit 2 about 2,000 yards south. (Map 2a) This error appears to have been caused by the loss of the control vessels, together with the dust and smoke thrown up by the naval gunfire. The errors in landing actually proved fortunate. Not only was the beach farther south less thickly obstructed, but the enemy shore defenses were also less formidable than those opposite the intended beaches. The 70th Tank Battalion, attached to the 8th Infantry Regiment, landed on UTAH BEACH, losing five tanks from A Company. D Company, the light tank company of the battalion, on landing late in the day, was attached to the 101st Airborne Division, and moved immediately to make its way off the beach to join that unit. The 746th Tank Battalion landed at 061140 as general support for the 4th Infantry Division. On landing, C Company was attached to and



UTAH
MAP
2 &

moved to the support of the 82nd Airborne Division.

The clearing of the beach obstacles, as were necessary, was the mission of Beach Obstacle Task Force, a special Engineer force. By hand-placed charges and tank dozers, they were to clear four 50-yard gaps in the obstacles on each beach from the high water mark seaward. The detachment of eight tank dozers working with this force was from the 612th Light Equipment Company and the 70th Tank Battalion. Tank dozers worked effectively against some of the pilings and pushed the obstacles up on the beach, but hand-placed charges accounted for most of these obstacles. Few mines were found attached to the obstacles. "Belgian Gates" were found in small numbers, a few on the beach and a few blocking the roads leading from the beach. The reserve engineer teams which came ashore on Green beach blew these gates and assisted in blasting additional gaps in the sea wall. The demolition of the sea wall and the clearance of paths through the dunes were accomplished very early. Two gaps were blown in the wall on Red beach and two on Green beach. The engineers then accompanied the infantry, removing mines and "dozing" roads across the dunes.

Considerable congestion of traffic in movement to the beach exits was experienced. This was partly due to the error in landing. The original traffic plan envisaged the use of Exit 2 and Exit 3 for vehicles. Exit 3 could not be used because of the nearness of the enemy positions to the north. The traffic

became congested when all vehicles tried to use Exit 2. The 3rd Battalion, 8th Infantry, supported by tanks of the 70th Tank Battalion and engineers, had begun to move down the causeway toward Exit 2.

The 1st and 2nd Battalions, 22nd Infantry, came ashore about 1000 hours on the northern and southern beaches respectively. These two battalions were to march inland through Exit 4. Since the eastern end of this exit was still covered by fire and the causeways to the south were already congested, some of the 22nd Infantry's units were compelled to wade two miles through the inundated area. The 1st Battalion, 8th Infantry, upon landing, had moved north and then inland through Exit 3 while the 2nd Battalion moved down the coast to Exit 1.

There are too many factors involved in the landings to evaluate the effect that the order of landing of the various waves might have had in the success of the assault at the beaches. However, the sequence of events and order of landing would appear to be: demolition units, infantry, tanks.

As D-day drew to a close, all ranks were surprised at the relative ease with which the assault had been accomplished. The losses in personnel were astonishingly low. During the first fifteen hours, the 4th Infantry Division (less one field artillery battalion); one battalion of the 359th Infantry; the 65th Armored Field Artillery Battalion; the 87th Chemical Mortar Battalion; the 899th Tank Destroyer Battalion (less two companies;

the 70th and 746th Tank Battalions; components of the 1st Engineer Special Brigade; and many smaller units had been landed. A total of over 20,000 troops and 1,700 vehicles reached UTAH BEACH by the end of 6 June 1944.

NOTES FOR CHAPTER II

¹From UTAH BEACH to CHERBOURG, by Historical Division, Department of the Army.

²Commander Assault Force "U", T&S, G-2 Documents Files.

CHAPTER III

THE 70th TANK BATTALION

Previous chapters have discussed the background of the operation and the movement to the landings. This chapter will deal exclusively with the 70th Tank Battalion and the units with which it was associated in battle, usually as reinforcement, from the beach on D-day, 6 June 1944, through D plus five.

D-Day

The 70th Tank Battalion, commanded by Lieutenant Colonel John C. Welborn, touched down on UTAH BEACH at H-hour, 0630, reinforcing the 8th Infantry Regiment, commanded by Colonel James A. Van Fleet, of the 4th Infantry Division, commanded by Major General Raymond O. Barton. A and B Companies were equipped with duplex drive amphibious tanks, commonly referred to as DD tanks. They landed in the first wave, reinforcing the 1st and 2nd Battalions respectively. C Company, not DD equipped, had four dozer blades and landed in the third wave at H plus fifteen minutes, directly on the beach from LCTs, with detachments of the 299th and 237th Engineer Combat Battalions. These engineer units also had four tank dozers. Elements of the tank battalion forward echelon followed in later waves.

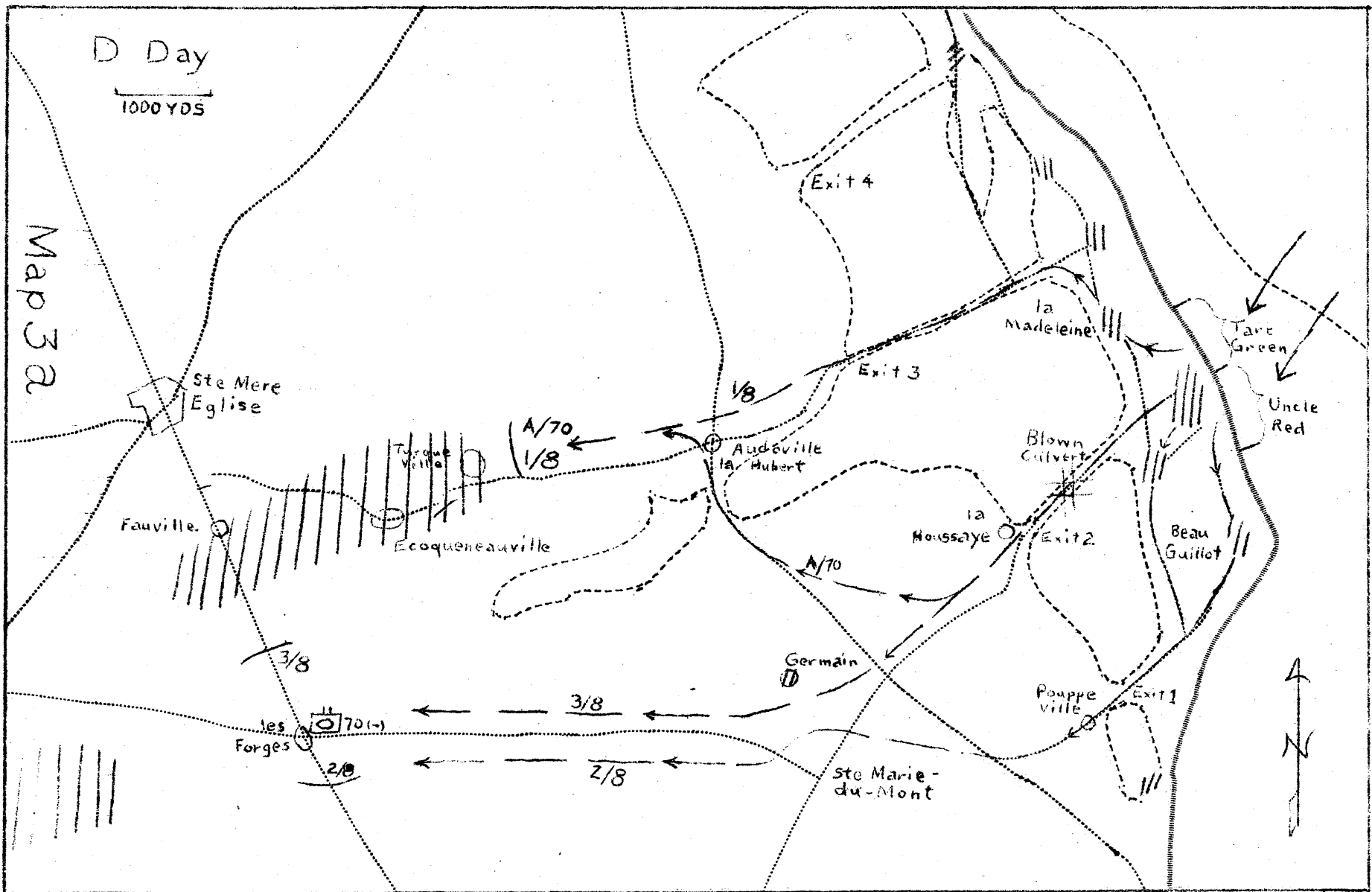
A Company, commanded by 1st Lieutenant De Witt C. Fair, landed with the first Battalion, on beach Tare Green, immediately in front of the fortifications in and around LA MADELEINE.

B Company, commanded by 1st Lieutenant Francis E. Sanger, landed

D Day

1000 YDS

Map 3a



with the 2nd Battalion, on beach Uncle Red, about 1300 yards southeast of LA MADELEINE. It was also faced with fortifications upon landing. These were field fortifications covering the causeway roads. They were reduced with little difficulty by company-size forces. Other small groups cleared houses along the roads which parallel the beach. These fortifications were much less formidable than those at the beaches where the landings were intended. This allowed much greater early success than could have been obtained against the others. C Company, commanded by 1st Lieutenant John L. Ahearn, landed with the engineers on both Tare Green and Uncle Red beaches. They cleared the beaches of enough obstacles to insure unobstructed landing of troops to follow. The dozer tanks provided cover from small arms and artillery fire for the dismounted engineers while they placed charges to blow those obstacles which could not be pushed aside by the tank dozers. The Battalion Commander, the Communications Officer, and one liaison officer came ashore in two 1/4-ton trucks with the assault waves.

Exit 3 was covered by 88-mm guns which prevented A Company from accompanying its infantry over the causeway through that exit. Instead, A Company and part of B and C, passed through Exit 2 with the 3rd Battalion, 8th Infantry. Halfway over the causeway to Exit 2, directly inland from the landing sites, they found a culvert blown and the road covered by an antitank gun. The first tank, a DD, was stopped by a mine. Another was knocked off the

road by the antitank gun. Still another moved up. This one silenced the enemy gun. The blown culvert was not serious in itself because, after the gun was knocked out, the troops and tanks were able to ford the stream and push on.¹ They passed through Exit 2 and on to the area just southwest of LA HOUSSAYE. Here the tanks stopped for reorganization.

Meanwhile, elements of B and C Companies, with the C Company Commander, Lieutenant Ahearn, and the Second Battalion, Eighth Infantry, commanded by Lieutenant Colonel Carlton O. MacNeely, moved south along the beach toward POUPEVILLE. They encountered continuous small arms fire all the way. G Company received artillery fire and ran into a mine field as well, when it approached a strongpoint at BEAU GUILLOT. Tank fire forced the enemy in the town to capitulate. The tank-infantry team pushed on toward Exit 1. As they passed the minefield, C Company's commander saw a wounded paratrooper lying in the minefield behind the sea wall. Lt. Ahearn stopped his tank, told his crew to stay in it, dismounted to rescue the wounded man. As he was picking his way through the minefield, he tripped one or more mines which blew his feet off. His crew dismounted and, with the aid of ropes, succeeded in getting both men out of the minefield without accident. They evacuated them to the beach for return to ENGLAND.

The entire force was assembled at the road junction northeast of POUPEVILLE and advanced on the village. First

contact was made there with the 3rd Battalion, 501st Parachute Infantry, which they relieved. From POUPPEVILLE, they pushed west until they received antitank fire from a church steeple in STE MARIE DU MONT. The tanks knocked this out soon after it was located. These tanks now turned toward LA HOUSSAYE and joined the battalion which was reorganizing. 1st Lieutenant Dwight McKay assumed command of C Company. The tank dozers, which had been left on the beach, came through Exit 2 to rejoin C Company.

The S-1, S-4 and Reconnaissance Officer, with two 1/4-ton trucks, one half-track and six 2 $\frac{1}{2}$ -ton trucks of gasoline and ammunition, had landed about 1115. After a reconnaissance on foot by the S-1 and S-4 had located the battalion, they moved over the causeway to Exit 2 and on to the assembly area where the battalion was reorganizing and dewaterproofing. The vehicles were refueled but required no resupply of ammunition.² After the reorganization was complete, the companies moved out to join the infantry they were assigned to reinforce.

Lieutenant Fiar led A Company north on the road to AUDOUVILLE LA HUBERT just west of Exit 3 and joined the 1st Battalion, 8th Infantry. This team then pushed on through enemy artillery fire with little other opposition until they approached a strong point at TURQUEVILLE about evening. They stopped there for the night. (Map 3a) The battalion, less A and D Companies, moved west toward LES FORGES. They joined the 2nd and 3rd

Battalions, 8th Infantry, who were astride the road west of STE MARIE DU MONT, moving toward LES FORGES. The tanks stayed on the road as the infantry moved cross-country to the town, arriving in the early evening. North of the village, astride the FAUVILLE-STE. MERE EGLISE road, was an enemy strongpoint. The 3rd Battalion bivouaced for the night, astride the road, between this strongpoint and LES FORGES. The 2nd Battalion spent the night astride the road south of LES FORGES toward CARENTAN, protecting the south flank of the 4th Infantry Division. The tanks were placed in position to add depth to the defense of the infantry.

Thus, on D-day, the 70th Tank Battalion reinforced the 8th Infantry as it reached its D-day objectives. Neither the other regiments of the 4th Division nor the airborne divisions accomplished their D-day missions on schedule.

The American forces determined that the strongpoints at TURQUEVILLE and north of LES FORGES, together with one at ECOQUENEAUVILLE, were parts of an enemy pocket organized along the ridge from TURQUEVILLE to FAUVILLE. This pocket cut the LES FORGES-STE. MERE EGLISE highway and prevented a solid link between the 8th Infantry as LES FORGES and the 82nd Airborne Division at STE. MERE EGLISE. The next chapter will describe an action which tried unsuccessfully to penetrate to STE. MERE EGLISE late that evening.

D Company, commanded by 1st Lieutenant Gordon R. Brodie, had come ashore late in the day and, being attached to the 101st Airborne Division, proceeded to a bivouac area southwest of STE. MARIE DU MONT. It saw no action on D-day.

Six trucks, three of ammunition and three of fuel, came ashore on this day under Captain John M. Bushey to resupply the companies. Late in the day an equal number came in to join them. These last trucks came in under Lieutenant Bauer, the Battalion Transportation Platoon Leader. The Battalion Executive and S-3 came ashore with the second group of trucks in the same LCT. This group, with those elements of the command post which had landed, spent the night in the assembly area southwest of LA HOUSSAYE.

During June 1945, in ROTHENBURG, GERMANY, General Blakely of the 4th Infantry Division, presented the Distinguished Unit Citation to the 70th Tank Battalion for its action on D-day.

During this action the tank battalion casualties were:

KIA	3	EM
MIA	1	0, 16 EM
SWA	1	0, (Commander, C Company)
LWA	2	0, 5 EM
Total	4	0, 24 EM

Material losses were:

At sea:	9	Medium Tanks (5--A Company; 4--C Company)
On land:	7	Medium Tanks (3--A Company; 2--B Company; 2--C Company.)
Total	16	Medium Tanks.

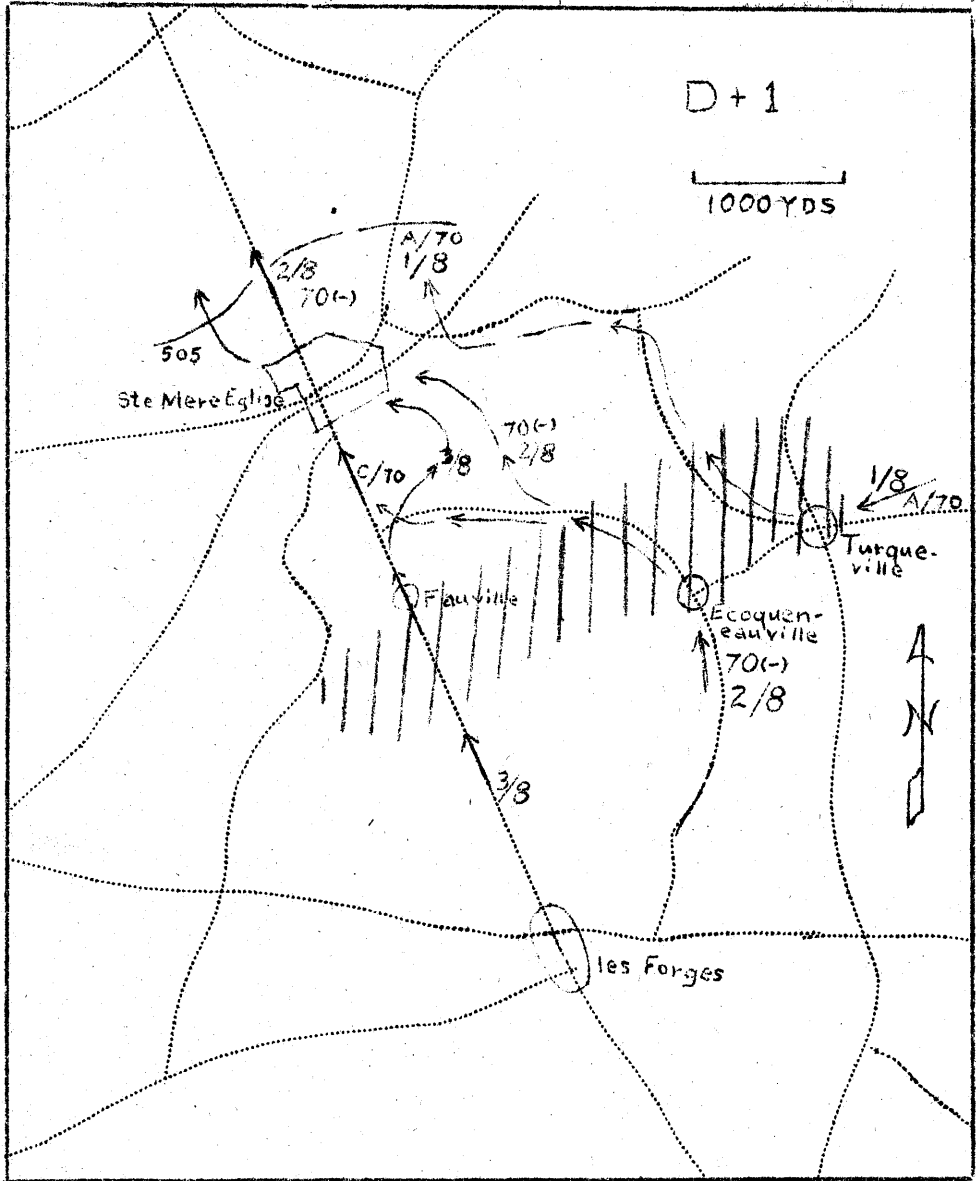
The 70th Tank Battalion had demonstrated that the early landing of tanks will greatly assist infantry in reducing beach

defenses and in gaining a foothold on a hostile shore. The value of the DD tank in assault landings, when properly launched in water that is not too rough, was proven.

D Plus One

Action to reduce the enemy pockets and consolidate contact between units consumed all of the day 7 June. Early in the morning the S-2 and the Maintenance Officer of the battalion landed on the beach with a maintenance vehicle and joined the Command Post group near LA HOUSSAYE. The lettered companies reinforced infantry units as follows: A Company--1st Battalion, 8th Infantry; C Company, now commanded by 1st Lieutenant McKay, and B Company--2nd Battalion, 8th Infantry, commanded by Lieutenant Colonel Arthur S. Teague; and D Company, under 1st Lieutenant Gordon R. Brodie--101st Airborne Division.

The A Company--1st Battalion team attacked first, late in the morning, to capture the TURQUEVILLE strongpoint on the east end of the pocket which was preventing contact with the airborne division in STE. MERE EGLISE. As the attack progressed, enemy fire diminished until, just as the final assault began, the enemy garrison surrendered. Later it was discovered that the enemy unit was Georgian and that an American who was their prisoner (Sergeant Svonchek, 82nd Airborne) had been able to speak Russian, and that he had, in conjunction with the effect of the attack, persuaded them to surrender. In clearing the town, 174 prisoners were collected. When that was completed the tank-infantry team



Map 3b

swung north astride a secondary road. They advanced against little resistance to the road from STE. MERE EGLISE to BEUZEVILLE AU PLAIN. There they turned west toward STE. MERE EGLISE. About 1100 yards from the village, they again turned north. (Map 3b)

The second group to attack was the team of B and C Companies with the 2nd Battalion. They drove north from LES FORGES on ECOQUENEAUVILLE, a strongpoint of the south side of the enemy pocket, at the same time as the 3rd Battalion, without tanks, made a parallel attack astride the FAUVILLE-STE. MERE EGLISE road. As these forces attacking north reached a creek bed in front of the enemy lines, they received heavy machine gun and artillery fire from the ridge inside the enemy defensive pocket. The 3rd Battalion, without tank reinforcement, was stopped, despite one of the most severe fights of the first few days. The Tank-infantry team reduced the resistance on their front and took their objective. Their action outflanked the enemy confronting the 3rd Battalion, which then advanced abreast while ECOQUENEAUVILLE was being mopped up. Both forces then drove on toward STE. MERE EGLISE.

With TURQUEVILLE, ECOQUENEAUVILLE, and FAUVILLE taken enemy resistance was broken. When the environs of these towns were cleared of Germans the dangerous pocket was eradicated.

As the forces south of STE. MERE EGLISE advanced to within one thousand yards of that town, enemy interdiction of the road with artillery and antitank fire forced the infantry battalions

to move east away from the road into an area about twelve hundred yards southeast of the town. The tanks sought cover near the road. A few of C Company infiltrated by fast individual dashes up the road to the town. The first tank carried two officers of the 505th Parachute Battalion who had come out to meet them. The second tank was hit in the track and did not make the town. The third tank, Second Lieutenant Thomas J. Tighe's, got into the town but continued north out of it and was hit. The driver was killed and the tank rolled over killing Lieutenant Tighe. The fourth and fifth tanks gained the town safely. The latter was Lieutenant McKay's tank.³

These tanks established contact with the 505th Parachute Infantry within the village. Enemy in position north of the village engaged them in action immediately. This enemy force had seven tank destroyers whose guns covered the road south of STE. MERE EGLISE. During this action, B Company, 70th Tank Battalion, entered the village from the east. These combined forces determined that the main German position was west of the highway. Two infantry-tank teams composed of C Company reinforcing the 2nd Battalion, 505th and B Company reinforcing the 2nd Battalion, 8th Infantry, arranged a coordinated attack.

The first team attacked north astride the road; the 2nd team crossed the road to the west behind them and attacked north on the left. The speed of the attack was so great that some enemy troops were literally run down and run over by the tanks.

By the end of the day this attack had cleared the enemy from his positions west of the highway and had killed or captured three hundred! Thus it, with an earlier attack from the east by the 746th Tank Battalion (see Chapter IV) removed the enemy threat to STE. MERE EGLISE. This allowed the 82nd Airborne units there to turn more attention to operations along the MERDERET.

Late in the day C Company reverted to reserve and joined the battalion command echelon in the LES FORGES area.

D Company reinforced the 1st and 2nd Battalions, 506th Parachute Infantry, in their attacks southwest of VIERVILLE. Occasional temporary reinforcement by medium tank platoons of the 746th Tank Battalion also assisted these parachute battalions as they attacked to the vicinity of ST. COME DU MONT. To keep abreast of adjacent units they withdrew eighteen hundred yards to the vicinity of BEAUMONT.

The action during this day cleared the pockets of enemy from among units of the 4th Infantry Division. The southern front, where D Company operated, still was not consolidated.

During the day the battalion casualties were:

KIA	10, 7	EM
MIA	3	EM
SWA	2	EM
LWA	2	EM
Total	10, 14	EM

Materiel losses were two light tanks from D Company.

D Plus Two

On D plus two, 8 June, the battalion, less D Company and elements not yet in FRANCE, spent the day in refitting, maintenance,

and rest in the vicinity of STE. MERE EGLISE. B and C Companies were astride the road north of the town where they had been at the end of action on 7 June. A Company had replaced C as reserve. They, with Battalion Headquarters elements, were in an orchard about five hundred yards northeast of town.

About 1700 hours the battalion, less D Company, was assigned the mission of attacking enemy infantry positions in the area north and northeast of AZEVILLE. Companies A and B attacked within their zone of action across the front of the 22nd Infantry, and Company C was placed in reserve. The path of the attack was a sweep through sparsely wooded terrain, through AZEVILLE, and on to the northeast to describe a loop and go back past AZEVILLE to the starting point. There was no intent to take and hold any ground, but rather to disrupt, destroy, and harrass the enemy in that area to the maximum. The attack was executed in late evening to gain surprise and security for the tanks. On the way to the attack position they encountered scattered artillery fire. About 1900 an artillery round seriously wounded the C Company Commander, Lieutenant McKay. Captain Albert M. Krekler assumed command of the company. The attack was supported by artillery fire on enemy strongpoints to the front and flank. The attack started at 1930 hours and was successfully completed at 2230 hours.⁴

After this attack the battalion returned to the area they had occupied during the day.

D Company performed some reconnaissance for the 101st Airborne Division about one mile north of ST. COME DU MONT. 1st Lieutenant Walter D. Anderson, a platoon leader of D Company, was killed when an enemy mortar shell landed directly in his tank turret.

The action of the three medium tank companies on this day did not gain and hold any ground, but undoubtedly demoralized the enemy throughout the area they traversed. In the light of the action in this same area during the next three days, it seems possible that a coordinated attack with infantry at the same time might have eliminated much slow costly fighting.

Casualties for the day were:

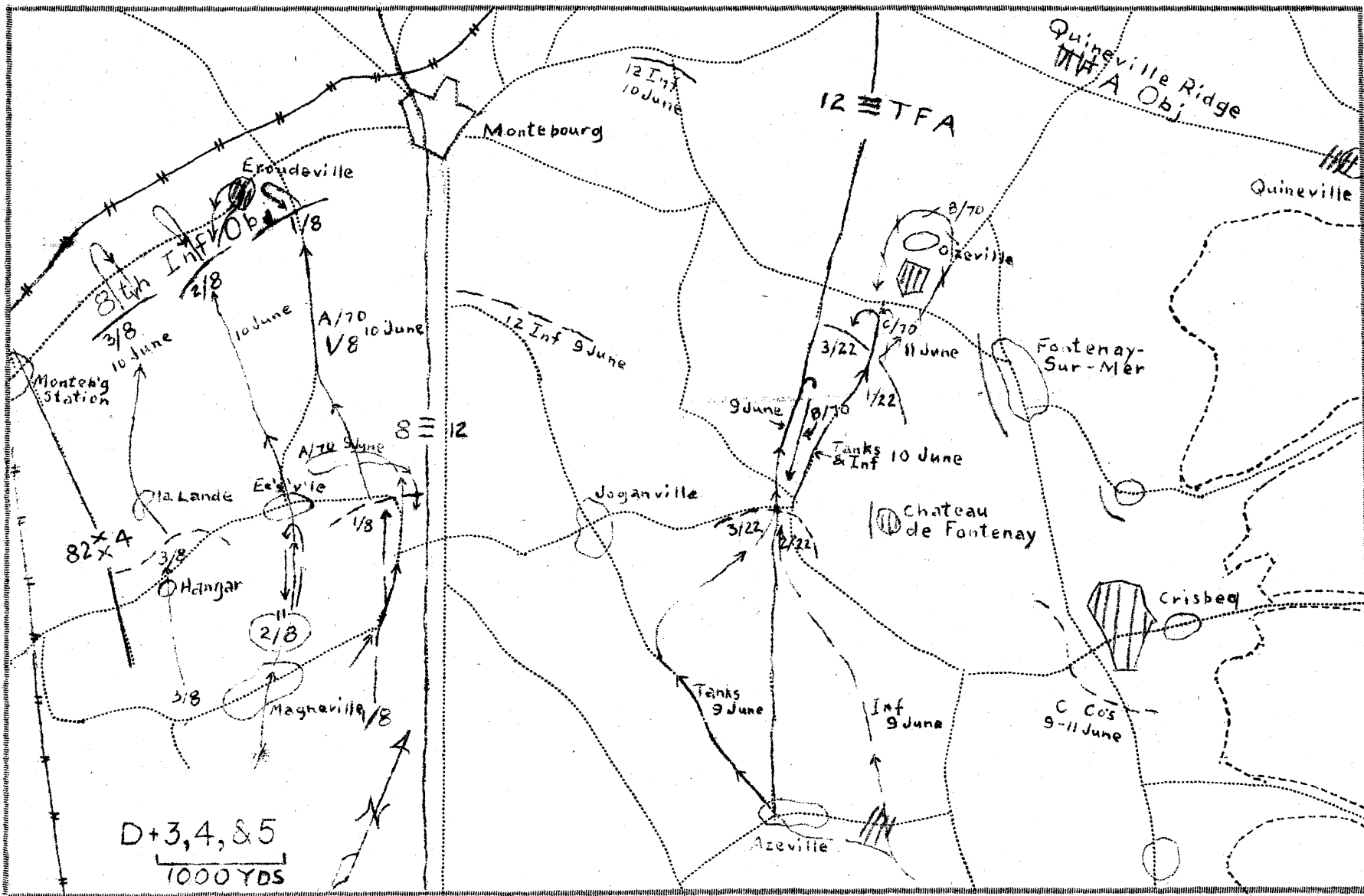
KIA	1 Officer
SWA	1 Officer
Total	2 Officers

Materiel losses were one light tank from D Company.

D Plus Three

On 9 June, General Barton made plans to bypass the remaining forts between the 22nd Infantry and the QUINEVILLE ridge. (Map 3c) This village was the eastern anchor for the German defenses. Task Force "A" was formed for this mission, under the command of Brigadier General Henry A. Barber. It consisted of the 70th Tank Battalion, less A, B, and D Companies, one platoon from D Company, 746th Tank Battalion, the 22nd Infantry, the 899th Tank Destroyer Battalion less two companies and one or more companies of the 4th Engineer Combat Battalion.

Map 3C



This team adopted a formation with the tanks leading and the infantry in column of battalions in the order 3rd, 2nd and 1st. The task force was to drive to its first objective at OZEVILLE. It had priority of fires of all 4th Division artillery. In this attack, the first really troublesome hedgerows were encountered. Tank dozers were distributed among all tank companies and led in nearly all future advances. Also, dozers were often used in attempts to dig up enemy communication cables laid between strongpoints. The formidable strongpoint at CRISBECQ which had thwarted all efforts of the 22nd Infantry toward its capture during the preceding two days, was to be contained by the C Companies of the Infantry, Engineers and Tank Destroyers. At the time of the attack, this strongpoint was to be further neutralized by all available artillery fire.

At 0630 B Company had received orders to reinforce an attack on AZEVILLE by the 22nd Infantry, but their orders were cancelled and they returned to the battalion when General Barton planned task force "A". This, and the platoon of light tanks from the 746th, brought the tank strength of the task force up to two medium companies and one light platoon. The 3rd Battalion reduced the strongpoint just east of AZEVILLE by early afternoon. Some tanks had started out with them but all except one were stopped by a minefield, and the fire of that one was ineffective on the concrete structures.

At 1630 the task force attacked north from the vicinity of AZEVILLE toward OZEVILLE about 4700 yards away, with tanks of B Company leading. The following infantry was stopped at the cross roads just east of CHATEAU DE FONTENAY, after an advance of about 2200 yards, by fire from strong enemy positions in the vicinity of the Chateau. The 2nd Battalion came up on the right of the 3rd and went into position facing these strongpoints. B Company continued the attack and by midnight had advanced about three thousand yards. It was about one half mile in front of the infantry, who had been forced to dig in for the night where they had been stopped. B Company was recalled. It went to the battalion assembly area southwest of AZEVILLE.

The events of this day showed that the task force had insufficient strength, even with air support, to protect both of its flanks from the forts on the right, which it was attempting to bypass, and the positions on the left, in the gap between itself and the 12th Infantry, and still be able to push forward. The weather was very dry and tanks drew fire whenever they moved because of the dust they raised. Artillery fire followed them all the way back to the assembly area at night.

Meanwhile A Company, reinforcing the 8th Infantry, had been held in reserve while the 1st Battalion of that regiment failed, with high losses, to gain toward the regimental objective. That objective was the road and the high ground between MONTEBOURG and MONTEBOURG STATION. The 3rd Battalion had somewhat better

success. It had taken the HANGAR area but had been stopped between there and LA LANDE by fire from the latter. This battalion had also taken heavy losses all day.

At 1900 the 1st Battalion resumed the attack preceded by two platoons of A Company's tanks. The tanks moved up the road which runs north from MAGNEVILLE. As they crossed the creek, they machine-gunned the houses on the right, swung into the fields north of ECAUSSEVILLE and fired into the village for ten or fifteen minutes. Fire returned by 88-mm guns from the village, caused them to turn back to rejoin the infantry. The infantry had not followed to attack the houses machine-gunned on the way up, so the tanks found them still occupied by enemy on their return. They attacked these houses from the rear, broke the enemy's resistance and A Company, 1st Battalion, moved in to mop up. They took about one hundred prisoners. At 2100 the infantry dug in for the night.

ECAUSSEVILLE, the strongest point on the enemy's first thoroughly prepared line, had held out all day; even against a separate attack by the 2nd Battalion, 8th Infantry reserve, during the day. Outflanked by the 3rd Battalion's valiant attack to the HANGAR area and the 1st Battalion's gain to the northwest, the town was abandoned by the enemy during the night.

D Company was not used by the 101st Airborne Division, to which it was still attached.

During the day battalion casualties were:

KIA	1	EM
MIA	2	0,5 EM
SWA	4	EM
LVA	2	EM
Total	2	0,12 EM

Material losses were two medium tanks from B Company.

D Plus Four

On 10 June task force A continued the attack to reach OZEVILLE. C Company reinforced the 3rd Battalion in two frontal attacks which carried the tanks up the rising ground to within three hundred yards of the main enemy positions. The infantry was so decimated that it lacked the strength to take the objectives. K Company was still on the beach; L Company had lost about 160 men since D-day. When the second of these attacks was stopped, the 1st Battalion came up on the right and went into position to contain FONTENAY SUR MER for the night in extension of the line, about 400 yards from the outskirts of OZEVILLE. When the infantry lines were organized for the night, the tanks returned to the battalion assembly area south of JOGANVILLE at 2215.

During the day the 2nd Battalion of the task force infantry had attempted to reduce the strongpoints at CHATEAU DE FONTENAY but had been repulsed. When ordered to withdraw to clear for an air attack, which never came, they became very disorganized, sustaining heavy losses. Some men became lost and were captured.

Meanwhile A Company continued to reinforce the 8th Infantry in its attack on the MONTEBOURG-LE HAM highway. This

time all three battalions were committed at the start. A Company reinforced the 1st Battalion on the right. After artillery preparation they jumped off at 0730 with some of the infantry riding the tanks which were leading again. They advanced north toward ECAUSSEVILLE, passed it to the east and continued to within 500 yards of ERCUDEVILLE before enemy fire forced the infantry off the tank decks. The tanks continued up the trail several hundred yards. There they destroyed three antitank guns. This time the infantry did not make the mistake of staying behind. They followed closely and engaged, alongside the tanks, in a sharp fight which drove the enemy back toward the highway. As the combined force came within three hundred yards of the highway, enemy fired on them from ERCUDEVILLE, stopped them, counter-attacked at 1500, and forced them back several hundred yards. The tanks made five thrusts into ERCUDEVILLE without infantry. Finally an attack by C Company, 1st Battalion, which had been pulled in from the right flank, completed the breaking of the enemy effort to the point where the 2nd Battalion, in the center, could move in and take the town. The 1st Battalion dug in for the night facing the highway about 500 yards east of it, astride the ECAUSSEVILLE-ERCUDEVILLE road, with C Company again protecting the right flank of the regiment.

The 2nd and 3rd Battalions had been echeloned to the left rear of the 1st most of the day. However, in the evening the 2nd continued the attack across the highway and half way

to the railroad before being stopped by enemy dug in behind the railroad embankment. As darkness approached they withdrew east of the highway and dug in on line with the 1st Battalion. The 3rd did approximately the same thing in their zone; they attacked in the evening, passed over the road in front of the railroad, met heavy fire, and finding themselves out front alone, withdrew and dug in on line with the rest of the regiment.

Thus the 8th Infantry reinforced by A Company, 70th Tank Battalion, reached their objective. They were on the high ground, facing the enemy across the MONTEBOURG-LE HAM highway. The tanks returned to the battalion area late in the afternoon. The battalion less A and D Companies, had fought, as part of task force A, to within three hundred yards of OZEVILLE, the task force objective. D Company, still attached to the 101st Airborne, saw no action this day.

Battalion casualties for the day:

KIA	3 EM
SWA	1 O, 2 EM
Total	1 O, 5 EM

Materiel losses were four medium tanks of A Company.

D Plus Five

On 11 June the task force again made a futile effort to gain OZEVILLE. All combat elements of the tank battalion except D Company were a part of that force. B Company was the lead tank unit. Although this company succeeded in reaching the high ground north of OZEVILLE, no real gain was made and held by any part of

the task force. Later in the day the 70th, less D Company, was designated as reserve for the 4th Division. It moved to an area four hundred yards southeast of JOGANVILLE. B Company joined them, after the day's fruitless effort, at 2100. D Company, still attached to the 101st Airborne, again saw no action.

The only casualty was one officer, B Company Commander, lightly wounded. There were no materiel losses.

Summary

The 70th Tank Battalion had landed on UTAH BEACH in the first and succeeding waves on D-day. The 4th Infantry Division, to which they were attached, was the assault division for VII Corps. These facts and the preceding account of the action of the battalion and its elements, clearly illustrate the valor and efficiency with which combat operations were carried out. In some cases as little as one company, reinforcing a battalion of infantry, was the decisive element in the success of as much as a regiment and a big factor for the division. An example of this was the 8th Infantry drive through ECOUSSEVILLE to EROUDEVILLE. Frequently the tanks were not committed as early as would seem to have been prudent. The operations were not planned to allow tanks and infantry to arrive on the objective at the same time in most cases. In the case just cited the tank-infantry coordination and cooperation were commensurate with present doctrine but most other operations lacked timing and teamwork. These shortcomings were corrected later, but experience cost much to both arms.

Total casualties in the battalion during this period were:

KIA	2 Officers,	14 EM
MIA	3 Officers,	24 EM
SWA	3 Officers,	8 EM
LWA	3 Officers,	9 EM
Total	11 Officers,	55 EM

Materiel losses were:

Medium tanks	18
Light tanks	3
Total tanks	21

The action of the battalion during these first five days was about as planned. ¹They were split up to furnish tank reinforcement for the infantry division. The next chapter covers the same period with a tank battalion which was intended for use as tank reserve for the division. However, the scarcity of armor during this period thwarted the plan for an armored reserve and the other battalion was also committed piecemeal.

NOTES FOR CHAPTER III

¹Soon engineers built a short treadway bridge for use of following troops.

²Each tank had carried fifty extra rounds for the main armament and extra machine gun ammunition when they came ashore. (Statement of Major John M. Bushey, who was the S-4 at that time.)

³This paragraph from an interview with Sgt 1st Class Benjamin W. Griffin, then S/Sgt, Platoon Sgt, 3rd Platoon, C Company, who commanded the first tank.

⁴From the After Action Report, 70th Tank Bn, June 1944, dated 20 August 1944 and interviews with Sgt. Griffin and Captain MacLunachan, S-2 of the battalion at the time.

⁵Except as explained in notes above, all facts were determined by comparison and deduction from the following sources:

Interviews: Major Lewis C. Laynton

Those mentioned in previous notes.

Documents: 1. AAR, as above.

2. Utah Beach to Cherbourg, (6 June-27 June 1944) American Forces in Action Series Historical Division, Dept of the Army 1 October 1947.

CHAPTER IV

THE 746TH TANK BATTALION

The 746th Tank Battalion was the second of the two tank battalions which landed early in support of the three divisions fighting to retain their precarious hold on UTAH BEACH. The actions in which the battalion engaged were critical. Until the beachhead could be tied together by linking up elements of the 4th Infantry and 82nd and 101st Airborne Divisions the Allies were extremely vulnerable. During the period 6 - 11 June the 746th did much to effect this juncture.

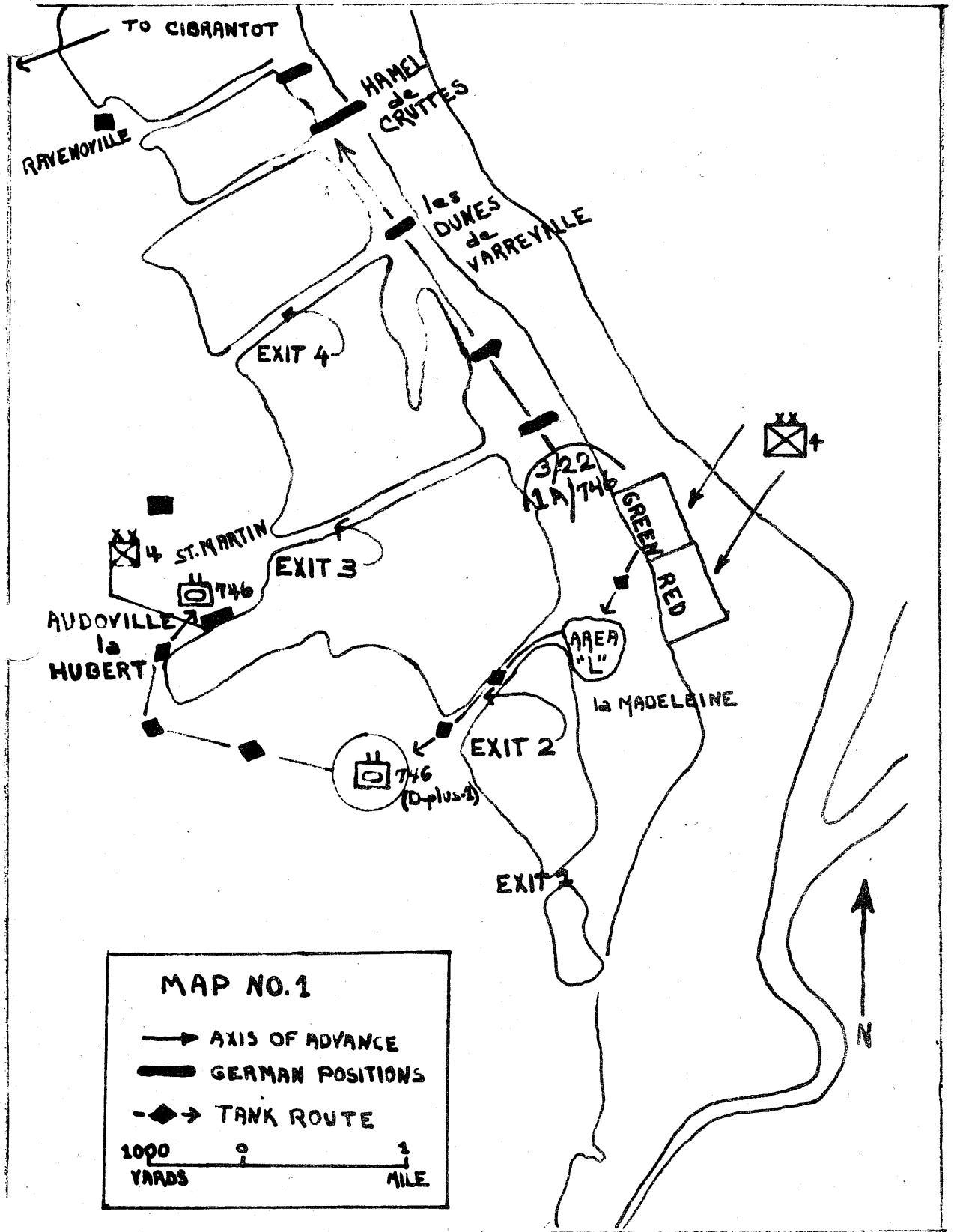
The battalion had completed loading in ENGLAND on the afternoon of 1 June 1944 and moved up the river DART to join the invasion fleet being formed in the CHANNEL. The entire unit was loaded on British LCTs with the exception of the 1st Platoon, Company A, which boarded an American LCT. The convoy maneuvered through the 3rd, 4th and 5th of June encountering heavy seas which moderated during the night of the 5th. The early morning dark of D-day found everything in readiness for the battalion to play their part in Operation Neptune.

Unlike the 70th which was split considerably for the landing the major fighting strength of the 746th landed together. Only the 1st Platoon, A Company, and the light tank company, D Company, were separated from the battalion. The platoon of A Company had landed earlier to support the 3rd Battalion, 22d Infantry. Company D was scheduled to come in on 7 June.

At 1140 hours, the first of the battalion's LCTs dropped ramps in about three and a half feet of water. The tanks moved on to the hard sand and immediately started collecting for the move to the initial assembly area near LA MADELEINE. (Map 4a) This position had been designated as area L. Considerable trouble was encountered unloading the smaller vehicles. Some of these drowned out as they came off the ramps into the shallow water. Consequently, it was necessary to use tanks to tow them to the sand. Unloading was generally rapid, however, and the tank column soon moved out toward its assembly area.

There was much to be encountered before the unit could clear the beach. Several factors impeded the progress. First of all, the craft had beached at a point about two thousand yards southeast of the planned location. Although a fortunate error in some respects, it did add to the congestion and confusion. Almost without exception, units coming ashore found it necessary to reconnoiter to determine their exact position. Consequently, as later waves piled in, more and more vehicles jammed the beach, presenting a critical target to enemy artillery and air. Another contributing factor to the slow exit was the presence of numerous mine fields which had not been cleared. Added to this, was the sporadic artillery fire which inflicted ever increasing casualties as the build-up continued.

Colonel Francis F. Fainter of the 6th Armored Group, Major Lynn M. Yeatts, Battalion Executive Officer, and Captain L. A. Hedges,



Map 4a

Commanding Officer of A Company, jumped off the tanks and went ahead of the column attempting to find a way through the mine fields and locate area L.¹ Engineers were busily engaged in removing the mines but so many obstacles existed that only a small part of the beach had been cleared. After threading their way through the mined patches, they were able to identify the main road as Exit 2, which was just north of the assembly position, Area L. The group then rejoined the tank column and guided it to area L where the unit settled to await orders.

At this point, the battalion was intact except for the 1st Platoon, A Company, still attached to the 3d Battalion, 22nd Infantry and fighting to clear the beach areas to the north of the landing site.² However, this major part of the battalion was not to remain together long. In accordance with pre-invasion plans, C Company, along with a platoon from the 4th Cavalry Reconnaissance Squadron, was formed into a combined arms team known as the "Howell Force" and moved out in an attempt to joint the 82nd Airborne Division southeast of STE. MERE EGLISE.

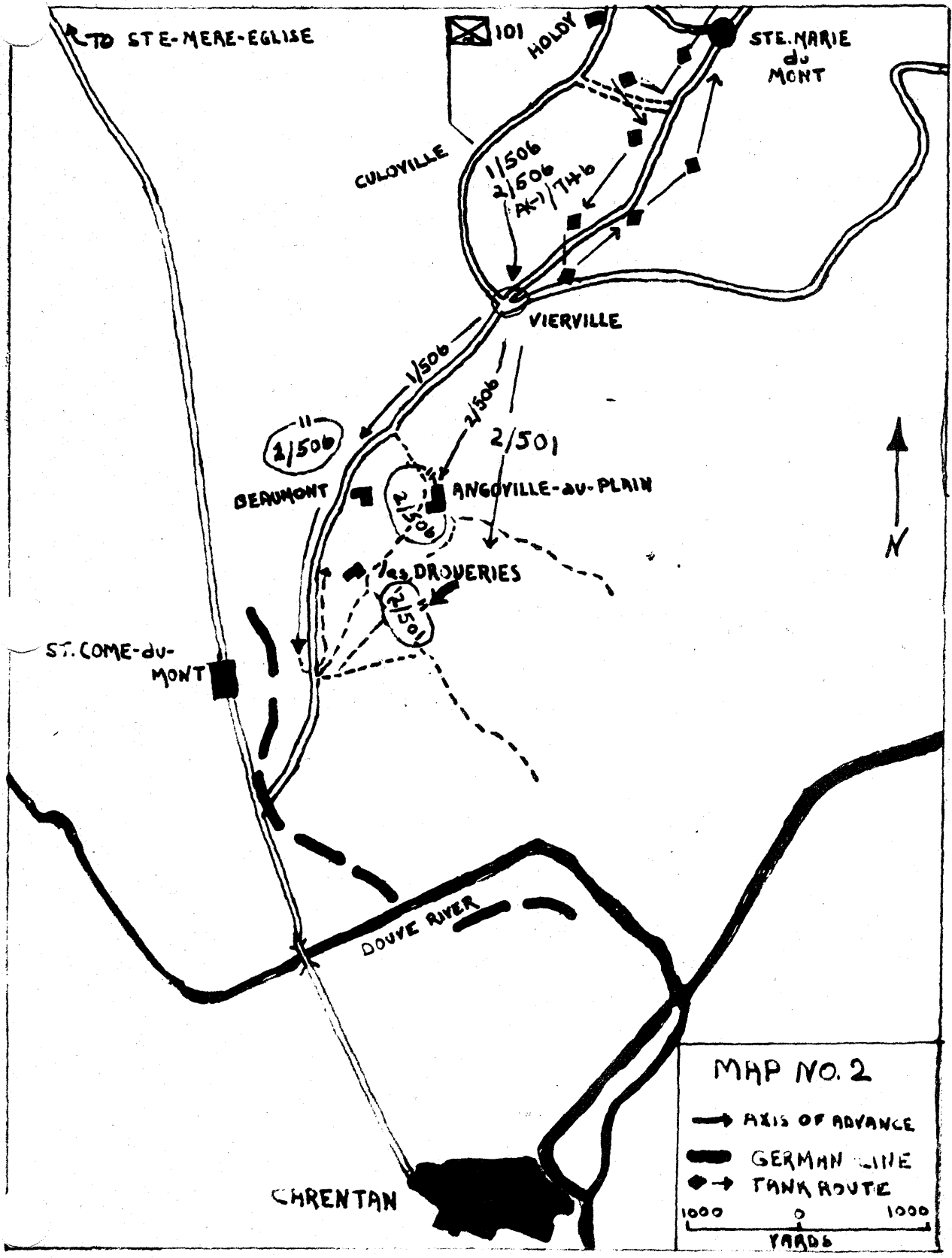
The battalion less these detachments, established liaison with the 4th Infantry Division located at AUDOUVILLE-LA-HUBERT. Immediately, permission was sought and obtained to move the battalion out of its initial assembly position. Enemy shelling of the area was becoming steadily worse and area L seemed particularly attractive to the harassers.

At 1800, Lt. Col. C. G. Hupfer, the Battalion Commander, moved the Battalion out of the area toward Exit 2, a narrow, shoulderless causeway across the inundated area west of the beach. The exit was jammed with vehicles. Some of the congestion was caused by knocked out vehicles and partly by trucks maneuvering to reclaim those that were partially mired. Progress along the route was slow and tortuous, and accompanied by enemy fire of varying intensity. The crossing was finally accomplished and the battalion pulled into the secondary assembly area remaining there during the dark, uneasy night of D-day.

At 070500 June the battalion, less the same detachments, moved on to a new bivouac area at ST. MARTIN. This location was to be used as a base of operations through 11 June. During this period the battalion was split and resplit to provide tank support for three divisions, the 4th Infantry, the 82nd Airborne and the 101st Airborne. This necessitates a discussion of separate company and even platoon units to gain a clear picture of the variety of tasks assigned to the battalion during Operation Neptune.

Clearing The Beach to the North

The 1st Platoon, A Company, under Second Lieutenant Clyde E. Tanner and Staff Sergeant Harold J. McNeeley as platoon sergeant, was teamed with the 3rd Battalion, 22nd Infantry, Lt. Col. Arthur S. Teague, commanding, for the D-day landing. This particular infantry battalion had been detached from its parent regiment and temporarily attached to the 8th Infantry to share the



MAP NO. 2

- AXIS OF ADVANCE
 - GERMAN LINE
 - ◆→ FANK ROUTE
- 1000 0 1000
YARDS

mission of reducing the beach strongpoints. In addition to reduction of emplacements of the beach, the team was to eliminate the heavy coastal defenses to the north in the direction of LES DUNES DE VARREVILLE and HAMEL DE CRUTES. (Map 4a)

Initial elements of the infantry battalion touched the beach at approximately 0745 (H plus 75 minutes). It was followed closely, at 0855, by the 1st Platoon, A Company, 746th Tank Battalion.³ At this time, the enemy strongpoints immediately confronting the assault waves had not been wiped out. As the platoon came in, it immediately went to work with the infantry cleaning out the German resistance along the road running parallel with the beach. Two or three hours were consumed in this activity, after which the platoon returned to the beach and joined its infantry in the move to the north.

The platoon and elements of the infantry battalion pushed out along the beach past Exit 3, reducing two or three German strongpoints along the beach between Exit 3 and LES DUNES DE VARREVILLE. One defensive position was encountered just opposite Exit 3 and the other about a thousand yards to the north. These were overcome by the advancing infantry.

The first test for the tanks in this advance came as the infantry hit the strong coastal defenses at LES DUNES DE VARREVILLE. Immediately after arrival in front of these positions, the infantry's progress was abruptly halted by intense fire from the emplacements. The tank platoon was brought forward and began firing. The initial

rounds from the tanks had absolutely no effect on the emplacements other than knocking out small chunks of concrete. Fire was then directed at the embrasures. This was only moderately successful and assistance was obtained from some of the naval vessels lying off shore. As this combined fire poured into the enemy defenses, the infantry struck at the emplacements and overran the position. In this action the tank platoon lost two tanks. One of the two was disabled as it hit a mine. The other was put out of action when an antitank round hit the tank's final drive. After the conclusion of this operation, the tank platoon went into bivouac and spent D-day night just north of LES DUNES DE VARREVILLE.

At dawn of 7 June, the Platoon swung into the column behind the infantry. Together they moved northwest along the seawall. The Germans were manning a particularly strongpoint at HAMEL DE CRUTES, the objective of the infantry battalion. These fortified positions were a part of the string of beach defenses which extended all the way up the coast to QUINEVILLE. Those which posed an immediate danger to the UTAH landings lay between LES DUNES DE VARREVILLE and QUINEVILLE on the narrow strip of land between the sea and the inundations. They could be approached only by advancing along the sea wall. Most of the strong points were reinforced concrete blockhouses and mounted artillery pieces and turreted machine guns. Some of the forts at HAMEL DE CRUTES housed twelve inch naval guns. In addition, they were protected

by wire, ditches, mines, and outlying infantry pillboxes, together with communications to supporting inland batteries.⁴

During the move on HAMEL DE CRUTTES on D plus 1, the 3rd Battalion, 22nd Infantry, destroyed two forts. Consequently, it was well toward evening as they faced the fort at HAMEL DE CRUTTES on 7 June. Shortly after reaching this point, the battalion received orders to move inland as regimental reserve, since a counterattack was feared against the shattered 1st and 2nd Battalions, 22nd Infantry. Colonel Teague left K Company plus attachment to deal with the strongpoint.⁵

An immediate attack was launched on the fort by the reinforced company. Naval batteries, adjusted by the Naval Shore Fire Control Party, laid down a preparation. The tanks and 57-mm AT guns approached within 75 to 100 yards of the fort to fire point blank, as the doughboys advanced through almost waist deep water under cover of mortar fire. As the infantry came near the fort, however, the defenders delivered withering fire, and in addition, subjected the attackers to artillery fire from inland batteries.

When this method turned out to be unsuccessful, three of the tanks, including that of Lieutenant Tanner, whirled about and headed back down the beach. Their mission was to come in on the fort from the rear and fire at the embrasures as the infantry assaulted from the beach side. The move failed however, as the three tanks bogged down in the attempt to get into position.

Lieutenant Tanner came back to the two remaining tanks facing the strongpoint and withdrew them in order to extricate the three stuck on a road leading off the beach. Before the mired vehicles could be reclaimed, darkness had fallen and the platoon spent another eerie night in bivouac on the beach. They planned to continue the attack the next day.

The light of the morning, D plus 2, found the platoon, now four tanks, proceeding west from the beach to the main road leading to RAVENOVILLE. Just prior to reach RAVENOVILLE, the small column turned back toward the beach. They moved to positions within five hundred yards of the fort and engaged it from the rear in coordination with infantry from the front. Several direct hits into the embrasures caused the enemy to evacuate and one more threat to UTAH BEACH was eliminated.

At the conclusion of this action, the tank platoon received orders to swing around to the west through RAVENOVILLE to AZEVILLE and support the 2nd Battalion, 22nd Infantry in that sector. At the close of the day the platoon withdrew to bivouac in the vicinity of CIBRANTOT. After establishing two road blocks, the platoon settled down for their third night on the coast of FRANCE.

In the evening of 9 June, the 1st Platoon, A Company, reverted to company control at ST. MARTIN.

The action of this tank-infantry team did much to eliminate the artillery fire harrassing the build-up units coming ashore on

UTAH. It was an excellent example of coordination between infantry, tanks and naval gunfire.

Reinforcing the 101st Airborne on the Southern Flank

On the morning of 7 June, as the 1st Platoon, A Company, pushed toward the fort of HAMEL DE CRUTTES, the remainder of A Company received orders from battalion to move out to CULOVILLE and support the 101st Airborne Division.⁶ At 0900, Captain Loueaire A. Hedges led the company on this mission. He was to contact the 101st at CULOVILLE and receive orders for the employment of his company.

Because of meager information concerning bridge capacities, Captain Hedges intended to join the 101st by taking a route through ST MARIE DU MONT, turning southwest toward VIERVILLE for about a thousand yards to a secondary road, thence northwest for approximately eight hundred yards, to an improved road leading to CULOVILLE. (Map 4b) As the column entered the secondary road, the command tank of the 2nd Platoon, Second Lieutenant Hugh J. M. Jones' tank, slammed to a halt in front of a tank ambush. The trap consisted of tautly strung wires with explosives at each end. The Company backed out and after a hurried conference, Captain Hedges decided to go through VIERVILLE to the contact point.

The column turned southwest on the VIERVILLE-ST MARIE DU MONT highway. As it neared VIERVILLE, the command tank of the 2nd Platoon was again stopped. This time three rounds of HE from a 75-mm antitank gun hit it, completely destroying the coaxial

machine gun and rendering the tank cannon useless. The tank had only the bow machine gun left functioning. Deployment of the tanks in the rear was prevented by deep ditches on both sides of the road, so the partially knocked out tank withdrew around a bend in the road to get out of range. The company was now stymied between the tank trap and the antitank defenses.

Another conference resulted and it was determined that a third attempt must be made to reach the objective by a route west out of STE. MARIE DU MONT and southwest through HOLDY. The column progressed along this route and rolled up to the contact point without further incident.

The 101st Airborne Division had the mission of securing the southern flank of the VII Corps beachhead through seizure of the causeway approaches to CARENTAN. At the time A Company joined them this mission was yet to be completed although considerable progress had been made. Consequently, a plan had been developed whereby all regiments of the division would continue their push to the south. Upon arrival of the tankers, it was decided to attach a platoon to each of the parachute battalions presently engaged in the drive southwest along the VIERVILLE-CARENTAN axis. The 2nd Platoon went to the 2nd Battalion, 501st Infantry, then advancing east of the road. The 3rd Platoon, under 1st Lieutenant W. W. Woods, went to join the 1st and 2nd Battalions, 506th Regiment, astride the road.

A Company then retraced its route toward VIERVILLE. Upon approaching the village, they found elements of the 506th pinned down in the streets and ditches in their attack to clear the houses of enemy. The tanks immediately reinforced this attack and their action quickly led to success. One enemy antitank gun was destroyed and 106 German paratroopers were captured in the engagement which lasted about an hour and a half. The company lost three tanks, including the command tank. Captain Hedges was uninjured. Here the tank company had encountered its first enemy bazooka fire, which had disabled one of the three tanks.

After the battle for VIERVILLE the two platoons proceeded to join the units they were to reinforce. The 2nd swung off to the left to join the 501st, then stopped on a sunken road, east of LES DROUERIES. The 3rd stayed with the elements of the 506th in VIERVILLE.

Colonel Robert F. Sink, commander of the 506th, decided to separate his column soon after leaving VIERVILLE. The 1st Battalion continued on the highway toward BEAUMONT while the 2nd Battalion turned left against ANGOVILLE AU PLAIN. Both of these were pinned down by machine gun and rifle fire soon after leaving VIERVILLE. Support of the tanks neutralized the fire and the advance was resumed. Meanwhile, the 1st Battalion fought its way into BEAUMONT despite harrassing fire from enemy positions in the hedges along the ridge paralleling the road. During its reorganization on the objective, this battalion repelled two enemy

counterattacks. It was unable to progress further without reinforcement.

Colonel Sink then detached D Company from the 2nd Battalion to assist the 1st in BEAUMONT. The tank platoon also reinforced the 1st Battalion. Using this new power, they pushed ahead to the high ground just east of ST. COME DU MONT. Inasmuch as the 506th had no contact with the 2nd Battalion, 501st Parachute Infantry on its left, Colonel Sink believed the 1st Battalion was in an extremely vulnerable position.⁷ He withdrew it to BEAUMONT for the night. The tank platoon spent the night just north of CULOVILLE.

Meanwhile, the 2nd Platoon had joined the 2nd Battalion, 501st Parachute Infantry on the road east of LES DROUERIES. When it arrived, Lieutenant Colonel Robert A. Ballard, the Battalion Commander, ordered it to silence the enemy machine guns which had stopped the advance. Two tanks moved up the road to enter the fight while two others broke out into the fields on the left and advanced abreast. All dashed forward with turrets open, spraying the hedgerows with machine gun fire and blasting building and emplacements with the tank cannon. The infantry followed closely, swept past the road junction and captured eight enemy machine guns. The battalion then reorganized and dug in for the night. The tanks returned to ANGOVILLE AU PLAIN.

At 0600 on D plus 2 the command section and 2nd Platoon left ANGOVILLE AU PLAIN, picked up the 3rd Platoon in the vicinity of CULOVILLE and closed with the other elements of the 746th at ST MARTIN at about 0700.

The tanks had materially assisted the 101st Airborne in their mission of securing the causeway approaches to CARENTAN. This was later to result in linking the UTAH and OMAHA beaches. Meanwhile, Battalion Headquarters and B Company were fighting to effect a juncture of the 4th Infantry and 82nd Airborne Divisions.

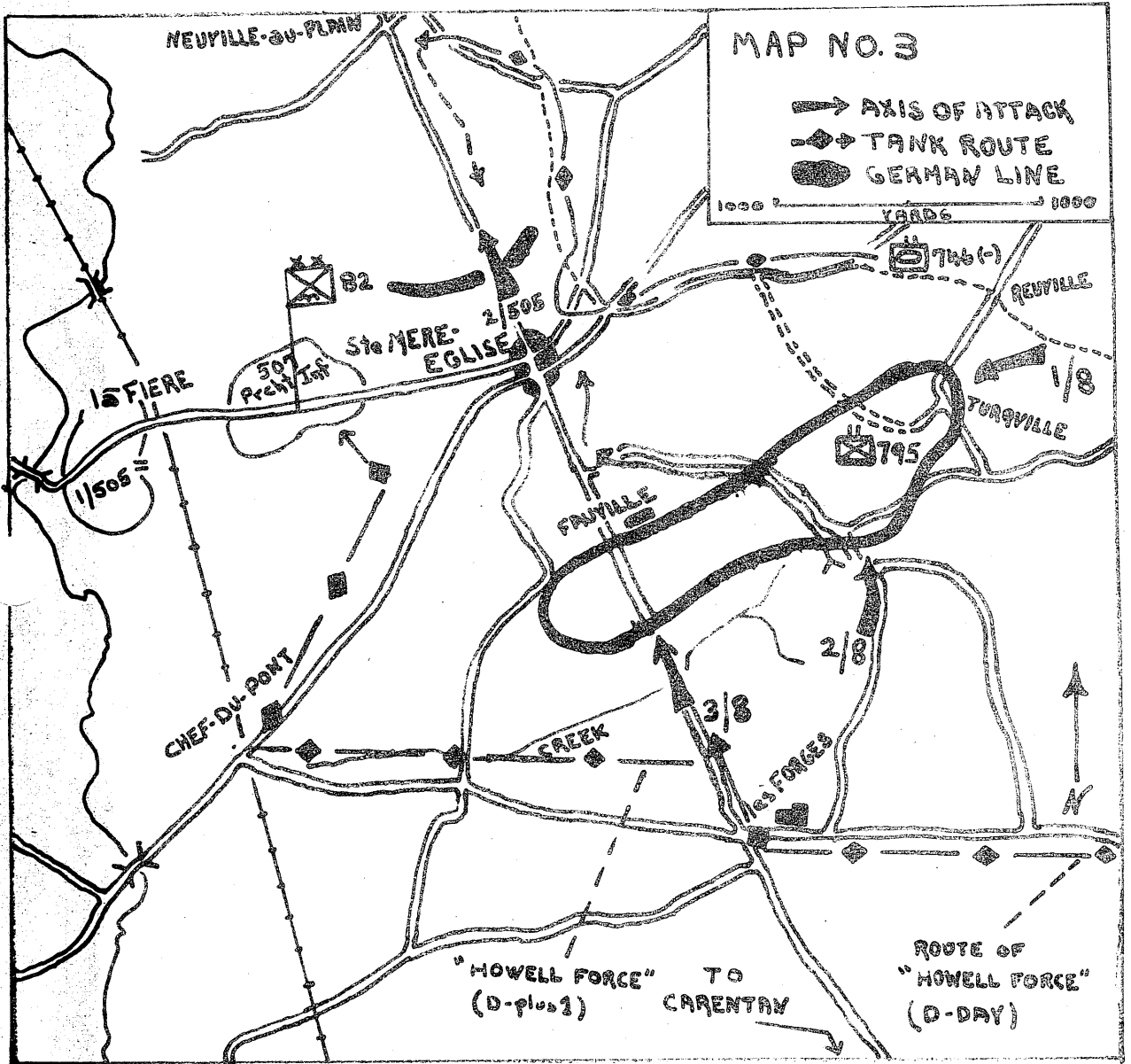
The 82nd Airborne at STE. MERE EGLISE

One of the unsolved problems facing the 4th and 82nd Airborne Divisions at the dawn of D plus 1 was a tie-up between these two divisions. The enemy was still holding the ridge between FAUVILLE and TURQUEVILLE and blocking the highway south of STE. MERE EGLISE. (Map 4c) An enemy armored spear was poised, threatening the 82nd Airborne from the north. The reduction of these enemy units preoccupied the 8th Infantry and the 505th Parachute Infantry on the second day following the landing.

General Ridgeway, Commanding General, 82nd Airborne Division, requested tank reinforcements to meet the armored threat. General R. O. Barton, Commanding General, 4th Division, ordered a task force of the 746th Tank Battalion to the support of the 82nd Airborne Division.⁸

At about 1400, 7 June, the task force formed in the battalion area at ST. MARTIN and moved toward STE. MERE EGLISE. Its mission was to find and destroy the German direct fire artillery which was harrasing the airborne elements.

This special force consisted of the tank section of battalion headquarters, the assault gun platoon which was medium tanks, Battalions Headquarters, and B Company. The assault gun



Map 40

platoon with one tanks from the tank section, formed the advance guard. Lieutenant Houston Payne commanded the point and Major Lynn M. Yeats, Battalion Executive Officer, the advance party. B Company was the main body; followed by the battalion command post half-track and the two remaining tanks from the battalion tank section.⁹

As the column, in this formation, entered STE. MERE EGLISE, it received heavy artillery and mortar fire from an enemy armored force headed toward the town. The enemy column consisted of five tanks and a small number of other vehicles contained infantry. Inasmuch as both of the forces were in column, only the lead tanks had targets. Lt. Payne's tank destroyed two enemy tanks before being forced to withdraw for lack of ammunition. Major Yeats moved his tanks forward and began firing. He was soon joined by the 1st Platoon, B Company. Meanwhile, Lt. Col. C. G. Hupfer, had reconnoitered to the east and north and found a trail to the right of the highway, leading north and joining a secondary road which led into NEUVILLE AU PLAIN. Utilizing this trail, the remaining ~~two~~ platoons of B Company, under Captain Asher K. Pay, drove north to outflank the enemy. The task force lost two of their tanks in the action but destroyed two enemy tanks, took sixty prisoners, liberated nineteen American Paratroopers and forced the enemy armored column to retreat northward. The tanks remained in NEUVILLE AU PLAIN until 2100, when they were withdrawn due to lack of infantry support. They returned to the bivouac

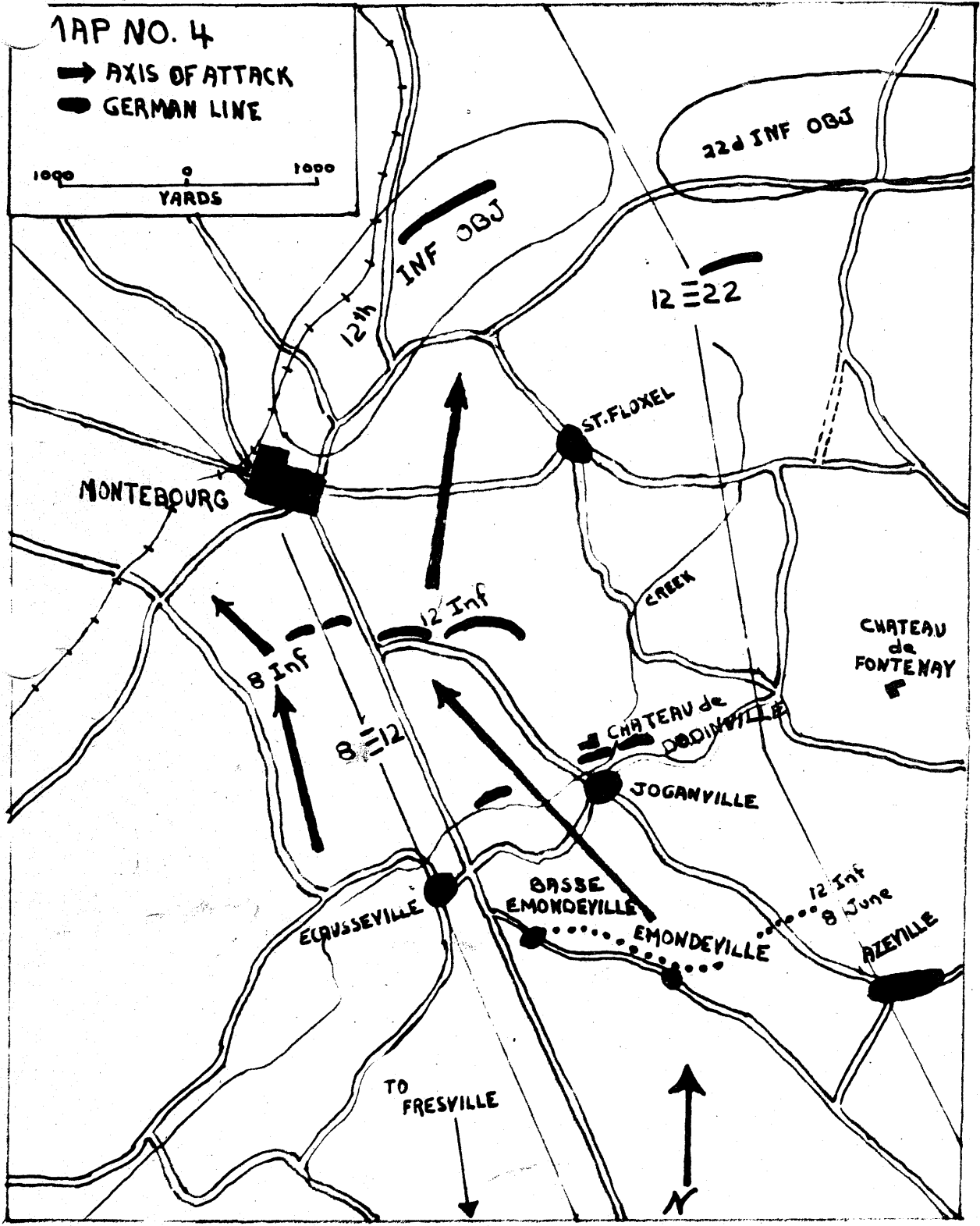
area at ST. MARTIN. These two actions had removed the enemy threat to STE. MERE EGLISE. The 82d Airborne could now concentrate its attention on other sectors of the front.

The Drive to MONTEBOURG RIDGE

B Company, after these two actions, remained inactive during 8 June. On the 9th they, with other elements of the battalion, moved to the vicinity of EMONDEVILLE preparatory to being committed in support of the 12th Infantry.

The 12th Infantry after a severe fight on D plus 1, had reached a line through EMONDEVILLE-BASSE EMONDEVILLE. (Map 4d) Their mission had been that of securing the high ground northeast of MONTEBOURG. They had been stopped by stiff enemy resistance around EMONDEVILLE.¹⁰ The attack continued on the 9th of June. The Germans had withdrawn during the night to positions around JOGANVILLE. Here the regiment was joined by the task force from the 746th Tank Battalion.

As the tankers joined the infantrymen, they found the entire regiment held up before the CHATEAU DE DODINVILLE near JOGANVILLE. The chateau was a tremendous walled-in structure and heavily defended. A plan was developed whereby the 3rd Platoon, B Company, under Lieutenant Irving N. Hurley, would move to the west along the MONTEBOURG-JOGANVILLE road and flank the enemy position from the west as the infantry attacked frontally. The platoon moved out in a wide envelopment and succeeded in swinging back to place enfilade fire on the enemy as they were busily



Map 4d

engaged by the 1st and 2nd Battalions, 12th Infantry. Although casualties were heavy, these two battalions managed to cross the creek and sweep through the chateau. Both battalions then continued northward, supported by the tanks, and reached positions about 1000 yards southeast of MONTEBOURG.

Although progress to this point was fairly rapid, considerable trouble was being experienced by the infantry on the west or left flank. That flank of the 12th Infantry was exposed to attack from the west due to the 8th Infantry's swing to the northwest from FRESVILLE. This left a gap between the two advancing regiments. Consequently, as the 1st and 2nd Battalions of the 12th reached the hill approximately two thousand yards northwest of JOGANVILLE, the left flank of the line received heavy flanking fire from the enemy positions to the west.

After a consultation with the infantry commander, Lieutenant Colonel Hupfer made a foot reconnaissance to the left to look for possible routes of employment for the tanks in reducing the enemy strongpoint which was delivering the flanking fire. In his reconnaissance, Colonel Hupfer observed an opening through the hedgerow which would admit the tanks into the enemy position. The 1st and 2nd Platoons were brought forward and their leaders briefed. Lieutenant Frank Kogut led the 2nd Platoon to covering positions along the road while the 1st Platoon, under Lieutenant Hurley, moved behind the infantry lines toward the hedgerow. Under cover of this hedgerow, the platoon reached the gap where

the small column received intense small arms fire which was neutralized as the platoon passed on to the open area beyond. All tanks then came up on line and fired into the enemy positions which had been holding up the advance of the infantry. Heavy casualties were caused and the German strongpoint was eliminated. This relieved the pressure on the regiment and the whole line started forward again.

The advance of the 12th, especially the 3rd Battalion, was fairly smooth from this time until it stopped to reorganize about 1800.¹¹ While reorganization was under way, the unit was hit by an enemy counterattack from the west. The German force was beaten off and withdrew to the northwest in the direction of MONTEBOURG. As darkness came, the infantry stopped for the night and the tank unit returned to ST. MARTIN.

As the skies lightened on the morning of 10 June, B Company again pushed out from the bivouac area. The armored unit spent the day reinforcing the 12th Infantry as they continued their drive to secure the high ground northeast of MONTEBOURG. As the day ended the infantrymen and the tankers had reached a position just north of the MONTEBOURG-ST. FOXEL road. A tired and exhausted B Company then headed back to the original assembly area at ST. MARTIN, where they remained inactive during the next day.

The Crossing of the Merderet at LA FIERE

The force which C Company joined immediately after dewaterproofing their tanks consisted of a platoon of the 4th Cavalry

Reconnaissance Squadron and about ninety riflemen of the 325th Glider Infantry and was under the command of Lt. Col. E. D. Raff. The combination was known as the "Howell Force" and had the mission of providing additional support to the 82nd Airborne Division in its task of sealing off the southern part of the CONTENTIN PENINSULA.

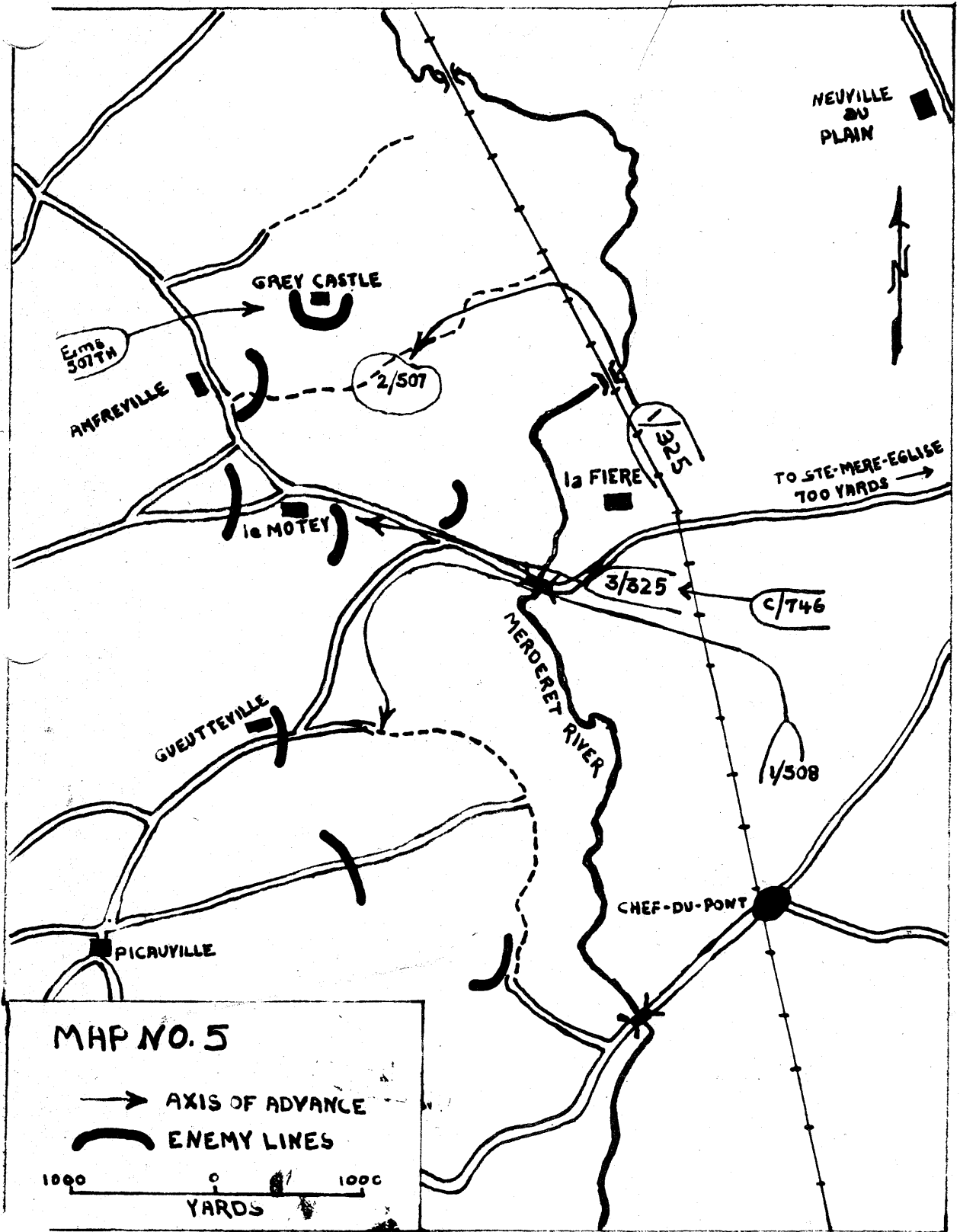
Late in the afternoon of D-day, this seaborne Howell Force followed the 3rd Battalion, 8th Infantry across Exit 2. (Map 4c) The link-up with the 82nd was to occur at STE. MERE EGLISE. As the infantry battalion swung to the north at LES FORGES it ran into the enemy pocket which still existed in the vicinity of FAUVILLE just southeast of STE. MERE EGLISE. When the battalion came up against these positions, it requested artillery but did not intend to advance farther that evening. However, Colonel Raff believed that a penetration of the German line was necessary if the "Howell Force" was to accomplish its mission. Consequently, an attack was planned and executed. The tankers and the infantry struck twice at the enemy defenses and were turned back each time. The tank platoon leader, Lieutenant Joe M. Mercer was killed and three tanks were lost to heavy antitank fire which hit the tanks as they slowed to cross the creek just below the German line. The enemy was still in position at 2100 when sixty gliders appeared overhead and were cut loose by their C-47s.¹²

These gliders were carrying elements of the 325th Glider Infantry. They had been scheduled to land in the area around

LES FORGES. Some came down in the enemy lines and some crash landed in the Howell Force positions. Colonel Raff immediately gathered up the effectives and established a defensive line against the possibility of a counterattack. On this night of 6 June, C Company, 746th Tank Battalion, bivouaced with these elements of the 82nd Airborne in the vicinity of LES FORGES.

The next morning Colonel Raff received orders to bring his seaborne force west to CHEF DU PONT and come into the command post of the 82nd Airborne Division from the southwest. Just after arrival at the command post in the vicinity of STE. MERE EGLISE, the 3rd Platoon, C Company under Lieutenant James R. Shields moved into and through STE. MERE EGLISE to assist elements of the 505th Parachute Infantry in cleaning out enemy strong points located to the north and west of town. Captain Crawford and another platoon moved directly west toward LE FIERE to eliminate the German antitank guns which were harrassing the infantry in and around STE MERE EGLISE. (Map 4e) In addition to this mission, Captain Crawford was also concerned with conducting a reconnaissance in preparation for an attack which was to be launched on the morning of 8 June.

On that morning, the planned attack which was to force a crossing of the MERDERET RIVER at LA FIERE was cancelled and the tank company remained in bivouac most of the day verturing out in the evening to shell enemy positions across the MERDERET.



NEUVILLE
DU
PLAIN

GREY CASTLE

Emb
507A

ANFREVILLE

2/507

la FIERE

1/325

TO STE-MERE-EGLISE
700 YARDS

la MOTEY

3/325

C/746

MERDERET RIVER

1/508

GUEUTTEVILLE

CHEF-DU-PONT

PICRUVILLE

MAP NO. 5

→ AXIS OF ADVANCE

⌒ ENEMY LINES

1000 0 1000
YARDS

During the night of 8 June the 1st Battalion, 325th Glider Infantry, moved to force a crossing of the MERDERET to the north of LE FIERE. This battalion was successful in crossing through the swamps at that point but was isolated at GREY CASTLE with elements of the 507th Parachute Infantry Regiment that had made its D-day drop to the west of the river. Consequently, it was again determined to attempt a crossing at the village on the morning of 9 June.

In the early dawn of 9 June, the company occupied positions on both sides of the STE. MERE EGLISE-LE MOTTEY road near the railroad running parallel to the MERDERET and fired into enemy positions west of the river in preparation for the attack by the 3rd Battalion, 325th Glider Infantry. The artillery went into action at 1030, firing a preparation until 1045, during which the tank company moved up to within 150 yards of the bridge and fired over a hedge at targets of opportunity. At the close of the preparation the artillery laid a smoke screen to protect the infantry approach. However, the smoke was too thin. The leading elements were stopped as they neared the bridge by machine gun fire from across the river. Only by swinging left and following behind a stone wall could they approach the crossing. At 1045 a round of colored smoke signalled the lifting of the artillery fire and the attack jumped off.

The long run across the 500 yard causeway in the face of heavy mortar and machine gun fire resulted in many casualties

among the infantry although some of the men succeeded in gaining the west bank where they deployed along the road. To add to the congestion of the bridge one of the tanks of the 2nd Platoon hit an uncleared American mine as it was crossing the causeway in close support of the infantry. This effectively blocked the build-up on the far side of the river until other tanks could retrieve the crippled tank. Lieutenant Harold D. Plagge, the 2nd Platoon leader, worked under small arms fire to attach the towing cable. The balance of the tank company then proceeded across the bridge to assist in the establishment of the bridgehead.

Fighting in the bridgehead was severe and tanks were dispatched in sections, and even singly, toward LE MOTÉY and AMFREVILLE to destroy enemy vehicles and personnel they might encounter. These two towns were considerably behind the enemy at this time. While engaged in this mission, the company lost two tanks. One was Lieutenant Plagge's tank. He was hit in the head and face. The crew, thinking him dead, carried him to the rear. On the way back to the assembly area they met Lieutenant Lawrence S. Deptula, Company Maintenance Officer, who examined Lieutenant Plagge. He was still alive. Lieutenant Deptula rushed him to an aid station but he later died in the hospital.

Other tanks were sent in behind the enemy lines to harrass the Germans in the vicinity of GUEUTTEVILLE. By dark, 9 June, the combat efficiency of the company was about thirty percent. ¹³

Nearly all of the machine guns were burned out and many of the tank cannons were defective. So, on the 10 and 11 June, the company remained in the assembly area along the STE. MERE EGLISE-LE NOTREY road and reverted to battalion control on the afternoon of 11 June.

The MERDERET RIVER had been a critical obstacle, separating elements of the 82nd Airborne Division and preventing their consolidation. As a result of the LA FIERE crossing the division was linked together. The bridgehead added much to the security of the American positions on UTAH BEACH.

Employment of the Light Tank Company

D Company, the light tank company of the 746th Tank Battalion, had little opportunity to engage in the bitter struggle for UTAH BEACH during the critical period of 6 - 11 June. The LST carrying the company ground ashore on the sand at about 0200, 7 June. The tanks proceeded at once to the command post of the 4th Infantry Division near AUDOUVILLE LA HUBERT. The unit engaged in no action until 9 June when it moved out with other elements of the battalion to the assembly area near JOGANVILLE. During the engagement of B Company at this village, D Company's 3rd Platoon, Lieutenant Charles G. Beatty leading, moved northeast of the town on reconnaissance. Lieutenant Beatty sighted two German heavy antitank guns which he engaged with his 37-mm gun. In the ensuing fight an armor-piercing shell went through the tank killing one man burning Lieutenant Beatty's face. The crew leaped clear

of the burning tank and were picked up by the remainder of the platoon. A short time later they returned to JOGANVILLE.

The only other element of the company to engage the enemy during the early action was the 1st Platoon led by Lieutenant Herbert F. Stackhouse. It saw action in the intense fight for OZEVILLE while attached to the 70th Tank Battalion.

Supply and Maintenance

For logistical support of the battalion, the Service Company was broken into separate parts for the UTAH landing. At about H plus 5 hours on D-day an LCT transporting the first of these sections, slid into the beach of the NORMANDY coast. Aboard the landing craft were seven $2\frac{1}{2}$ -ton trucks of fuel and lubricant section led by Lieutenant James T. Hill; and a portion of the maintenance platoon consisting of a tank retriever, T-5, and one $1\frac{1}{4}$ -ton. Captain William P. Kennedy, the Battalion Maintenance Officer, was in command of the entire section. As has been mentioned before, the company had difficulty because the heavily loaded trucks were unable to wade ashore. Assistance from other companies of the battalion pulled the vehicles above the water line. A bit of first echelon maintenance enabled them to move with the other elements of the battalion to the assembly area. Captain Kennedy remained at the beach with the T-5, retriever, assisting in the evacuation of drowned-out vehicles of other units. The rest of the section accompanied the battalion to area L and later to the bivouac area at ST. MARTIN.

Another section of Service Company accompanied the light tank company, landing about 0200 hours, 7 June. Six cargo trucks of ammunition, four half-tracks from the mortar platoon, four 1/4-tons from the reconnaissance platoon, the second T-5 retriever and a medical half-track composed this section. It arrived intact except for the mortar platoon half-tracks, which absorbed so much salt water spray that it was necessary to keep them at the beach two days for repairs.

No other elements of Service Company landed on UTAH during this period. The many supply and logistical functions incident to the battalion's operations in this phase were handled by these two sections which did land. The attachment, reattachment, and splitting of the battalion made the logistical support difficult. The trials and tribulations of the service sections were numerous. The confusion on the beach in the first days made the resupply a tedious and exasperating process. Small convoys proceeding to and from the beach and assembly area, were compelled to worm their way through the dense traffic. They spent many hours searching for supplies. Gasoline was borrowed, begged and stolen from other units bogged down on the beach. Gasoline and ammunition dumps were invariably established within four or five hundred yards of the fighting. All difficulties were overcome. They kept the battalion operating.

Summary

The first phase of the operations on UTAH BEACH was ended. The landing accomplished; the beachhead expanded; and the American VII Corps securely ashore. It had been a trial-and-error period for the tank-infantry team. The lessons learned in combined arms coordination were invaluable. Tankers and infantrymen found, that together, they formed an effective combination. They learned respect for each others capabilities. They guarded each others weaknesses. A summary of the actions of the tank battalions on UTAH BEACH follows in the next chapter.

NOTES FOR CHAPTER IV

¹The 70th and 746th Tank Battalions constituted the Sixth Armored Group.

²After Action Report, 746th Tank Battalion, June 1944, p.4.

³Ibid, p. 4.

⁴Utah Beach to Cherbourg (6 June - 27 June 1944), Historical Division, Department of the Army, 1947, p. 71.

⁵Ibid, p. 71.

⁶Op. Cit., After Action Report, p. 5.

⁷Op. Cit., Utah Beach to Cherbourg, p. 74.

⁸Statement, Major General Raymond O. Barton, USA, Ret., Commanding General, 4th Infantry Division during Normandy landings.

⁹Op. Cit., After Action Report, p. 7.

¹⁰Op. Cit., Utah Beach to Cherbourg, p. 103.

¹¹Statement, Colonel J. S. Lockett, Executive Officer, 12th Infantry, regarding this action:

"I remember that the company commander who had the tank attached to the 3rd Battalion, 12th Infantry, on D plus 3 or 9 June, was aggressive and assisted the 3rd Battalion materially in its mission, both by terrifying the enemy by aggressive action and by furnishing mobile fire power."

¹²Op. Cit., Utah Beach to Cherbourg, p. 54.

¹³Op. Cit., After Action Report, p. 10.

CHAPTER V

SUMMARY OF THE OPERATIONS ON UTAH BEACH

In the foregoing two chapters the tank actions just discussed were a small but critical part of all the combat operations which were necessary to securely establish the Allies' position on UTAH BEACH.

To meet the tank requirement presently considered a minimum for infantry or airborne divisions, six battalions would have had to be landed--probably the last of them by evening of D plus 1.

The 70th and the 746th Tank Battalions provided the only tank reinforcement available to the 4th Infantry Division and the 82nd and 101st Airborne Divisions for the first six days of operation on UTAH BEACH. The result was that tanks were not available in most cases when and where they would have been capable of speeding success and minimizing losses. The actions in which they did take part were characterized by speed and reduced loss of personnel.

That the requirement for tanks was greater than their availability is borne out by the fact that many changes of reinforcing missions from one infantry unit to another took place. No doubt each commander on the ground felt that his need for tanks was paramount. Wherever they were employed, they either led the infantry and largely broke the enemy resistance, or maneuvered around or accompanied the infantry, and greatly assisted their

movement forward. Numerous actions have been described which indicate that when infantry alone was stopped in the face of intense small arms fire, the line normally moved forward again when tanks were committed either through the infantry frontally or around the infantry in an envelopment.

The action of Company A, 746th, with elements of the 501st and 506th Parachute Infantry during the drive toward CARENTAN is an excellent illustration of this. The 1st and 2nd Battalions, 506th, made excellent progress accompanied by the tanks and fought their way through to the vicinity of ST. COME DU MONT. The 2nd Battalion, 501st, on the left was held up near LES DROUIERES exposing the left flank of the 1st Battalion, 506th. However, when the 2nd Platoon, Company A, 746th, was sent to reinforce the parachute battalion, forward progress was again resumed. As nearly as can be determined, the actions of these three battalions was against similar resistance.

The action of the 1st Platoon, Company A, 746th against the beach fortifications at LES DUNES DE VARREVILLE and HAMEL DE CRUTES was an early indication of the need for heavier and more powerful tank cannon. The 75-mm and 37-mm guns had little effect on the emplacements unless the embrasures were hit. The principal contribution of the tanks in action of this type was to keep the defenders down and away from their antitank weapons, so the infantry and engineers could advance, place charges, use flamethrowers, or use other close-in methods to reduce fortifications.

There were instances where the infantry and tanks became separated due to difference in speed of movement. In these cases such as the action of the 746th Tank Battalion at NEUVILLE AU PLAIN and the 70th in Task Force A, little could be done about holding and consolidating gains and the tanks had to be withdrawn because of the lack of infantry support. Consequently, it was necessary at a later time to retake this ground which could have been held initially if the two forces had advanced together.

Such was the coordinated action of the 1st Battalion, 8th Infantry reinforced by Company A, 70th Tank Battalion, in the push from ESCAUSSEVILLE to the MONTEBOURG-LE HAM Highway. In this case, some of the infantry rode into the attack on the tanks. Substantial gains were made and the ground secured was readily consolidated by both tanks and infantry.

This supports the position that tanks, when working with infantry in an attack against prepared positions, should, except in rare instances, stay within mutual supporting distances and arrive on the objective at about the same time.

The landing at UTAH BEACH was a highly complex operation in which armor, in the form of two separate tank battalions played a small though significant part. The action of the tanks in itself was not a decisive factor in the outcome, but only because an insufficient number were put ashore to definitely influence such a vast undertaking. The need for additional armor was felt very

keenly in many cases; consequently resulting in piecemealing to meet the most vital of these needs. Again, there is no question that had the enemy developed his capability of a major counterattack with Panzers against UTAH during the early stage, the absolute necessity for additional armored support would have become quickly apparent.

In a discussion of the employment of the 70th and 746th Tank Battalions, it should be remembered that there were three divisions landed and dropped in the UTAH Beachhead. The fighting elements of these divisions were assigned clear-cut overall missions, but these had to be broken into a wide variety of multiple tasks in order to accomplish the whole. It is virtually impossible to decide whether or not the component parts of the tank battalions were thrown into the most important of these actions or into those wherein armor could be used most effectively. Even in retrospect, most operations in the early stages of UTAH seemed critical and they must have appeared doubly so to the commanders on the ground.

PART THREE
OMAHA BEACH

CHAPTER VI

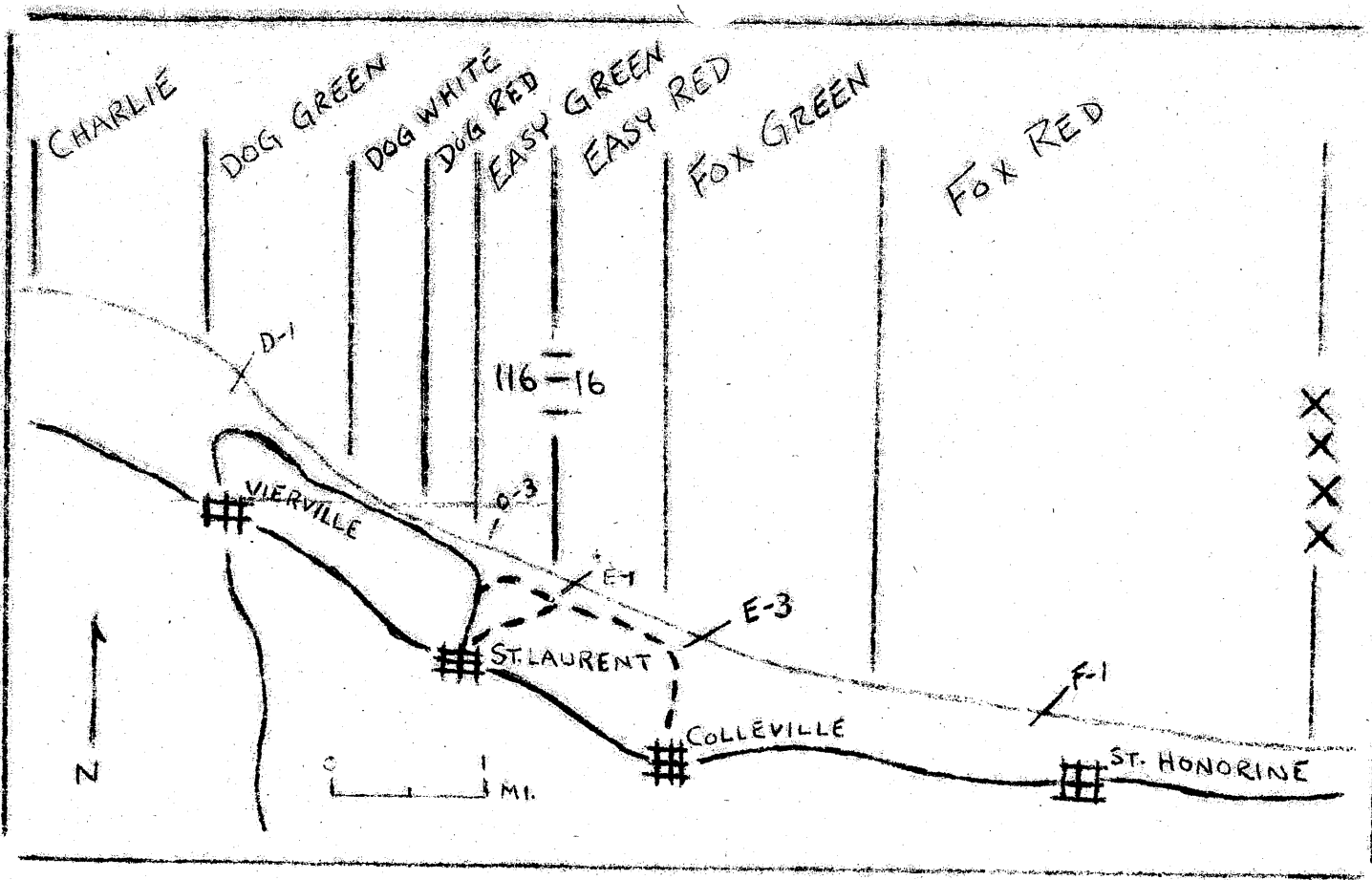
OMAHA BEACH

Let us look now at that eleven thousand yards of NORMANDY coastline which was destined to go down in history under a name straight from the heart of the American Corn Belt--OMAHA BEACH. Extending from POINT DE LA PERCEE almost to PORT-EN-BESSIN, it was subdivided into sectors and subsectors as indicated on Map 6.

The invasion plan called for the V Corps to attack in column of divisions, the 1st leading, followed by the 29th and, at some distance, the 2nd. For this operation, one regiment of the 29th, the 116th Infantry, was attached to the 1st Division. The 1st Division was to attack with 2 RCTs abreast, the 116th on the right and the 16th on the left. The object of this plan was that as the initial foothold was expanded, the 116th Infantry would be returned to the control of the 29th Division and that its regimental sector would become the basis of the 29th's division sector as the beachhead was further enlarged.

The armor with V Corps consisted of Headquarters and Headquarters Company 3rd Armored Group, and the 741st, 743rd, 745th, and 747th Tank Battalions. These units were attached as follows: Headquarters and Headquarters Company 3rd Armored Group to Headquarters 1st Division, 741st Tank Battalion to the 16th Infantry, and 743rd Tank Battalion to the 116th Infantry. The 745th Tank Battalion was retained as part of the 1st Division reserve and the 747th Tank Battalion was part of the V Corps reserve. The

MAP 6



OMAHA BEACH

two battalions making the assault landings, the 741st and 743rd, were organized as three-company units for this operation; D Company of each battalion being left in England as reserves. Companies B and C were equipped with DD (Duplex Drive flotation device) tanks, while Company A kept its regular tanks. The plan called for B and C Companies of the 743rd to land on DOG GREEN and DOG WHITE respectively, at H minus 5 while A Company would be landed from LCTs on DOG RED and EASY GREEN at H-hour. In the sector of the 16th Infantry, B and C Companies of the 741st were to land on EASY RED and FOX GREEN at H minus 5, while A Company would be brought in on LCTs and landed in the same sectors at H-hour. One important point to note here is that tanks were to be the first assault troops ashore, four companies landing five minutes before the infantry.

That was the plan. Now let us take a look at what actually happened.

The troops making the assault on OMAHA BEACH moved to the ports during the last days of May, and by 3 June had all been loaded. This force consisted of thirty-four thousand men and thirty-three hundred vehicles. To transport this force the Navy had assembled 7 transports, 8 LCIs, 24 LSTs, 33 LCI(L)s, 36 LCM(3)s, 147 LCTs, and 33 other craft. In addition, for protection and gunfire support, there were 2 battleships, 3 cruisers, 12 destroyers, and 105 other ships. After one twenty-four hour delay because of unfavorable weather forecasts, H-hour for OMAHA BEACH was set

at 0630 hours on 6 June, and on the afternoon of 5 June the main convoy cleared PORTLAND HARBOR.

Dawn of D-day disclosed that although the weather had improved somewhat over the past twenty-four hours, the conditions were far from ideal for the assault. Nonetheless, having gone this far, the plan had to be carried out. We had tipped our hand, and to withdraw now would have meant scrapping all our plans and starting again from scratch. So, in spite of adverse conditions, Operations Neptune was launched at the scheduled hour. This was probably the first, last and only event of the entire operation which came off exactly as planned.

Companies B and C of the 741st Tank Battalion were launched as scheduled at 0540 hours (H-50) and immediately ran into trouble from the weather. The six thousand yards of open water which these DD tanks had to traverse were whipped up by a ten to eighteen knot wind until the waves averaged three to four feet in height, with some as high as six feet. Of the thirty-two DD tanks of these two companies, twenty-seven swamped on the way in, two swam in, and three were landed from an LCT which could not launch its tanks because of a damaged ramp. All five of these tanks reached shore at EASY RED sector, and immediately went into action against enemy emplacements.

Except for four boat sections of infantry, these DD tanks were the only assault troops on EASY RED beach for the first half hour of the invasion. Among the twenty-seven DD tanks of the 741st

Tank Battalion which were swamped on the way in to shore were all sixteen tanks of Company C. This left all of FOX beach without armor support.

At the same time, in the zone of the 116th Infantry, it was decided that the seas were running too high for the DD tanks to run ashore under their own power. As a result of this decision, Companies B and C of the 743rd Tank Battalion were carried to shore in the LCTs. Eight tanks of Company B were sunk before reaching shore by direct hits on the LCTs. The remaining eight reached shore safely at DOG GREEN, while three minutes later Company C's sixteen tanks reached DOG WHITE and EASY GREEN sectors with no losses. One, however, was put out of action immediately upon landing.

At H-hour, the regular tanks of Companies A of the 741st and 743rd Tank Battalions were landed from LCTs. In each craft were two tanks and one tank dozer. Those of the 743rd landed well spaced and without loss on EASY GREEN and DOG RED sectors either ahead of or simultaneously with the DD tanks. The tanks and tank dozers of Company A of the 741st Tank Battalion landed on EASY RED, their only losses being two tanks and one dozer sunk in an unexplained explosion of an LCT. Within a few minutes after H-hour there were ninety-six tanks ashore on OMAHA BEACH.

By 0700, when the second group of assault waves touched down on the beach, no advance had been made beyond the shingle. On the western end of OMAHA BEACH, much of the artillery fire was

from guns emplaced near POINTE DE LA PERCEE. Tanks had been assigned these gun positions as primary targets but were kept so busy by enemy strongpoints directly in front of the landings that they could not fire on the gun positions. Although the tanks and infantry of the initial waves were not able to provide much covering fire, they did make the landings easier for later waves by drawing enemy fire to themselves and so away from the landing troops. When the infantry hit the beach, naval gunfire had practically ceased since the ships were ordered not to fire until communication was established with fire control parties, unless exceptionally definite targets presented themselves. This meant that on some sectors of the beach, the tanks furnished the only supporting fire other than the infantry's own weapons. The Commanding Officer of the 2nd Battalion of the 116th Infantry, an outfit which at LES MOULINS saw some of the worst fighting on the beach, said of the tanks that they "saved the day. They shot the hell out of the Germans, and got the hell shot out of them."¹

The assault of the bluffs was primarily an infantry operation since there were few operational tanks on the beach and these were scattered. The problem was further complicated by the confusion and intermingling of units on the beaches. On FOX GREEN beach, an attempt was made to get some tanks through E-3 draw. At 1100 hours, Colonel Taylor, commanding officer of the 16th RCT, ordered all available tanks to go into action at the E-3 exit route. Only three tanks arrived for this operation, and two of these were

knocked out while attempting to go up the draw. The first route opened to get vehicles off the beach was E-1 on EASY RED beach. By 1300 hours on D-day the mines had been cleared from this exit and the antitank ditch filled in. This was to become the main route off the beach.

At 1309, V Corps was able to make its first favorable report to Army: "Troops formerly pinned down on beaches..advancing up heights."

During the afternoon and night of D-day, exits E-1, E-3, and F-1 were cleared. This eased the overcrowding on the beach where units had been landed faster than they could be moved off.

Although some penetrations of the beach defenses had been made, these could not be exploited because the infantry had few heavy weapons, no armor or artillery support, and units were so intermingled that control difficulties were greatly increased. In one area of about one square mile, elements of five battalions spent all afternoon and evening of D-day fighting scattered pockets of enemy. Although the going had been harder than was expected and D-day objectives had not been achieved, the beach and the bluffs were in U. S. hands. The assault of OMAHA BEACH had succeeded. Let us, therefore, leave the overall picture and go more in detail into the actions of the individual tank battalions.

NOTES FOR CHAPTER VI

¹Omaha Beachhead, p. 81.

CHAPTER VII

THE 741st TANK BATTALION

When the remnants of the 741st Tank Battalion hit the beach, the Battalion had temporarily ceased to exist as a fighting unit. All of Company C's tanks were on the bottom of the Channel. Company B had gotten only five tanks ashore; Company A was reduced to the size of a platoon before reaching the beach; Company D had been left in ENGLAND in reserve and did not reach FRANCE until after D plus 6. These few tanks, which got ashore, were scattered along the three thousand yards of EASY RED and FOX GREEN beaches. Most of these vehicles landed between E-1 and E-3 draws. They went into action at once against enemy emplacements. During the first half hour, four DD tanks and about one hundred infantrymen were the only assault units on EASY RED sector of OMAHA BEACH. In these early hours of the landing, the tanks were favorite targets of the enemy artillery. Many infantrymen took refuge behind tanks only to find that they were in a worse position than when out in the open. Artillery fire, together with mines, took heavy toll of the tanks. At 1100 hours, Colonel Taylor, 16th RCT commander, ordered all available tanks into action along the exit route of draw E-3. Only three were able to assemble at the exit. Two of these were disabled as they tried to go up the draw.

At about this same time the 18th RCT had begun an assault on Exit E-1. The 2nd Battalion of this regiment, supported by

the fire of a single tank, was stalled in its initial attack, but after getting fire support from some destroyers, captured the enemy defensive position in front of E-1 draw at about 1130 hours. This exit became the main avenue off the beach. The 16th RCT ordered their attached tank battalion, the 741st, to this exit at 1700 hours. The order directed that all the battalion's vehicles move through this exit. It directed that they assemble at a point approximately five hundred yards east of the village ST. LAURENT-SUR-MER. The total battalion vehicles now amounted to four tanks only, the commander's command half-track and one T-2 retriever. This latter vehicle was engaged in salvage operations on the beach. A tank-dozer platoon of the battalion was also ashore under the command of Lieutenant F. A. Klotz. The mission of Lieutenant Klotz was to work on the beach with the Engineers in removing beach obstacles, opening roads, and unloading landing craft. Although they performed yeoman service under extremely hazardous conditions, they did not take part in any of their battalion's combat operations. Lt. Klotz with his platoon and the tank retriever remained on the beach. The four tanks and the half-track, accompanied by nineteen dismounted men whose tanks had been destroyed or damaged beyond use, assembled in the designated area, dispersed, and dug in to await further orders. At 1900 hours this force was joined by two 1/4-ton trucks, one from Headquarters Company and one from Company C.

At 2000 hours the battalion received a request from a unit of the 29th Division for assistance in clearing out some machine guns near ST. LAURENT. The requesting unit was probably the 115th Infantry Regiment which had one battalion in ST. LAURENT and two battalions just southeast of the town. One tank under Corporal Resar of Headquarters Company was sent out on this mission. Fifteen minutes later the other three tanks, under Lieutenant Barcellona, went out on a similar mission for the 18th RCT. At 2300 hours all four tanks returned to the assembly area reporting several machine gun nests and snipers destroyed with no damage sustained by the tanks. This ended the D-day operations of the 741st.

During the night of 6 June, three trucks containing a considerable amount of gasoline were landed on the beach and proceeded to the assembly area. One ammunition trailer with one hundred rounds of mixed types of 75-mm shells and some caliber .30 machine gun ammunition was salvaged from the beach. Working at night, the salvage and repair operations had succeeded in getting another tank operational, so that on the morning of 7 June the battalion had five tanks ready for action. These were formed into a provisional platoon. At 0700 hours, Captain C. D. Thomas was ordered into action with this platoon to reinforce the 2nd Battalion of the 16th Infantry.

En route to the 16th Infantry, Captain Thomas was stopped by the commanding officer of the 1st Battalion of the 18th Infantry, with a request that the tanks reinforce his attack, as he was

suffering heavy casualties from emplaced machine guns. Captain Thomas contacted the command half-track by radio, explained the situation and requested permission to help the 18th Infantry, Captain William King, the Battalion S-3, was with the command half-track near ST. LAURENT, where he was endeavoring to gain contact with the forward elements of the 16th Infantry. Unable to contact the 16th, he authorized Captain Thomas to divert his platoon to aid the 18th Infantry. The platoon joined the 18th, immediately closed with the enemy and succeeded in inflicting such severe casualties on the enemy that the unit it was reinforcing was able to make rapid progress in its drive to the south. The high point of this engagement was the reduction of a gun position in a stone farmhouse by the tank gun fire. In this action two tanks under Lieutenant Barcellona became separated from the platoon and penetrated the enemy position to such a depth that they found the enemy completely unprepared for an attack. At one time they found three Germans riding bicycles along a road. They fired on these men, killing two and capturing one. At 1400, Captain Thomas' tanks had reached ENGRANVILLE. After shelling the town, the tank-infantry team by-passed it and proceeded on until they discovered fire from the village falling in their rear. They returned immediately to shell the village until their ammunition was exhausted, when they were forced to return to the assembly area.

At 1700 hours the Commanding Officer of the 2nd Battalion, 16th Infantry, reported that an enemy medium artillery piece

firing on his position had been located. He requested help in destroying it. Sergeant Compton of Headquarters Company took a tank up to a position near the infantry and succeeded in knocking out the enemy weapon by indirect fire. At 1800 hours the battalion S-3 finally established contact with the 16th Infantry. The remaining tanks then acted in conjunction with the 16th Infantry in its assault to the south and southwest. This attack progressed rapidly. By nightfall, the force held the village of COLLEVILLE and the adjoining high ground, although it was still receiving enemy sniper and machine gun fire from within the town.

On 8 June the Battalion Commander started a salvage program to recover all tanks that could be repaired and replaced those that could not be repaired. Five T-2 recovery vehicles were at work on this mission. Higher headquarters was contacted to obtain supplies and vehicle replacements. A forward command post was established with advance elements in order that the battalion could continue its reinforcement of the 16th Infantry. The battalion S-3 operated the forward command post. He maintained communications with the rear echelon via radio and runners. The battalion raised its fighting strength to eight tanks by the repair of three tanks at this time. The days combat operations, in support of the 16th Infantry, included successful attacks against the towns of TOUR-EN-BESSIN and ST. ANNE. During these attacks, the battalion vehicles sustained no damage and there were no personnel casualties. In the afternoon, a bivouac was organized in ST. ANNE.¹

Two T-2 tank recovery vehicles, no longer needed in the salvage operations, joined the unit here at 1600 hours.

The fourth phase line of the initial assault had now been reached, so division called a temporary halt. No change was made in the battalion's mission; they continued to reinforce the 16th Infantry. In performance of this mission, they moved at times to CAHAGNOLLES and BAUGY BOIS, but returned each time to the same bivouac area. They took no part in any offensive operations. The tanks were assigned defensive missions of covering possible avenues of approach for enemy tank or mechanized counterattacks.

On 13 June, V Corps marked the official end of the initial phase of the NORMANDY invasion with the issuance of Field Order Number Five stating, "The V Corps halts temporarily in its present position, reorganizes and defends." The beachhead was secure.

NOTES FOR CHAPTER VII

¹Taken from After Action Report, 741st Tank Battalion, Omaha Beachhead, pp. 121, states that 2nd Battalion, 18th Infantry, supported by C Company, 745th Tank Battalion, attacked through TOUR-EN-BESSIN on the night of 8 June, reaching ST. ANNE at 0130, in contact with enemy patrols.

CHAPTER VIII

ACTION OF THE 747th TANK BATTALION^{1,2}

The duplex drive tanks of the 741st Battalion had not gotten ashore in force on D-day because of rough water on the Channel. The 747th Tank Battalion was lying off shore awaiting orders to land. Its mission in this assault on Hitler's "Festung Europa" was V Corps armored reserve. This mission was altered dramatically when Captain Baryo with two platoons of his C Company landed on the beach D plus 1. A Major General met him on the beach, gestured toward the VIERVILLE exit, and said "That way and start fighting." The 747th landed in full strength. Except for the fighting done by C Company, it arrived in its assembly area atop the cliffs without having engaged in action or suffered losses. This fresh strength was needed to accomplish the Corps mission because of the stiff enemy resistance. So the 747th went into action immediately. Instead of passively awaiting an enemy tank attack, it became part of the infantry-tank teams which participated in the two major actions to secure the landing areas.

The Battalion (Minus) Supporting the 175th Infantry³

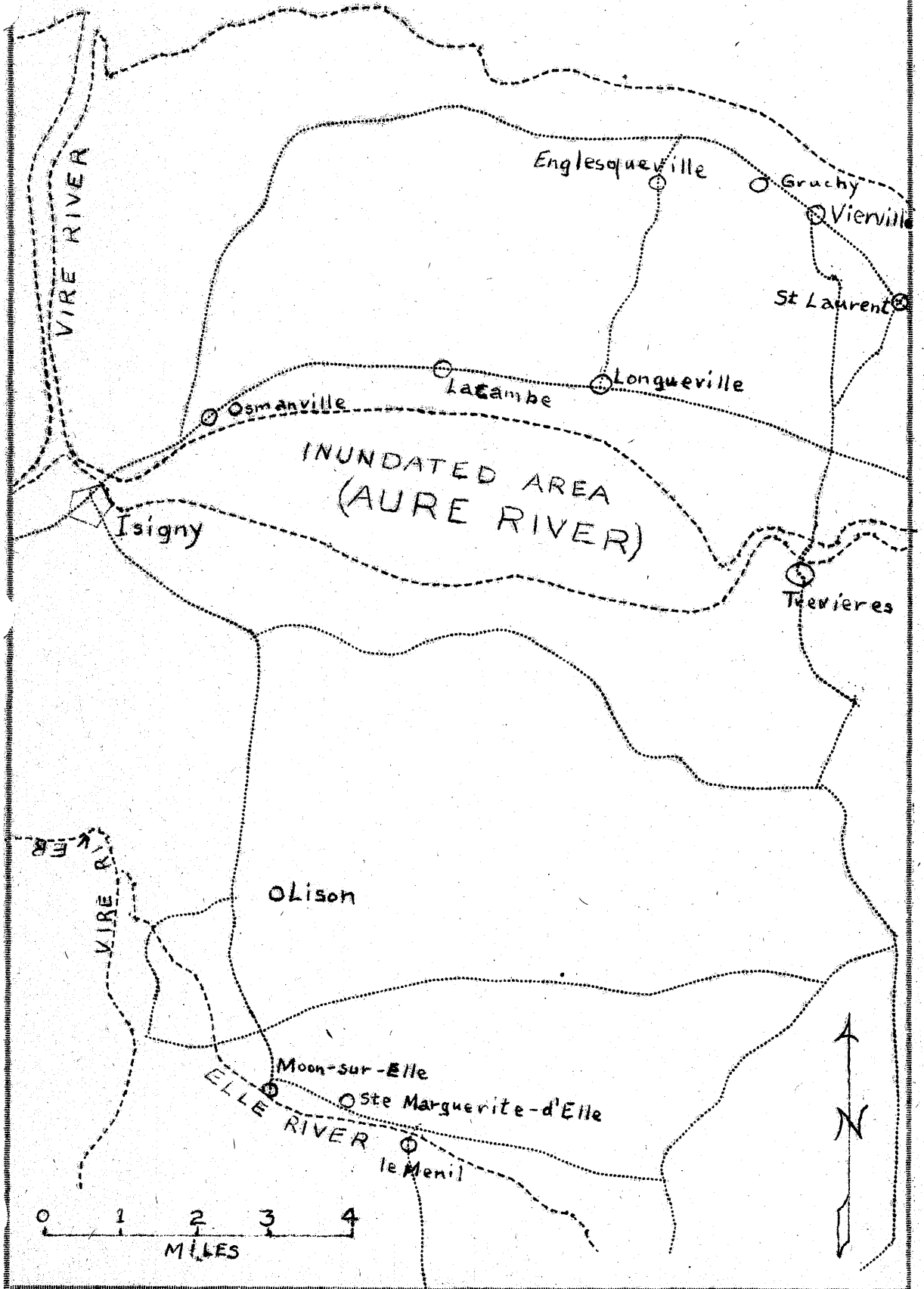
The first of these actions to secure the landing area was the capture of ISIGNY and securing of the AURE RIVER line. This was the mission of the 175th Infantry. V Corps orders attached the 747th (minus) to the 29th Infantry Division. Division,

in turn, attached the battalion to the 175th Infantry Regiment to support it in the attack on ISIGNY. The elements missing from the battalion were D Company, less one platoon, one platoon of C Company and two platoons of B Company. Thus, the battalion (minus) had about two companies in fighting strength.

Lieutenant Colonel Fries, Battalion Commander, led the column, with A Company and one platoon of D Company, toward GRUCHY to join the infantry. At ST. LAURENT, C Company, less one platoon, joined the column. This unit, under Captain Baryo, had completed its mission of reinforcing the infantry in clearing the village. Now the battalion (minus) moved on to GRUCHY. (Map 8a)

Organization of the tank-infantry team. At GRUCHY, the first task was coordination with the infantry. This involved the agreement upon a formation and adoption of a scheme of maneuver. Governing considerations were the inundated areas and the hedgerows, which limited any rapid movement to road axes. The formation agreed upon placed the tanks on the road, with the infantry on both road shoulders. The tanks always moved on the road. The infantry in two columns moved on the shoulders, in the ditches, or just within the bordering hedgerows. They picked their path to afford maximum shelter and best footing, but always with a view to mutual support for the tank-infantry combination. They normally remained within the bordering hedgerows. The scheme of maneuver adopted provided for the tanks to cover these bordering hedgerows with fire. All points capable of concealing the enemy

ENGLISH CHANNEL



Map 8a

were sprayed with machine gun fire. Any particularly dense spots and all roadside buildings were blasted with the tank cannon as well as machine gun bursts. At least two tanks were normally ahead of the infantry to permit this firing.

This formation and scheme of maneuver was generally used for all advances, except actual engagements, during the action of this team in establishing the beachhead. The initial disposition had C Company leading with Lieutenant Thompson's platoon as point.

Action in the vicinity of LA CAMBE. Lieutenant Thompson's platoon of C Company was leading the column as it entered LA CAMBE. Aircraft bearing friendly markings came down and strafed the column in the village. Lieutenant Thompson, in the lead tank, fired recognition flares but the planes continued their attack. He then dismounted to disperse his tanks with arm signals because his radio was inoperative. At this point antitank fire from west of the town struck the column. Lieutenant Thompson's tank was hit once while he was standing in front of it directing it off the road. It was not disabled and continued to maneuver, so when it was headed across the drainage ditch, Lieutenant Thompson moved along side of it to signal the tanks following. A second hit on his tank ricocheted from the turret, crushing his skull. Subsequent hits disabled the tank. This antitank fire disabled five tanks, before they succeeded in clearing the road. Meanwhile, the air strike had continued, inflicting twenty casualties. The tanks withdrew to an assembly area east of LA CAMBE.

The infantry established a line on the farthest advance of the tanks. They dug in and held this line for the balance of the day. Colonel Paul Goede and Lieutenant Colonel Fries, using a light tank, reconnoitered north of the strongpoint for a by-pass route. None was found. South of the town lay the inundated area. No by-pass route there! The two commanders returned and organized a tank attack to go through the village. The tank retrievers, the only vehicles in the battalion armed with mortars, were to lead the attack, employing smoke to neutralize the enemy antitank guns. A Company followed. C Company was rotated to reserve. The organization for the attack was completed in the late afternoon.

At dark the retrievers attacked. They received no anti-tank fire and the tank column broke through to OSMANVILLE. The infantry closed on the tanks there. Reorganizing in their initial formation, the team advanced toward ISIGNY.

Action at ISIGNY. The team approached ISIGNY without striking further resistance. On the outskirts, they lost a tank in a mine field which covered the approach to the town. The infantry breached this mine field for the tankers. The team entered ISIGNY about 0230 unopposed except for a few snipers which they proceeded to clear out. K Company of the infantry with one platoon of tanks continued west to the VIRE, where they found the bridge burned. Infantry forded the stream with the tanks giving fire support. On the 11th they made the junction with the UTAH BEACH forces.

Summary of results. The advance of this combat team was the first sizable expansion of the OMAHA beachhead. They covered twelve miles in thirty-six hours. The capture of ISIGNY with the bridge over the AURE intact indicates that the Germans were surprised. Certainly the direction of the attack was a surprise. This advance, with the concurrent attack on TREVIERES, collapsed all enemy resistance north of the inundated AURE valley between ISIGNY and TREVIERES. The German defensive policy of stopping the attacking columns with small parties, well equipped with automatic weapons, had failed.

The Advance to MOON-SUR-ELLE. With ISIGNY secured, the tank-infantry team prepared to move south. Their new objective was MOON-SUR-ELLE, with an intermediate objective of LISON. The formation initially used in the attack on ISIGNY was adopted again. C Company of the 747th lead the advance.

LISON fell about noon of D plus 3. The enemy had offered no opposition. Another small detachment similar to the one sent out from ISIGNY to contact the 101st Airborne was sent to the west to secure a crossing over the VIRE. The assault guns and one platoon of light tanks formed the armored element of this detachment. At the river they found the bridge destroyed. Enemy fire from across the stream disabled one of the light tanks. The near bank of the river was clear of enemy. The detachment's mission of securing the right flank of the division was accomplished, so they rejoined the column in its advance to the south.

The column entered MOON-SUR-ELLE at approximately 1900. Rapid movement was keeping the enemy off balance but a rest was desperately needed. The attack was now actually ahead of the projected phase lines. Flanking battalions of the infantry had met enemy resistance. The much needed halt could safely be taken while the other battalions were coming abreast.

For the night of D plus 3 - 4, the tanks occupied defensive positions on the high ground north of the ELLE. During the day of D plus 4 they continued to occupy these positions. No crossing was attempted until the next day and that was unsuccessful. They had secured the right flank of the OMAHA beachhead.

On D plus 6, the team again attempted to find a crossing over the ELLE. They moved down to MARGUERITE-SUR-ELLE. There was no crossing there. They moved east to LE MENIL. A crossing existed, so they started across. The road on the far side went up over a high fill. After three tanks were across the bridge, enemy armor in ambush on the ridge disabled the lead tank and the one on the bridge. The one between was trapped by the high fill. This one the enemy knocked out at their leisure. Lieutenant Bailey's tank had been in the lead. He was wounded but managed to evacuate the tank with his crew. All of them were then crawling down the ditch to escape. Enemy machine gun fire killed some of them, including Lieutenant Bailey. Crossing the ELLE was not going to be an easy task. But that is part of the breakout--the mission of securing the beachhead was already complete.

Action of D Company, Reinforced⁴

D Company less one platoon, reinforced by one platoon of C Company, commanded by Captain Scott, was not idle during the days the battalion (minus) reinforced the infantry to secure the right flank of the beachhead. They landed on D plus 1 just after the battalion mission had been changed.

The first platoon, D Company, landed just west of COLLEVILLE about 1200. It moved to the cliff top and was joined by the 2nd platoon of C Company. Captain Scott, not knowing of the change in plans or the location of battalion headquarters, reported to V Corps headquarters about 1500 yards northwest of COLLEVILLE. Colonel McLaughlin, commander of 3rd Armored Group, directed him to move across the lateral highway to an assembly area. Here the battalion executive officer, Major Owen W. Nelson, with some elements of Headquarters Company including the assault guns, joined them. Major Nelson assumed command.

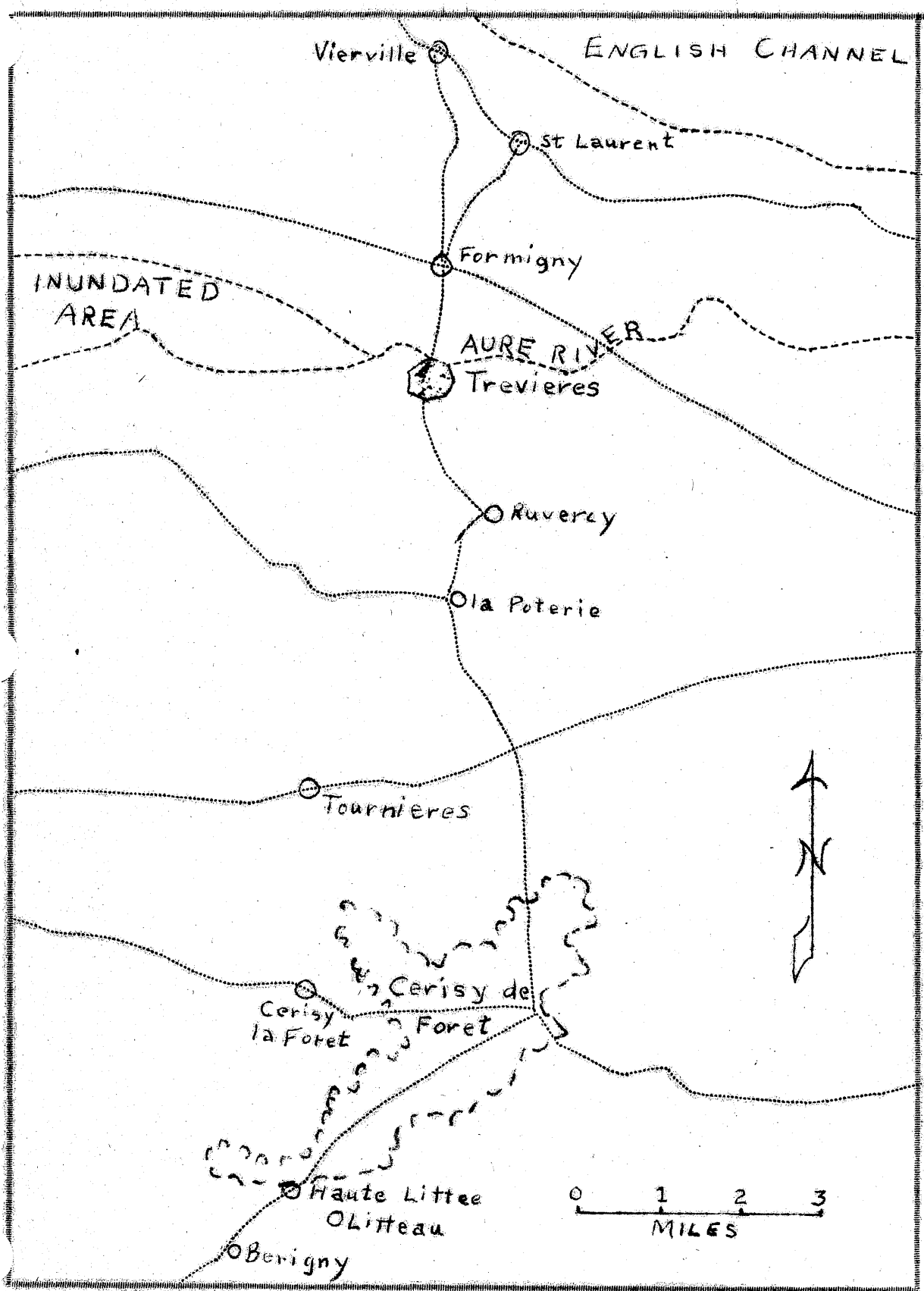
About 0800 D plus 2, the third platoon and the remainder of Company Headquarters arrived in the assembly area. The mortar platoon came in about 0900. Shortly after this, Colonel McLaughlin directed that Captain Scott report to General Robertson, Commanding the 2nd Division, to be attached to the 38th Infantry Regiment. Captain Scott reported to the 38th about six hundred yards north of FORMIGNY about noon. Other elements remained in the assembly area as V Corps armored reserve.

Colonel Elliott, Commanding the 38th Infantry, attached the 3rd Platoon of D Company to the 2nd Battalion of the 38th. The balance of the composite company was attached to the 1st Battalion. The 1st Battalion was to attack on the axis of the FORMIGNY-TREVIERES road. They moved through FORMIGNY about 0600 D plus 3. The infantry was going into action without machine guns, mortars, or artillery. Consequently, the tank reinforcement gave them their only large caliber and automatic weapons.

The AUER RIVER ran through the inundated area and was the water source. Seizing the crossing at TREVIERES, therefore, became a critical objective.

Crossing the AURE at TREVIERES. About 1400 D plus 3, Colonel Elliott requested tank support to secure the AURE RIVER crossing north of TREVIERES. Verbal orders from Captain Scott sent Sergeant Rommel's section of the 3rd Platoon into action over the crest of the hill into the AURE valley. Sergeant Rommel led his section of two tanks into action and Captain Scott could hear his orders to Sergeant DeBellis, the other tank commander, over the radio. After getting DeBellis' tank into position and firing across the river, Rommel continued to maneuver his own tank down the hill to get at the machine gun covering the road block at the bridge.

This gun was particularly well sited. Since the 38th Infantry had only hand weapons available, the infantrymen were



Map 8 b

unable to close on the position of this gun and were suffering heavy casualties. The gun could not be reached by direct fire of small arms from the front because of the cover afforded the enemy by the road block. To close in to deliver flanking fire, the infantry were forced into the open valley floor, which was covered by the fire of weapons supporting the road block. This lone strongpoint had stopped the advance of the regiment. Sergeant Rommel maneuvered his tank into position to fire on the machine gun nest. He found that he could not depress the coaxial machine gun sufficiently to deliver fire over the barricade into the position. He opened his hatch and stood up to man the anti-aircraft machine gun. After firing a belt and a half of ammunition he silenced the obnoxious Kraut. At this point he was hit--two bullets through the head. The gunner failed to rise in the emergency and take command. The driver, failing to get any response over the intercom, hearing no firing from the tank, backed out and retired over the hill. DeBellis seeing Rommel pass on the way to the rear (Rommel was still standing in the hatch) and having no orders over the radio, also withdrew. Sergeant Rommel's head was bleeding profusely and he was evacuated immediately. His helmet, recovered the following day, marked with his name, had two bullet holes just above the ear pieces on either side. A letter from Rommel to the unit about a year later announced the birth of his child and said "I'm much more valuable now than the ordinary man because of the amount of silver in my head."

The infantry in the valley, trying to clear the river crossing, was also receiving casualties from accurate mortar fire. The church steeple in TREVIÈRES was the most advantageous observation point which could be directing this mortar fire. Colonel Elliott, because he believed that some American infantrymen were in the town, had issued orders that the tanks should not fire into it. The company commanders and platoon leaders in the valley were convinced that the fire direction was from the church steeple and wanted it eliminated. Eventually, the 37-mm gun of the light tank proved to be the perfect weapon to cause the evacuation of a church steeple without completely demolishing it. Perhaps this was the only ideal target for a 37-mm gun encountered during World War II.

Staff Sergeant Bell's section had assumed the mission of supporting the attack in the river valley after Sergeant Rommel's heroic silencing of the machine gun. Anticipating a later advance, Captain Scott, accompanied by an engineer officer, made a reconnaissance of the bridge, which was partly destroyed. They decided that it would support the light tanks but that the mediums could not cross until it was repaired. By evening all the machine guns along the river had been silenced.

At dark the enemy fire was sufficiently light to permit engineer personnel to demolish the road block. A case of dynamite was loaded on the back deck of a medium tank of C Company; the engineer officer became a member of the crew and the tank drove

down to the road block. The demolition was prepared and exploded. This reduced the road block but also damaged the bridge. It had to be reinforced before the tanks could cross. During the night, the engineers accomplished this task and the advance continued the next morning.

The advance to CERISY LA FORET. The attack continued south about 0600 D plus 4. Only light enemy opposition was encountered so the movement was rapid. At LA POTERIE the axis of advance was shifted to secondary roads southwest to TOURNIERES, which was reached by 1600. Again the direction of attack changed to the south. The tank-infantry team entered CERISY LA FORET, the next objective, in the evening.

About 2100 the regimental command post was established in CERISY, despite the fact that the town was still infested with snipers. Tanks patrolled the roads in the vicinity during the night, clearing out these snipers. One patrol, a tank manned by the company mechanics because of casualties, also destroyed two enemy machine guns at the stream crossing just west of the village.

The advance made by this tank-infantry team on D plus 4 was the greatest gain during the operation. It permitted the capture of the FORET DE CERISY which was the only adequate area, covered from air observation, for the assembly of large armored units. This prevented the Germans from launching any large scale armored counterattack because Allied Air Forces located and destroyed the enemy tanks whenever a concentration for such counter-attack was attempted.

Action in the vicinity of HAUTE LITEE. With CERISY LA

FORET secure, the tank-infantry team resumed its attack about 0500, D plus 5. The objective was the high ground near LITEE in the southeast end of the FORET DE CERISY. The mission was to seize and hold this area to provide flank protection for units clearing the forest of enemy.

The tank-infantry team captured LITEE without opposition. The tank column then turned southwest toward BERIGNY. The column composition was four light tanks, a medium tank, Captain Scott's command tank, and the third platoon. When the first seven tanks were on the BERIGNY road an antitank gun, firing from about 1500 yards, hit the medium tank with its first round. Although the road was narrow and bordered with hedgerows, the four light tanks somehow turned around, by-passed the burning tank, and withdrew into the woods. The crew evacuated the disabled tank, although four of them were wounded.

The tanks now maneuvered along the edge of the forest, probing with fire for the antitank gun. It would not return the fire and could not be located. The infantry attacked along the axis of the road. Bazooka fire hit another medium tank when it moved south of LITEE. The attack was halted since it was already past its objective.

Feeling that he should clear the area just south of the woods to make his position secure, Colonel Elliott ordered an attack on LITTEAU. B Company, 38th Infantry, assembled for this

attack. An enemy artillery concentration hit, them inflicting about eighty casualties. The remainder, about fifteen men and one officer withdrew to LITEE.

The 3rd Battalion, 38th Infantry, attacking on the right, took ST. QUENTIN but was out of contact with the 1st Battalion. A tank patrol, Lieutenant Francis G. Turton's platoon, went to BERIGNY to establish contact with the 3rd Battalion. They found BERIGNY unoccupied. While they were still there two German half-track personnel carriers entered the town. The tanks disabled the carriers, captured the personnel, loaded them on the tank decks, and returned to the infantry who took charge of the prisoners. The infantry-tank team then reentered BERIGNY. During the night a counterattack forced them back to the FORET DE CERISY.

The infantry held the position on the edge of the FORET DE CERISY. The beachhead expansion was adequate to allow the build-up. Corps issued orders to units to occupy positions on the line of the advance made by this infantry-tank team and assumed the defensive.

NOTES FOR CHAPTER VIII

¹Omaha Beachhead, a report prepared by the Historical Division, War Department, for the American Forces in Action Series.

²After Action Report, 747th Tank Battalion, June 1944.

³Captain William J. Hyde, an interview.

⁴Captain S. Scott, Jr. an interview.

CHAPTER IX

RESULTS OF OMAHA BEACH

OMAHA BEACH will long be a name for conjecture. Many American citizen-soldiers tested the stuff of which friendship is made; many may have tested and found it wanting, but all showed the spirit which has made this democracy a potent force. The tank-infantry team developed from this spirit of mutual neighborly helpfulness--as much as part of the American Corn Belt as the name OMAHA.

The planning provided the opportunity for the tank-infantry team to function from the touchdown at H-hour onward. The elements gainsaid the human planning. The DD tanks were not the final answer to the problem of getting armored reinforcement for the infantry ashore with the first assaulting wave. They were not seaworthy, at least not sufficiently so. Their failure to get ashore in force left the infantry man without his teammate in the difficult beach fighting.

The fight for the beach was severe. Scaling the dominating cliffs in the face of enemy fire was a test that only the most brave could take and only the best could pass. Even by D plus 2, the assault had not progressed past its reorganization point on top of those cliffs. Those tanks which were on the beach served to draw some of the enemy fire away from the infantry climbing the cliffs. Had there been more, it is a minimum evaluation to say that they would have rendered valuable fire support.

After the first waves had landed and the DD tanks of the 741st had sunk, the other DD tanks and some conventional tanks were put ashore. These were neither adequate nor in time. There were not enough to aid the infantry in penetrating the belts of automatic fire with which the enemy was covering the water line. They were in time to join the confusion, but too late to prevent it. Now the enemy's fire had the accuracy of previous hits, the coordination to dispose of threats to the machine gun positions which were stopping the infantry, and the confidence of having decimated the initial waves of the assault. Even so, it was where tanks were available that the initial penetrations over the cliffs were able to cut back to open the exit roads.

Once up the hill, the movement inland did not progress until the tank reinforcement was available. The inland thrusts were rapid after they started. On D plus 2, they were well behind the D-day phase line but by D-plus 4 they were approximately on the D plus 6 phase line. The tank-infantry teams spearheaded this rapid advance.

The slow progress in those first two days might well be explained in the loss of the 741st. Their action has been discussed in detail because of the important role they were to play. The rapid progress in the next days was certainly spearheaded by the 747th. They have been discussed in detail because of the important role they did play. The role of armor was highly significant in this amphibious assault, but it was the infantry-

tank team that the enemy failed to stop. Such a team broke through to ISIGNY and not only secured the west flank of the OMAHA area but also made the contact with the UTAH area. Another such team led the speedy advance which secured the FORET DE CERISY, removing the German threat of armored counterattack. These actions presented numerous instances where only the team was effective. For example, on the AURE RIVER at TREVIERES the infantry could not break through until the tanks cleared the way. Again, the tank platoon in BERIGNY could enter the village, but could not occupy and hold until the infantry was there.

On D plus 6, the area of the beachhead was adequate for its security. Tank-infantry teams had established that line. They held it, without momentous gains, until the breakout weeks later. Then it was the same tank-infantry team, which had cut its teeth in the fumbling confusion of NORMANDY, that rolled through FRANCE.

PART FOUR
CONCLUSIONS

CHAPTER X

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

As General Marshall said in his report to the Combined Chiefs of Staff, "The invasion of the CONTINENT was an opportunity for a disaster of an unprecedented scale." This invasion must not fail. The greatest insurance against failure was an operation on an "unprecedented" scale. Invasion on a broad front--over fifty miles; invasion with great forces--in the two American beaches there were three regimental combat teams to be in the initial assault waves with two airborne divisions in air drops before the seaborne assault. These forces were attacking two regiments. This was the insurance--a power play--attack with such superior forces that failure, if not completely impossible, was most certainly highly improbable.

A general consideration of the overall action on both UTAH and OMAHA beaches shows that they were in decided contrast. The salient features on UTAH were that the forces met little opposition in landing, crossing the beach, and taking their approximate D-day objectives; but by D plus six they had made little appreciable progress, other than to cement the contact between units. On OMAHA the lodgment on the beach was effected only after bitter fighting until D plus 2, but by D plus 6 they were near their projected objectives for that day. Why did these forces on OMAHA, despite being much depleted by the opposition on the beach, advance much more rapidly?

Was the enemy strength unequal in the two areas? True, the enemy had suffered heavy losses to his area reserves on OMAHA, because they had been maneuvering on the beach and became involved in its immediate defense, but the damage inflicted on the assaulting forces was even greater. The enemy command was the same in both areas. The air drop at UTAH demoralized the enemy, and its scattered pattern confused him. Consequently, his ability to react was as much impaired on UTAH as on OMAHA.

Were the assaulting forces comparable? The overall leadership was the same. Small unit leadership can be assumed as equal because of the number of units involved. The troops had been similarly and equally trained. If there were any units which might be considered as better qualified it should be the airborne troops--and these were all on UTAH.

Was the terrain of equal difficulty? The major difference was the location of the inundated areas. The UTAH area was believed to present the greatest obstacle, but this was penetrated in the relatively easy assault on D-Day. The inundated area at OMAHA did present an obstacle later but was penetrated by aggressive fighting.

If the physical factors do not indicate a reason for the contrast in the action is there a psychological explanation? This might introduce many imponderables, but to have a general result of such magnitude only a major cause which was uniform for both beach areas would be valid. Examine the fact that both forces were prepared for a maximum effort in a beach assault which

did confront the one on OMAHA but did not the one at UTAH. The fighting edge of troops and leaders is sharpened by expected opposition and dulled by lack of it. For example, in S. L. A. Marshall's Book, "Men Against Fire," a unit which crossed the beach on OMAHA without losses and then received casualties in a lateral movement to its proper landing area was of no further fighting value on D-day. Another unit, which suffered heavy casualties in crossing the beach, continued to be effective though decimated. Mr. Arnold Thoynebee in his book, "A Study of History," concludes that civilization advances as a response to a challenge which inspires the leaders.

A logical conclusion is that when units are prepared for a maximum effort which fails to materialize, the deterioration of spirit will cause them to be less effective in immediately subsequent engagements. Hence, counterattack is more likely to succeed against an easily won success than against a partial yet dearly won success. As a corollary, leaders must be especially alert to the psychological reaction when reorganizing on an easily won objective.

Turning now to the rôle of armor in the invasion, the danger of enemy counterattack with armor was not only great but also expected. A counterattack with the two armored divisions available in the Paris area within the first 24 hours would probably have destroyed the beachhead. The Allied cover plan for deceiving the enemy into anticipating an attack in the Pas De Calais

area was designed to prevent immediate German reaction to the Normandy invasion. German intelligence agencies report many divisions still in England ready to land in France. Patton's presence in England lent the last vestige of probability to this cover plan assuring its success. Further measures were taken to guard against this attack in event the Germans were not deceived.

The first of these was the use of friendly air for isolation of the battle field and close support. The German strategic reserves in France were largely panzer divisions. They planned to move reserves to the area of the battle by rail. Isolation of the battlefield by our air force prevented this type of movement. Infiltration movement brought some of the wheeled elements of the panzer divisions to the Normandy area in sufficient time to have participated in the attack before the beachhead was secure. German leaders strove to avoid ineffective piecemeal commitment. The night movement of the armored vehicles delayed their arrival at the scene of action. When they eventually arrived, they were unable to assemble for attack because the close support Allied air bombed all concentrations of more than two or three vehicles. The Foret de Cerisy, the only area affording adequate concealment from air for an assembly area, was in Allied hands. The only German armored unit was at Neuville du Plain.

Another measure of the insurance against a major armored threat to the establishment of the beachhead was the inclusion of armor in the early waves of the attacking force. Armored doctrine

was not uniform in the various Allied Armies. The American doctrine was the use of armor for deep penetrations and exploitation. For this purpose, our medium tank was well suited. It also minimized our other problem of transoceanic movement before battle could be joined.

Our medium tank would be barely adequate to meet the heavy German armor. Certainly the amphibious tank was not capable of the antitank role which was paramount in the beachhead. The DD (Duplex Drive) tank was a compromise which offered some promise of being able to perform the mission. These tanks could be reinforced with standard tanks equipped to wade ashore shortly after H-hour.

The amphibious tanks were successful in the UTAH area and were failures in the OMAHA area. Water conditions in the OMAHA area were more severe than any which the DD tanks had attempted before. The results indicate that this modified tank was not capable of negotiating the rough water. In the UTAH area some of the landing craft were beached and the tanks could wade ashore. In one or two cases this was successful at OMAHA.

Since landing craft were critically short any decision to take the risk of losing the landing craft in an effort to get the tanks ashore by this means could not be made until the attempt to swim ashore had been made. The conclusion that taking such a calculated risk was correct can be made now in the nature of "Sunday morning quarterbacking" and is offered as a recommendation

with the full knowledge that it was impractical at the time of the NORMANDY landings.

Even on UTAH beach where only a few tanks were lost at sea there was not enough armor. There was not enough to give each unit commander as much as he felt he needed. Requests of infantry regiment and battalion commanders for more tanks were frequently unfilled because there were no more available. These requests usually were made by those commanders who feared a counterattack. We must inevitably conclude that there was not enough to satisfy the antitank role. Apparently this was the only role that the infantry commanders universally understood.

For use as reinforcement of the infantry attacks one can only judge, that since more armor is usually necessary for the attack than for the antitank role, that there was not enough. It is impossible to determine if armor was used for all critical attacks. It is equally impossible to determine if more was needed at critical points where some was used. Infantry commanders, in most cases, were not familiar with its use in support of the attack. In case of the airborne divisions this is unquestionably true. In the establishment of the UTAH beachhead these divisions rarely used tanks. One platoon of the 70th which was attached to them saw little action. Yet it would appear that in all cases where armor was used in the attack it was of material assistance.

This assistance is indicated in two ways. First, where armor was used the infantry losses were less. In many cases where

the cooperation between the two failed the infantry suffered severe losses. In places where the infantry became separated from the armor, either by falling behind or by attacking without waiting for tank support, infantry losses were high.

Second, in all but one case, the objective was taken when tanks accompanied the infantry. Some attacks were repulsed without armored support. Subsequent attacks on the same strongpoints succeeded when combined arms were employed. Not all objectives were achieved immediately by tank-infantry teams but eventually they were. The outstanding exception was Task Force A on UTAH *✓ Link up* BEACH.

While it cannot be determined that combined arms teams were used at all critical points, it is certain that many of their actions were essential to the establishment of the beachhead. On UTAH BEACH success depended upon linking up the seaborne with the airborne troops. It was also necessary to link up isolated parachute regiments dispersed in the drop pattern. The tanks units *✓* were used in the actions which effected most of these junctions. In fact, in most of the actions in which the 746th participated the objective was to secure such linkings.

One of the reasons for the failure of tanks to get ashore was the failure to get the beach obstacles cleared. Both Navy and Army personnel were on these teams. Tank-dozers were included in their equipment. The efforts of these teams on UTAH were successful. Where the dozers were not used to push the obstacles

aside, in instances where the obstacles were mined, the tanks were used as protection from enemy fire. They were even used for shelter while obstacles were being blown. Similar teams on OMAHA beach did not accomplish their mission completely. Only a few paths were made, and the use of these paths contributed to the congestion on the beaches. The landing craft put their loads ashore through those lanes which they could safely approach.

While quite successful on UTAH, the same scheme of operations failed on OMAHA and may be attributed to several factors. First, the water was more rough. DD tanks did not get ashore in the contemplated force. Second, the volume of enemy fire was greater. The enemy 352nd Division was present on the beach in a practice maneuver and added their fire to that of the static beach defenders; few tanks got ashore to assist in reducing the volume of enemy fire. The withering enemy fire caused many of the assaulting infantry to seek shelter behind the beach obstacles before continuing to the base of the cliffs. Obstacles could not be demolished by blasting while friendly troops were in the vicinity. Third, it was proven that demolition teams cannot work efficiently under fire. This fact had been established before. OMAHA beach reiterated it. Lastly, the tank-dozers were not present in sufficient numbers to protect the demolition crews. The few tanks which were on the beach during the first assault waves, including the tank-dozers, were primary targets of the enemy fire.

But what if the weather had not only caused the Channel to be rough but also had limited the visibility to such an extent that our air force could not operate? Some isolation of the battle field had been accomplished before the invasion. Non-flying weather would have prevented the almost complete isolation and close support. The enemy's strategic reserves could have arrived at the battle area by road marches according to the German schedule by being able to travel faster during the day as well as marching during the hours of darkness. They could have concentrated. Our armor was certainly not ashore in sufficient strength to have rendered adequate assistance in the repelling of a coordinated counterattack. We must conclude that a calculated risk was taken in trusting weather predictions. More armor would have reduced this risk. More armor could have been landed. Enormous quantities of supplies were landed in the follow-up waves which were not required immediately. Some of this space might well have been used to land tanks. How much easier the assault would have been with 4 more tank battalions!

Hitler contributed substantially to our success. The strategic reserves could not be committed without his authority. Not even coastal defense units could be shifted without his permission. Hesitant commitment of the armored reserves indicated indecision. Or was the indecision mostly the delay incident to communicating a decision from a headquarters so far to the rear? In any event the delay simplified the task of securing the beachhead.

A lack of tank-infantry team training was not only evident but also detrimental. Neither the tanks or the infantry were indoctrinated with the principle that the team must cooperate and give mutual support. Outstanding examples violating this precept exist in the actions at BERIGNY on OMAHA and ECOUSSEVILLE and NEUVILLE-AU-PLAIN on UTAH. Tanks without accompanying infantry would overrun objectives. Without infantry support the tanks could not hold, and the gains lost when the tanks withdrew.

On the other hand, two of the major operations which established the OMAHA beachhead, used the 747th Tank Battalion, and tank-infantry cooperation was good. The other tank units available on the beach were also used. Two thrusts, one through TREVIERES to the FORET DE CERISY and the other through ISIGNY to MOON-SUR-ELLE, starting from small "footholds" well behind the D-day phase line and just above the beach exits on D plus 2, moved inland and secured the D plus 6 phase line by D plus 6. Throughout this action the tank-infantry cooperation was good. On UTAH beach such cooperation made possible the success of the attacks on ERGUDEVILLE, ECOQUENEAUVILLE, JOGANVILLE-MONTEBOURG, and the action north of ST. MERE EGLISE. In all of these actions it was only through the use of the combined arms teams that the objectives were attained.

The impression gained, however, is that this cooperation was attained as a matter of good leadership and judgment, not as a result of training. A lack of such training is indicated in

the reports from the tankers. It is evident that the infantry commanders were mostly perturbed about their lack of tank support only when they expected enemy armor.

Armor experienced some difficulty with the difficult hedgerow and swampy country. Later, field expedients made the tanks more capable of penetrating the hedgerows. More detailed intelligence as to the character of the hedgerows would have permitted the tanks to have been properly equipped to cope with this problem before they had to go into action. It is believed that similar areas could have been secured for training in England or at least experimentation. Modifications for the tanks could have been constructed before invasion without jeopardizing the security of the operation.

This study had indicated that tanks were employed to reinforce the infantry; that they were much in demand for the anti-tank role; and that greater numbers would have been a decided advantage in securing the beachhead area. Present doctrine gives these factors as principles of employment of the organic infantry division tanks and of the separate Corps Tank Battalions. There was no deep penetration or exploitation mission in the beachhead. The conclusion is that present doctrine is sound.

Little use was made of the light tanks in the UTAH area. In the OMAHA area, Captain Scott said "The target of the church steeple in TREVIERES was the only mission I saw during the war where the 37-mm was the ideal gun for the task." The light tanks

were used because no others were available. They were inadequate but better than nothing. We must conclude that the doctrine of using the heavy tanks for infantry reinforcement is correct. The latest trend toward a medium tank for this use is not ideal. It can be accepted only as a compromise. The present medium tank's armament may be equal to the reinforcement mission. When a mission of pursuit becomes available, the medium tanks will perhaps be better than the heavy tank. With this secondary mission in mind the medium tank may be a satisfactory compromise. Some consideration must be given to future battle areas where the heavy tank may prove unable to negotiate the terrain.

In forming the conclusion that the armor was not sufficient for the possible requirements in the beachhead, consideration must be given to the fact that the Allied commanders may have been certain that ~~all of these requirements would not exist~~. Modern War is rarely an economic gain, better to be extravagant than lost. Intelligence evaluation could conceivably have determined that the armored attacks would not materialize. Certainly they did not.

On the other hand, the fortunate discrepancy which occurred in the landings on UTAH beach would indicate the additional armor in the invasion would certainly have been welcome insurance. Had the landings occurred in the areas planned for them, the obstacles and fire would have been much more severe. Quite conceivably the losses in tanks, during landing, would have materially delayed the establishment of the beachhead. It is possible, though improbable that we might have failed to secure the beach.

Conclusions resulting from this study may be summarized as follows:

1. Tank-infantry training must be thorough and adequate at all levels.

2. Air isolation of a battlefield area is effective.

3. Air and sea bombardment in support of amphibious landings must be close and continuous.

4. Tank and artillery fire from landing craft is not effective due to the roll of the craft.

5. A command decision must be made whether or not to beach landing craft or ships, risking loss, in order to put ashore essential assault elements.

6. The former design of DD tanks did not give seaworthiness.

7. Engineers cannot clear obstacles and mine fields efficiently when they are under fire.

8. The intelligence estimate must be thorough regarding terrain and its "tankability."

Any adverse criticism of an operation as successful as the invasion of the CONTINENT is to be taken with tongue in cheek. It can be useful only if it points toward the consideration of additional factors in similar future operations. No doubt many things were considered in the planning of the invasion which could not be recorded. The planning may have been as comprehensive and perfect as were the results. This report has attempted only to point out that the role of armor in unfavorable terrain, in

reinforcing the infantry, and in antitank defense, must be carefully weighed before limiting the quantity in amphibious operations. An adequate amount of armor must be provided even at the expense of losing critically short landing craft. The "Lance Corporal" will not again be the defender and the new defender may not suffer the same malady of indecision.

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APPENDIX A

FRIENDLY ORDER OF BATTLE

Major Infantry and Tank Units which participated in Operation Neptune from 6 to 11 June 1944.

Allied Chain of Command

SHAEP

General Eisenhower

21st Army Group
General Montgomery

First U. S. Army
Lt. General Bradley

V Corps (Omaha)
Major General Gerow

1st Infantry Division
2nd Infantry Division
29th Infantry Division
2nd Ranger Battalion
5th Ranger Battalion
3rd Armored Group

741st Tank Battalion, Medium
743rd Tank Battalion, Medium
745th Tank Battalion, Medium
747th Tank Battalion, Medium

VII Corps (Utah)
Major General Collins

4th Infantry Division
9th Infantry Division
82nd Airborne Division
101st Airborne Division
90th Infantry Division
6th Armored Group
70th Tank Battalion, Medium
746th Tank Battalion, Medium
4th Cavalry Group
4th Cavalry Squadron
24th Cavalry Squadron

Names of the American Commanders as they arrived by sea or air in Normandy. The numerous changes which occurred during and after the landings have not been recorded.

1st Infantry Division, Major General Clarence R. Huebner

16th Infantry Regiment, Colonel George A. Taylor

1st Battalion, Lt. Col. Edmund F. Driscoll

2nd Battalion, Lt. Col. Herbert C. Hicks, Jr.

3rd Battalion, Lt. Col. Charles T. Horner, Jr.

18th Infantry Regiment, Colonel George A. Smith, Jr.

1st Battalion, Lt. Col. Robert H. York

2nd Battalion, Lt. Col. John Williamson

3rd Battalion, Lt. Col. Joseph W. Sisson, Jr.

26th Infantry Regiment, Colonel John F. R. Seitz

1st Battalion, Lt. Col. Francis J. Murdock, Jr.

2nd Battalion, Lt. Col. Derrell M. Daniel

3rd Battalion, Lt. Col. John T. Corley

2nd Infantry Division, Major General Walter M. Robertson

9th Infantry Regiment, Colonel Chester J. Hirshfelder

1st Battalion, Lt. Col. H. K. Wesson

2nd Battalion, Lt. Col. Walter M. Higgins, Jr.

3rd Battalion, Lt. Col. Paul V. Tuttle

23rd Infantry Regiment, Colonel Hurley E. Fuller

1st Battalion, Lt. Col. William Humphries

2nd Battalion, Lt. Col. Raymond B. Marlin

3rd Battalion, Lt. Col. John B. Naser

38th Infantry Regiment, Colonel Walter A. Elliott

1st Battalion, Lt. Col. Frank T. Mildren

2nd Battalion, Lt. Col. Jack K. Norris

3rd Battalion, Lt. Col. Malcolm R. Stetts

4th Infantry Division, Major General Raymond O. Barton

8th Infantry Regiment, Colonel James A. Van Vleet

1st Battalion, Lt. Col. Conrad C. Simmons

2nd Battalion, Lt. Col. Carlton O. MacNeely

3rd Battalion, Lt. Col. E. H. Strickland

12th Infantry Regiment, Colonel Russell P. Reeder

1st Battalion, Lt. Col. Charles L. Jackson

2nd Battalion, Lt. Col. Dominick Montelbano

3rd Battalion, Lt. Col. Thaddeus R. Dulin

22nd Infantry Regiment, Colonel Hervey A. Tribolet

1st Battalion, Lt. Col. S. W. Brumby

2nd Battalion, Lt. Col. Earl Edwards

3rd Battalion, Lt. Col. Arthru S. Teague

9th Infantry Division, Major General Manton S. Eddy

39th Infantry Regiment, Colonel Harry A. Flint

1st Battalion, Lt. Col. Phillip C. Tinley

2nd Battalion, Lt. Col. James W. Lockett

3rd Battalion, Lt. Col. William P. Stumpf

47th Infantry Regiment, Colonel George W. Smythe

1st Battalion, Lt. Col.

2nd Battalion, Lt. Col. James D. Johnston

3rd Battalion, Lt. Col. Donald C. Clayman

60th Infantry Regiment, Colonel Frederick J. DeRowan

1st Battalion, Lt. Col. Carey Cox

2nd Battalion, Lt. Col. Michael B. Kauffman

3rd Battalion, Lt. Col.

29th Infantry Division, Major General Charles H. Gerhardt

115th Infantry Regiment, Colonel Eugene N. Slappey

1st Battalion, Lt. Col. Richard C. Blatt

2nd Battalion, Lt. Col. William E. Warfield

3rd Battalion, Major Victor P. Gillespie

116th Infantry Regiment, Colonel Charles D. W. Canham

1st Battalion, Lt. Col. John A. Metcalfe

2nd Battalion, Major Sidney V. Bingham, Jr.

3rd Battalion, Lt. Col. Lawrence E. Meeks

175th Infantry Regiment, Colonel Paul R. Godde

1st Battalion, Lt. Col. Roger S. Whiteford

2nd Battalion, Lt. Col. Millard G. Bowen

3rd Battalion, Lt. Col. Edward A. Gill

82nd Airborne Division, Major General Matthew B. Ridgeway

505th Parachute Infantry Regiment, Colonel William E. Ekman

1st Battalion, Major Frederick A. Kellen

2nd Battalion, Lt. Col. Benjamin A. Vandervoort

3rd Battalion, Lt. Col. Edward C. Krause

507th Parachute Infantry Regiment, Colonel George V. Millett, Jr.

1st Battalion, Lt. Col. Edwin J. Ostberg

2nd Battalion, Lt. Col. Charles J. Timmes

3rd Battalion, Lt. Col. William Kuhn

508th Parachute Infantry Regiment, Colonel Roy E. Lindquist

1st Battalion,

2nd Battalion, Lt. Col. Thomas J. B. Shanley

3rd Battalion, Lt. Col. Louis G. Mendez

325th Glider Infantry Regiment, Colonel Harry L. Lewis

1st Battalion, Major Teddy H. Sandford

2nd Battalion, Lt. Col. John H. Swenson

3rd Battalion, (2nd Bn., 401 Glider Inf.)

90th Infantry Division, Brigadier General Jay W. MacKelvie

357th Infantry Regiment, Colonel Phillip D. Ginder

1st Battalion,

2nd Battalion,

3rd Battalion,

358th Infantry Regiment, Colonel James V. Thompson

1st Battalion, Lt. Col.

2nd Battalion, Lt. Col. Christian H. Clarke, Jr.

3rd Battalion, Lt. Col. Jacob W. Bealke

359th Infantry Regiment, Colonel Clark K. Fales

1st Battalion, Lt. Col. Leroy H. Pond

2nd Battalion, Lt. Col.

3rd Battalion, Lt. Col. Paul Smith

101st Airborne Division, Major General Maxwell D. Taylor

501 Parachute Infantry Regiment, Colonel Howard R. Johnson

1st Battalion, Lt. Col. Robert C. Carroll

2nd Battalion, Lt. Col. Robert A. Ballard

3rd Battalion, Lt. Col. Julian Ewell

502nd Parachute Infantry Regiment, Colonel George V. H. Moseley, Jr.

1st Battalion, Lt. Col. Patrick J. Cassidy

2nd Battalion, Lt. Col. Steve A. Chappius

3rd Battalion, Lt. Col. Robert G. Cole

506th Parachute Infantry Regiment, Colonel Robert F. Sink

1st Battalion, Lt. Col. William L. Turner

2nd Battalion, Lt. Col. Robert L. Strayer

3rd Battalion, Lt. Col. Robert L. Wolverton

327th Glider Infantry Regiment, Colonel George S. Wear

1st Battalion, Major Hartford T. Salee

2nd Battalion,

3rd Battalion, (1st Bn, 401 Gl. Inf) Lt Col. Ray C. Allen

2nd Armored Division, Major General Edward H. Brooks

CCA., Brigadier General Maurice Rose

CCB., Colonel I. D. White

66th Armored Regiment, Colonel John H. Collier

1st Battalion, Lt. Col. Carl O. Parker

2nd Battalion, Lt. Col. Lindsay C. Herkness

3rd Battalion, Lt. Col. Amzi R. Quillian

67th Armored Regiment, Colonel Paul R. Disney

1st Battalion, Lt. Col. Richard E. Nelson

2nd Battalion, Lt. Col. William M. Stokes, Jr.

3rd Battalion, Colonel Harry Hilliard

41st Armored Infantry Regiment, Colonel Sidney R. Hinds

1st Battalion, Lt. Col. Martin J. Morin

2nd Battalion, Lt. Col. Wilson D. Coleman

3rd Battalion, Lt. Col. Marshall L. Crawley, Jr.

702nd T.D. Battalion (SP). Lt Col. John A. Beall

2nd Ranger Battalion, Lt. Col. James E. Rudder

5th Ranger Battalion, Lt. Col. Max E. Schneider

3rd Armored Group, Colonel Severan D. McLaughlin

741st Tank Battalion, M., Lt. Col. Robert N. Skaggs

743rd Tank Battalion, M., Lt. Col. John S. Upham, Jr.

745th Tank Battalion, M., Lt. Col. Wallace Nichols

747th Tank Battalion, M., Lt. Col. Stuart G. Fries

6th Armored Group, Colonel Francis F. Fainter

70th Tank Battalion, Lt. Col. John C. Welborn

746th Tank Battalion, Lt. Col. Clarence G. Hupfer

4th Cavalry Group, Colonel Joseph M. Tully

4th Cavalry Squadron, Lt. Col. E. C. Dunn

24th Cavalry Squadron, Lt. Col. F. H. Gaston, Jr.

ENEMY ORDER OF BATTLE

General

The German command was controlled by Hitler and as a consequence strategy suffered materially. Some of the officers of the German command believed that the Allied preparations for invasion were sheer bluff; others doubted the imminence of any large scale amphibious attack. Due to this misapprehension and coupled with the fact that the German supreme command was not a unified, well coordinated body of experienced combat officers but was composed of armchair strategists influenced by Hitler, the Germans were not able to duplicate their sweeping victory of 1939-41.

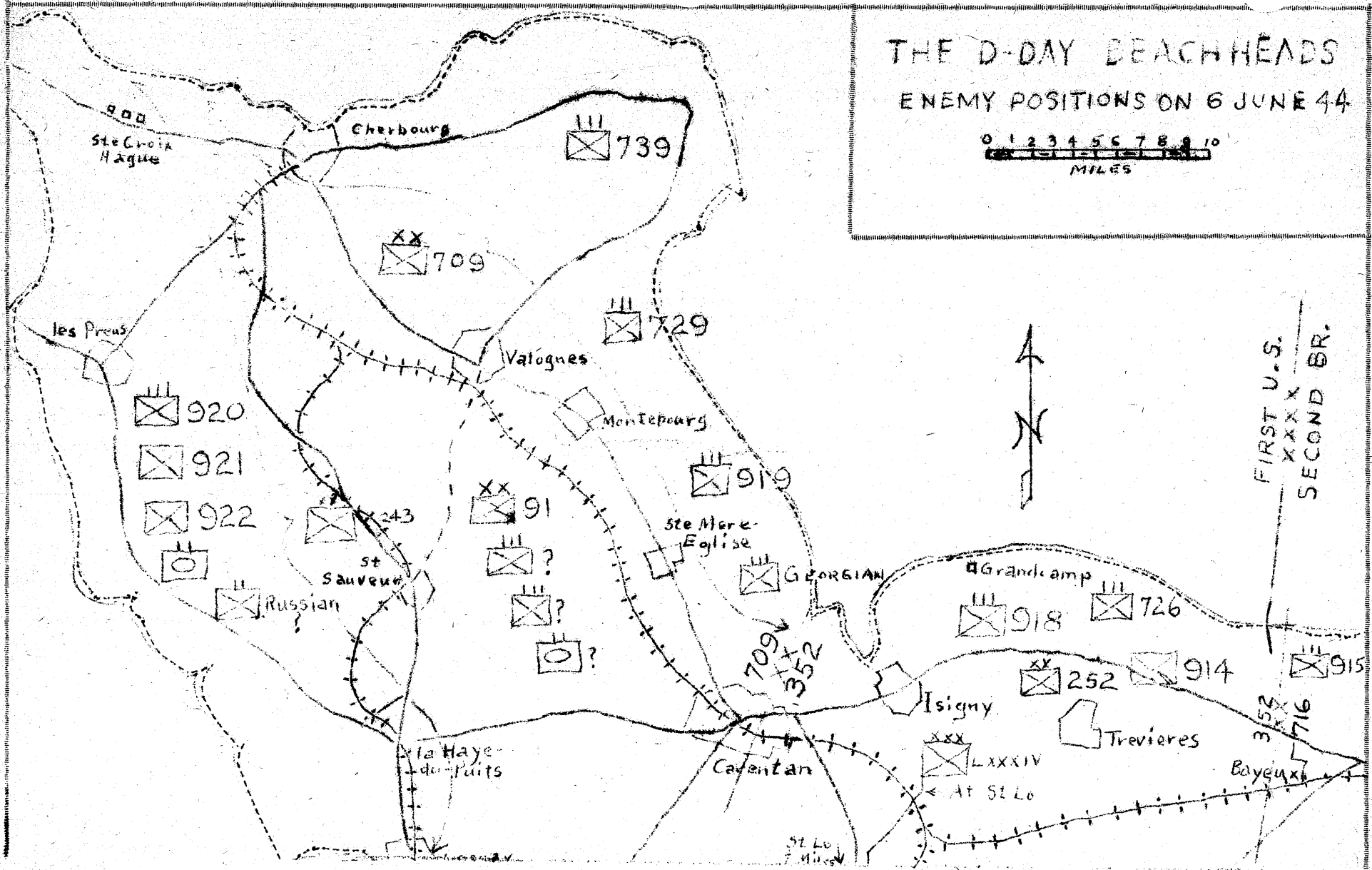
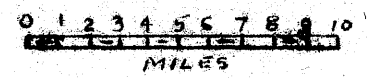
By the end of 1943, Hitler recognized the fact that he could no longer hope to mount a decisive offensive in the East. The only choice, if war was to be continued, lay in gaining a defensive success in the west, sufficiently conclusive to force a negotiated peace. The estimated sixty divisions that were freed for the fight in the East might yet permit a stalemate with the Soviet Union. Such was the cornerstone of the German strategy for 1944.

The Western Defensive Armies

Field Marshal Rundstedt commanded OB West and had his headquarters at ST. GERMAIN. His forces were disposed from the Atlantic Wall to the Siefried Line. The mission of OB West was to defend Holland, Belgium, France and the Channel Islands against

THE D-DAY BEACHHEADS

ENEMY POSITIONS ON 6 JUNE 44



any attack. Of these sixty divisions as estimated in OB West, seventeen were infantry divisions, twenty-six were characterized as "limited employment" units (coastal defense units of limited mobility), seven were training units and ten were panzer or panzer grenadier divisions.

Field Marshal Rommel commanded Army Group B, technically under OB West but not completely subordinated to it. For this reason, OKW, superior headquarters of OB West, was frequently required to resolve conflicts in tactical views between Rommel and Rundstedt. OKW, though doubtful, was inclined toward Rommel's theory of the defense.

Rommel represented the tactical view that as many forces as possible should be concentrated in the coastal defense itself. Advance detachments of panzer divisions and most of the reserves, especially panzer units, were to be brought up as close as possible to the coastline. Any enemy landing force was to be defeated while still afloat and allowed to gain no foothold on land. The coastal defense was a linear tactical disposition. Rommel's view would prematurely tie up the bulk of the forces in beach defense.

On the other hand, Rundstedt contended that the reserves should be only so close to the coast as to enable them to take part in the first day's combat, while at the same time they would, prior to their commitment, remain out of reach of the long-range artillery, naval guns and close support bombers delivery the preparatory fires for the invasion forces. Disposing the reserves

in this way constituted, at the same time, an effective measure against air landings. Most important, though, was keeping open the possibility of shifting or withdrawing reserves, particularly panzer units.

The sector in which the blow was actually to fall came under the German Seventh Army, commanded by Col. Gen. Friedrich Dollman, with headquarters at LE MANS in NORMANDY. Actually, the LXXXIV Corps, located at ST LO was responsible for the defense of the French coast from the ORNE RIVER to the northeast corner of BRITANNY.

Other Defensive Preparations in the West

Supplementary to this Army picture, mention may be made of the Navy Group West of the Germany Navy, under the command of Admiral Krancke, which helped in the defense of the Atlantic Wall. This unit was not under the OB West except the naval elements employed in coastal defense on land. These were chiefly in harbor areas and in the naval signal installations under the operational control of the OB West.

Likewise, the Third Air Force of the Luftwaffe, under the command of General Sperrle, with the mission of supporting the defense of the Atlantic Wall, was not under the command of OB West. It was just "cooperating" with OB West. Apparently Reichmarshal Herman Goering, Commander in Chief of the Luftwaffe, considered at one time, the possibility of committing the whole of his fighter force against the expected invasion but was forced to

abandon the idea. Allied bombings had hit hard at Luftwaffe ground installations in FRANCE. If the Luftwaffe moved large numbers of fighters to FRANCE, months ahead of time, it would have been inviting destructive fights with Allied planes which it could not afford. Moreover, Goering was reluctant, for obvious political reasons, to strip Germany of fighter protection.

The main line of resistance of the Atlantic Wall was the beach. Mine fields were integrated into the scheme of strong-points which composed the Atlantic Wall. Other obstacles were erected between the strongpoints. Field Marshal Rommel, after taking over command of Army Group B, estimated that fifty million mines were needed for continuous defensive belts but only five or six millions were laid by D-day. Rommel also introduced a new defense consisting of underwater obstacles designed to wreck landing craft. In NORMANDY, hedgehogs and tetrahedra, formerly placed inland as tank obstacles, were moved to the beached believed suitable for enemy landings. These were supplemented by Belgian Gates, gate-like barricades constructed of steel angles and plates which were mounted on small concrete rollers, and stakes slanting seaward. The intention was to cover every possible landing beach between high and low water marks with obstacles staggered so as to leave no free channel for even a flat bottomed boat to reach the shore.

Rommel sought to make the expected invasion physically impossible with all these obstacles. He believed he could

hopelessly entangle Allied ships and men in a vast complex spider web of obstacles. The Allied force thus entangled would then be given the paralyzing sting by the German Army awaiting at the water's edge.

Omaha Beachhead

First phase, D-day and D-plus one, the beach assault. On D-day, the enemy reacted strongly to the assault and employed, to a maximum advantage, his defensive fires on the beach. No sustained counterattack was made on D-day. All action came from prepared and previously occupied defensive positions.

The forces then available on the coastal sector were the 726th Infantry Regiment occupying the prepared defensive positions from the mouth of the DOUVIERS to BAYEUX and three regiments of the 352nd Infantry Division with the mission of reinforcing the permanent coastal strongpoints and providing the reserve for local counterattacks. The 726th was attached to the 352nd Division. The organic regiments of the division with their sectors were: 914th Regiment sector from the mouth of DOUVIERS to GRANDCAMP, inclusive; 916th Regiment from GRANDCAMP to TREVIERES, exclusive; and the 915th Regiment from TREVIERES to a boundary beyond the OMAHA area.

All defenses were manned. Extremely heavy and accurate artillery and mortar fire covered all beaches and exits. Mobile Nebelwerfers were used. The permanent battery at POINTE DU HOE was neutralized early by combined efforts of air, navy and rangers.

but batteries from MAISY, ASNIERRES, FORMIGNY and LE MOLAY continued to be effective throughout the day. In addition, antitank guns, self-propelled artillery, chiefly 75-mm and 88-mm, and fixed cannon fired throughout the day at all targets. Automatic and rifle fires were encountered inland. Sniper fire continued on the beach throughout the period. In general, coastal defenses in the sector assaulted were considerably heavier than anticipated by the Allied forces.

Local reserves of the 915th and 916th Regiments were committed early. This commitment was largely defensive in nature, against break-throughs. No general reserves reacted.

Rommel had prescribed that local supply installations would be within the defensive areas of the local strongpoints. The defending troops had adequate supplies of all kinds.

Second phase, D plus two and three, capture of ISIGNY. Information on actual locations of enemy forces was meager except from prisoners. It was evident that the enemy was withdrawing from some inland positions. Strongpoints north of ISIGNY continued to hold but the Allies captured GRANDCAMP. They also overcame the resistance on the ridge at OSMANVILLE. The attack on ISIGNY surprised the defenders and the bridge was not blown. In the city, sniper fire was delivered but there was no organized defense. The line BOIS DE CALLETE-VOUILLY was defended. Isolated strongpoints continued to hold out.

The attackers identified elements of the 352nd Division and Naval personnel as the defensive forces. The 352nd Division between having elements forced into action and attempting to withdraw to ST. LO~~ste~~ to organize a counterattack was becoming badly disorganized. The 914th attempted to withdraw west of the VIRE; the 916th toward CERISY. Both were intermingled with the 915th. Division directed the organization of Kampfgruppe forces east of the VIRE. West of the VIRE, between CARENTAN and ISIGNY, organization was maintained and attempts were made to retake ISIGNY and infiltrate back into the strongpoints north of the town.

The 352nd employed defensive hedgerow tactics. The lack of organization prevented these from being every effective. The surprise attack on ISIGNY carried through the town to take an elaborate pillbox before the defense could take any effective action. Artillery continued to fire on beach targets. The confused situation prevented the use of artillery to support the hedgerow fighting. Mobile guns were the only support for these small groups which were being forced back by the pressure of the invaders. Civilians and agents left behind, spread rumors which had some effect on the Allies.

The 352nd Division continued to make small local counterattacks and tried to build up a force for a larger thrust. The reconnaissance elements of the 17th SS Panzer Division arrived in the area but were not committed. The 3rd Parachute Division was in action at the base of the COTENTIN PENINSULA.

The small local supply dumps continued to resupply the German forces. The withdrawal was causing them considerable loss of equipment.

Third phase, D plus 4 through 6, advance to the ELLE RIVER.

The retreat to the south of the ELLE RIVER now became, in many cases, hasty. The 352nd Division had little hope of concentrating any force for a counterattack. It was collecting its elements on the south bank of the ELLE for the organization of Kampfgruppe (battle-groups). The 423rd Infantry Division, defending in the UTAH sector, was met by OMAHA forces trying to establish contact with the VII Corps at CARENTAN.

Utah Beachhead

As in OMAHA BEACH, man-made defenses along the coast took various forms. On the beach itself rows of obstacles had been emplaced at a distance of from 50 to 130 yards seaward.

The main line of defense was immediately behind the beach along the sea wall. This line consisted of pillboxes, tank turrets mounted on concrete structures, firing trenches and underground shelters. These were usually connected by a network of wire protected trenches within the area of the mine fields and antitank ditches. Concrete strongpoints provided interlocking bands of fire. These emplacements were for the infantry but were also armed with both fixed and mobile light artillery pieces.

One difference between UTAH and OMAHA beaches was that the fixed infantry defenses were more sparsely located. This is

explained by the reliance placed on the inundated area directly behind UTAH BEACH. Roads leading to the beach were covered by a linear series of infantry strongpoints, armed chiefly with automatic weapons. About two miles inland on the coastal headlands behind UTAH BEACH were several coastal and field artillery batteries, the most formidable being those at CRISBECQ and ST. MARTIN-DE-VARREVILLE. Here heavy and medium caliber guns, housed in a series of concrete forts, were sited to cover both the sea approaches and the beach areas.

Troop disposition. The CONTENTIN PENINSULA lay within the defensive zone of the Seventh Army. Early in May 1944, Allied intelligence estimates placed the enemy force occupying the COTENTIN at two infantry divisions, the 709th and 243rd. The 709th was disposed generally along the east coast of the peninsula, with two of its regiments, the 729th and 919th, believed to be manning the beach defenses. The 243rd division was located generally to the rear of the 709th, with the mission of defending the western portion of the peninsula.

About ten days before D-day, it was learned that enemy dispositions in the COTENTIN had probably been altered as a result of the recent arrival of the 91st Division in the CARENTAN-ST. SAUVER-LE-VICOMTE-VALOGNES area. This division was estimated to consist of two or three regiments and one tank battalion. The mission of the 91st was apparently to strengthen the defense of the eastern half of the peninsula from CARENTAN to VALOGNES.

These three divisions were part of the LXXXIV Corps, which also controlled other divisions east of the COTENTIN PENINSULA.

The invasion. The German high command estimated that the Allied invasion attempt was imminent in May 1944. However, the actual landing on 6 June took the enemy by surprise. Field Marshal Rommel was not present at the front and the troops in the sector were taken out of their defense positions to construct additional fortifications.

Word of the Allied landings reach Hitler's headquarters about four hours after the first airborne troops came down in the peninsula, but it was not until several hours later that the landings were reported as part of a full-scale invasion and not until late in the day that even the Seventh Army realized that seaborne landings had taken place at UTAH.

Armored Units

There is no mention of German Panzer units being used against the American sectors of the invasion of the Continent. The 746th Tank Battalion was in a small action against a few German tanks. No other armored action occurred in the establishment of the two beachheads. Had the Germans used their panzer divisions to advantage, it might have turned the tide of battle in these areas in their favor. These panzer divisions were located at inland points for the purpose of being moved into any threatened coastal areas. During the month of May, Allied intelligence reported the presence of the 21st Panzer Division south of CAEN, within the

invasion zone of the Second British Army. Intelligence also estimated that enemy build-up would include eight armored units by D plus three, assuming no interference to his road and rail movements, depending on the success of Allied air attacks.

On 6 June, the 21st Panzer Division was attached to the Seventh Army and ordered to attack in the CAEN area, with its main effort east of the ORNE river. The 12th SS Panzer Division was also to be committed in this sector. These two divisions, with the Panzer Lehr Division and the 2nd Panzer Division, formed the I SS Panzer Corps. The whole corps operated within the zone of the British Army. None of these units ever reached the NORMANDY beach where the U. S. Army operated.

The 17th SS Panzer Division, located south of the LOIRE RIVER, was alerted on 7 June to move to the scene of the coastal action. It did not reach its assembly area in rear of the Seventh Army, southwest of CARENTAN, until 11 June. Not only was its movement slow but also its losses were heavy during the movement. Allied air inflicted such damage on vehicles, assault guns and supplies that its fighting ability was seriously crippled. Not until 13 June could the divisions deliver its counterattack and by that time the 101st Airborne, reinforced by elements of the 2nd Armored, were strong enough to repel the thrust.

Conclusions

The old chess axiom "Each man is the architect of his own misfortunes" accounts for the German failure to repel the invasion.

In short, it was not that the Allies succeeded, but that the Germans failed. This failure evolved from several factors.

First, the strength of the Atlantic Wall was only a propaganda to the point of self-deception. The actual defenses were not prepared to withstand a powerful thrust.

Second, the German high command's indecision tied up their reserves. The effects of this were augmented by the delay of the High Command headquarters, which was too far to the rear, in making its decisions, and by the restriction of movement imposed by Allied air action. Nevertheless, the indecision was the basic fault. Even vigorous action could **not** have regained time for the effective employment of these reserves.

Third, the lack of unity in command and policy in the defense gave rise to both the incompleteness of the Atlantic Wall and the indecision in committing the reserves. Lastly, the Germans miscalculation of both their own and Allied capabilities. The defending units were well aware of the restrictions on their mobility due to the Allied air action. Any proper evaluation of enemy capabilities should have indicated the impossibility of executing the cover plan. But could any headquarters in the German hinterland have kept abreast of the situation developing on the northern coast of FRANCE? All of these played an important part in allowing the Allies to get a foothold on the Continent. In the week that followed, the same weaknesses, exploited in particular by the overwhelming Allied air power, provided time for the powerful build-up over the beaches which insured that the invasion forces were there to stay.

ENEMY CHAIN OF COMMAND AND ORDER OF BATTLE FOR UTAH BEACH

Supreme Command West
General Field Marshall Gerd Von Rundstedt

Army Group B
General Field Marshall Erwin Rommel

Seventh Army
Generaloberst Friedrich Dollman

LXXXIV Corps
General der Artillerie Erich Marcks

Units of LXXXIV Corps identified on VII Corps front from D-day to
12 June

709th Division - Genlt Karl W. von Schlieben, CG
919th Grenadier Regiment
729th Grenadier Regiment
739th Grenadier Regiment
649th OST Battalion, attached
795th Georgian Battalion, attached
Sturm Battalion ACK 7, attached

243rd Division - Genlt Heinz Hellmich, CG
920th Grenadier Regiment
921st Grenadier Regiment
922nd Grenadier Regiment

91st Luftlande (Airborne) Division - Genmaj. Wilhelm Falley, CG
1057th Grenadier Regiment
1058th Grenadier Regiment
6th Parachute Regiment, attached

APPENDIX B

TERRAIN ANALYSIS FOR OPERATION NEPTUNE

The location selected for the assault landing of the FIRST U. S. ARMY in France was on the eastern shore at the base of the COTENTIN PENINSULA. A consideration of the tactical aspects of the terrain is necessary in order to recognize the important effects it had upon the operation. To accomplish this, we shall consider the analysis for UTAH BEACH and, second, that of OMAHA BEACH.

UTAH BEACH

The overall shore line designated as UTAH BEACH extended from a point northeast of RAVENOVILLE to POINT DE LA MADELEINE, a distance of approximately 9,600 yards. Offshore the beach was somewhat sheltered by the ILES ST. MARCOUF and the banks extending northwest and southeast from the Iles about four miles offshore. On the south, the beach gradient is approximately 1:200 from a low water mark for $\frac{2}{3}$ of the width, and 1:60 from that point to high water. On the north, the gradients are approximately 1:280 and 1:80 for the same relative widths. The spring tide varies from twenty-two to twenty-six feet, while the neap tide varies between a mean low water of seven to nine feet and a mean high water of nineteen to twenty-one feet. The high tides hold for a period of 75 to 105 minutes with a stage variation of less than one foot.

A sheltered anchorage $2\frac{1}{2}$ miles offshore is from twenty-four to fifty-four feet deep. There are numerous submerged rocky ledges near low water line in the vicinity of QUINEVILLE which are covered to a depth of eight feet at high tide.

The beach varies in width between eight hundred and twelve hundred yards. It is backed for its entire length by a masonry sea-wall ranging in height from four to twelve feet. Behind this sea-wall is an embankment ten to twenty feet high and beyond this, sand dunes extend inland along much of the beach for 150 yards. Inland from the sanddunes, the area is low pasture land which the Germans inundated to form a strong barrier to landing forces.

Artificial beach obstacles first appeared at QUINEVILLE, north of UTAH BEACH, early in the year. By 8 March, a total of one thousand obstacles had been laid on the northern half of UTAH BEACH. Identified obstacles, prior to the landings, consisted of the following: (1) Concrete and masonry wall ranging in height from three to ten feet, built primarily as a sea-wall. (2) Rows of fabricated steel obstacles at and above the high water mark and twelve to sixteen feet below high water mark. (3) Bands of barbed wire on the beach and inland. (4) Steel hedgehogs in staggered rows near the back of the beach. In considering counter-measures, it had to be assumed: (1) That any or all four types of obstacles may be encountered either alone, or in combination with other types, at all of the beaches. (2) Mines and wire would probably be used to strengthen the obstacle area. (3) That

at H-hour the obstacles would be found within the tidal limits of the beach, both above and below the water line.

Obstacles of the following type would undoubtedly be present, although not identified: (1) land mines on the beach above the high water mark and in the sand dunes behind the beach, (2) portable concrete and steel obstacles on roads and beach exits, (3) portable wire obstacles on roads, (4) driven piling, steel rails, etc., at the low water mark, (5) extensive craters created by friendly aerial or naval bombardment as well as prepared charges of the enemy.

The area immediately inland from the beach designated as UTAH was a long line of sand dunes fifty to one hundred yards wide, rising ten to twenty-five feet above the high water line immediately behind the sea-wall. They extend inland on the northern sector about two hundred yards and on the south about six hundred yards. These dunes had been created by the fine sand of the beach being blown inland by the wind. Beyond the sand dunes the land sloped gently westward for a distance of one-half to one mile to the main channel of a sluggish stream. From here it rose gently to the relatively high ground two or three miles inland from the beach. The low ground west of the beach extended from north of QUINEVILLE, south to POUPEVILLE, and had been in years past a swampy salt marsh. Many years of work had reclaimed practically all of the land. The main lock south of POUPEVILLE, several small locks along the east coast, and a dam at QUINNEVILLE had

been constructed in conjunction with dikes, and by operating the gates at low tide and closing them at high tide the land had ultimately been drained and covered with pasture and marsh hay. The entire area was a network of small drainage channels. By the simple expedient of reversing the operation of the locks and permitting the sea to flow inland at high tide, the Germans had converted the area into a formidable water barrier. The crest of the dam on the SINOPE RIVER at QUINEVILLE had been raised early in 1944, and a channel cut to the southward, causing this river to flow into the low area south of QUINEVILLE and increasing the inundation. The water level in the inundated area had varied from a high during February and early March, decreasing through April and increasing again in May. The depth of the water varied from two to four feet.

Hard surfaced axial roads were anticipated to be approximately twelve inches above maximum flood stage. Standing timber suitable for bridge timbers was scarce.

Observation was very poor in most of the UTAH sector. Visibility was limited due to the abundance of scattered lines of high shrubs along fields. Camouflage was readily secured by parking along side of hedgerows, farms and wood patches combined with the use of nets.

The road network in the COTENTIN PENINSULA consists of a few routes, sixteen to twenty feet wide, a good secondary net ten to twelve feet wide, and numerous dirt roads. In cross section,

the main roads have a good crown, a six foot berm, and a deep ditch. Beyond the ditch, a heavy hedge invariably exists. Surfaces on these roads are tar-bound macadam over a thick base of compacted stone. Normally, the roads have easy curves, and except for a few locations in towns, no bottlenecks exist. The secondary roads, are likewise high crowned but with narrow shoulders and deep ditches backed by hedges. Surfaces are tar-bound macadam in some instances but the majority are water bound and become very dusty under traffic.

A stone surfaced road about twelve feet wide runs south from QUINEVILLE parallel to and within several hundred yards of the axial road which was selected for the initial beach. A number of exits from the beach lead to this parallel road. Most of the exits had been blocked by concrete or steel obstacles. At many points near the southern end of this road, its surface was covered with water. Within the limits of UTAH BEACH, four waterbound macadam roads approximately fifteen feet wide exist. The surface of the two southernmost roads had never been inundated; the two northernmost had been covered for short lengths with sheet water. These four roads had been built up during a period of years, and it was expected that by careful maintenance they would provide two one-way traffic loops from the beach to the beach dump areas on the high ground in the FOUCARVILLE-STE. MARIE DU MONT-STE. MERE EGLISE area which was designated as the beach dump and transit area. Numerous dirt roads and farm trails also existed through

the area, but these were under several feet of water and it was not expected that they would be of any value except for the passage of men and light, tracked M-29 "Weasel". Because of the numerous bridges and culverts and the high fill, the extremely potent capability of bridge and culvert demolition and road cratering by the Germans existed.

The circumstance of the landings having occurred twenty-two hundred yards south of its planned location, inadvertently resulted in the use of the best road through the inundations as a main axial route. The road upon which the beach was centered had a good surface, was wide enough for the passage of limited two-way traffic, and at no place was it inundated. Farther to the south was a good return route to the beach, likewise dry, and these two roads carried the major portion of the traffic from and to the beach during the first two days. Farther north, all of the roads were under water for short distances which contributed to their rapid deterioration under heavy traffic.

The dune area, between the beach and the inundations, was heavily mined with both antitank and antipersonnel mines. Most of these had been carefully fenced and marked by the Germans, and the speed of the assault did not permit them to remove the fences. Some marked fields were found to be dummies. Beach exit areas, and roads in most of the beach towns were mined. Very extensive deliberate fields existed on the western and northern side of the peninsula, none of which interfered with our operations.

No extensive minefields were laid by the enemy subsequent to the landing. He did, however, use both antitank and antipersonnel mines to the maximum. Antitank mines were located principally in road shoulders and in the vicinity of craters and destroyed bridges; antipersonnel mines were found at random locations in hedgerows, buildings, paths, and so on among antitank mines. At some road intersections several large cratering charges were found and removed; these had evidently been intended as a road destruction means rather than as an anti-vehicular weapon.

No demolitions and no preparations for demolitions on the roads were found. A short culvert on the main road leading from the initial beach had been destroyed either by the Germans or by the aerial or the naval bombardment immediately preceding the assault. A few of the secondary roads through the inundated area had been cratered, presumably by the Germans. It is assumed that the construction work at the beach defenses and transportation of the large quantities of material required for the beach obstacles had caused the Germans to delay preparations for demolition of the better roads.

One of the missions assigned to the Corps engineers was the drainage of the inundated area as rapidly as the control gates could be secured. Immediately after the landing, the 49th Engineer Combat Battalion moved south from the beach toward POUPEVILLE and LE GRAND VEY and immediately commenced the drainage of the area. As the infantry moved north along the beach, secondary control

points were captured and opened. No appreciable change in the water level occurred for a period of four days and it was not for ten days that the surface of the main roads began to dry. The area had been thoroughly studied for months prior to the invasion with the purpose in mind of locating the structures which controlled the water level. About one week after the landing a French civilian who was the president of the drainage cooperative organization, requested authority to commence operation of the control points to secure the pasturage area for cattle. Interrogation of this individual revealed that all of the major control points had been located accurately from aerial photographs, and that the increase in elevation of the crest of the dam at QUINEVILLE had been accomplished by the Germans to increase the depth of the inundations behind the northern part of the beach.

Starting with the built-up earth hedgerows, the Germans had developed a number of field fortifications that provided excellent protection against our artillery. One and two-man foxholes and slit trenches, generally connected by shallow communication trenches, were dug behind many hedgerows.

In the corners of many fields were angled slit trenches with adjacent shelters. Small clearings on top of the hedgerows provided excellent fields of fire or observation from these vantage points. Narrow sunken country lanes proved a boon to the defenders of the area in question. Not only did these lanes provide concealed supply routes, they also served as ready-made

field fortifications. Along the edges of many of these roads were found firing slits and peep holes, some with adjacent foxholes, slit trenches or shelters, and others designed for prone positions firing or observation. Mortar-proof and light artillery-proof dugouts and shelters sufficient to accommodate defending personnel were found to have been constructed as part of or immediately adjacent to these various systems of trenches, firing slits, observation points, etc. These fortifications were generally well camouflaged, and their reduction required much close-in fighting with a consequent high casualty rate for the attackers.

OMAHA BEACH

The area selected as OMAHA BEACH was a five-mile cliffless interval stretching east from the seaside village of GRAND-CAMP. That part of the stretch was regarded as suitable for landing operations was about eleven thousand yards long, on a shore which curves landward in a very slight crescent and is backed with bluffs which merge into the cliffs at either end of the sector.

The beach sloped very gently below highwater mark. With a tidal range of eighteen feet expected at the period of the assault, low tide would expose a stretch of firm sand averaging about 300 yards in distance from low-water mark to the high water mark. The enemy had placed underwater obstacles on this tidal flat. At high tide, men and vehicles wading up the beach could expect trouble with irregular runnels parallel to the shore, scoured out by the tidal current and two and one-half to four feet deep.

At the high-water mark, the tidal flat terminated in a bank of coarse shingle rock, sloping up rather steeply to a height of some 8 feet. In places it was as much as fifteen yards wide, and the stones averaged three inches in diameter. On the eastern two-thirds of the beach, the shingle lay against a low sand embankment or dune line and constituted a barrier which was impassable for vehicles. On the western part of the beach the shingle was piled against a seawall, first (near the VIERVILLE D-1 exit) of stone masonry sloping seaward, then of wood. The wall varied in height from four to twelve feet and was broken by a gap several hundred yards wide where the tidal flat ended in shingle and embankment. Immediately behind the seawall a paved, promenade beach road ran from Exit D-1 to Exit D-3, then became a rough track going as far as Exit E-3.

Between the dune line (or seawall) and the bluffs lay the beach flat. Very narrow at either end of the main landing zone, this level shelf of sand widened to more than 200 yards near the center of the stretch. Except at the VIERVILLE end, the flat had large patches of marsh and high grass, usually near the edge of the bluffs. Toward Exit D-1, a number of summer villas lined the shelf behind the promenade road, and at Exit D-3 lay a small village, LES MOULINS, with buildings clustered on the road running back inland from the beach. Many of these had been razed by the Germans to improve fields of defensive fires. East of LES MOULINS there were only a few scattered houses.

Bluffs 100 to 170 feet in height rise sharply from the flat and dominate the whole beach area. The slopes are generally steep, but in varying degree. They are most abrupt between Exit D-1 and Exit D-3; farther east, the rise is easier but reaches higher elevations (150 to 165 feet) fairly close to the beach flat. The grass-covered slopes are more uneven than they appear when viewed from only a short distance. Many small folds or irregularities provide opportunity for cover from flanking fires, and from Exit E-1 eastward the bluff sides are partly covered with low scrub and brush. Along most of the stretch, the bluff ends in a clearcut crest line as it reaches the edge of the inland plateau; toward the eastern end, where the slopes are longer and more gradual, the edge is not sharply defined.

At four points along OMAHA BEACH small wooded valleys sloped back inland and provided natural corridors for exit from the beach flat. A paved road led off the coast at Exit D-1; the other draws had unimproved roads. These corridors were, inevitably, key areas both in the plan of attack and in the arrangement of defenses. The advance inland of assaulting units would depend on opening exit roads for traffic and supply from the beach, and armor used in the attack could only get up to the high ground through the draws. Near the eastern end of the beach a very shallow and fairly steep draw, followed by a rough trail leading inland, was marked for development as a fifth exit route (F-1).

Once up the steep slopes bordering the beach, attacking troops would get the impression of coming out on a gently rolling plain. Actually, there is a gradual rise to a height of land which parallels the coast about two thousand yards inland and reaches over 250 feet in altitude south of COLLEVILLE. There is no marked "ridge" line whatever, and except for unusually open fields near the bluff between Exits D-1 and E-1, observation in the whole area is severely limited by the numerous hedgerows, orchards, and patches of trees. Three villages, VIERVILLE, ST. LAURENT, and COLLEVILLE (Note: All three have compound names, with ending "SUR-MER". For convenience, and, since there is no danger of confusion with other localities, these endings are omitted) five hundred to one thousand yards inland, were so situated near the heads of the draws and along the coastal highway as to figure inevitably in the defense of main exit routes. These were farming villages, with certain amount of activity in summer as modest beach resorts. Their stone houses were clustered on or near the coastal highway that connected them with GRANDCAMP and BAYEUX.

South of the tableland lies the valley of the AURE RIVER, running from east to west, about two miles behind the beach at PORT-EN-BESSIN and five miles south of it at POINTE DE LA PERCEE. West of TREVIERES the valley plain had been flooded to form a barrier over a mile wide. About TREVIERES, the AURE RIVER was fordable by infantry. Only on the northern side of the valley

are the slopes at all pronounced; at two points (just north of TREVIERS and at MOUNT CAUVIN) the ground close to the river on the north is 150 to 200 feet above the stream, giving good observation into the valley and its main approaches from the south.

South of the AURE the ground rises again, at first very gradually, toward the height of land crowned by CERISY FOREST figured as an important tactical objective, necessary to hold if the beachhead was to be secure. It not only included commanding ground, within medium artillery range of the coast, but offered cover for assembly of enemy forces.

The region west and southwest of OMAHA BEACH figured prominently in D-day plans, for early junction with VII Corps depended on progress in that direction. The flooding of the lower AURE VALLEY had made a peninsula, nearly ten miles long and five miles wide, comprising the low tableland stretching from FORMIGNY-TREVIERES west to the VIRE ESTUARY. In it lay some of the strongest German fortifications, controlling the sea approaches to CARENTAN, and through it from east to west ran the principal highway from PARIS (CAEN) to CHERBOURG and the COTENTIN. The town of ISIGNY, where the highway crossed the AURE, would be a key point in any effort to link the beachheads of V and VII Corps; all east-west communications near the coast funneled through ISIGNY, and from it V Corps could debouch on the lowlands near CARENTAN.

The road net south and west of OMAHA is characterized by the absence of main north-south routes, the few major highways in the Corps zone would be laterals rather than axials. The most important artery is the CARENTAN-ISIGNY-BAYEUX road just noted. Another highway, well paved for two-way traffic, links BAYEUX with the junction point of ST. LO, crossing the CERISY FOREST. From PORT-EN-BESSIN to GRANDCAMP runs a fifteen foot, hard-surfaced road paralleling the coast about a mile inland. North-south roads in the region, at best secondary, are winding and usually narrow; they were expected to present difficulties in the form of steep shoulders and narrow bridges. Local communities are served by many small lanes and tracks, designed for the needs of farmers, but regarded as unsuitable for military use except by infantry. Any advance inland would require, for the supporting vehicular traffic, a great deal of engineering work to develop small roads into suitable north-south axials. Deployment from any of the roads was estimated as likely to be difficult because of the ever present hedges, often combined with embankments. The doubletrack railroad from PARIS (CAEN) to CHERBOURG runs from east to west across the high ground a few miles south of the AURE. Cutting this line at BAYEUX and CAEN, and denying its use to the enemy, was a primary objective in the D-day attack of the British Second Army.

American troops who fought in NORMANDY will always connect the name with hedgerow fighting. They were to begin it as soon

as they left the bluffs above OMAHA BEACH. The field system was characterized by a patchwork layout of irregular fields varying from narrow ribbonlike strips to shapes more nearly square. These ranged in size from ten to fifteen to a hundred acres or more, with the greater number averaging fifty to seventy-five acres. Boundaries between fields followed NNE-SSW and WNW-ESE axis in the OMAHA region, but local variations were numerous, and the boundaries could not be counted on to provide a safe direction line for keeping to an axis of advance. Some hedgerows were of low bushes, five to six feet high, growing from the ground level of the field and not hard to break through. Others were thick, densely matted walls of tough and briery hedge, running up to ten feet in height and interspersed with large and small trees. In many regions the hedges grew out of banks or dikes of earth, forming natural ramparts sometimes six feet high and adding immensely to the strength of the barrier. Many hedge-embankments were not passable for tanks. Drainage ditches were found skirting the hedge or its embankment, and provided good sites for shelters and fox holes. Communication between fields was usually limited to small openings at the corners. Occasional narrow trails or sunken roads, running between parallel hedgerows gave access to fields far off the regular road net.

In general, the limit of vision in NORMANDY was restricted to the next hedgerow; thus, high ground for observation was usually a fallacy. The hedgerows offered an ideal defensive position for delaying action. Although the hedges did cause tree bursts, they

offered complete concealment. These banks lent themselves to complex defensive works, since they could be tunneled with impunity because of the reinforcement by interlacing roots of trees and hedge. A simple protection against tree bursts was provided by covering the ditch with short poles laid side by side and covered with earth and sod.

The initial terrain analysis and consideration of critical features, in respect to military operations, failed to take into consideration the fundamental characteristics as they were to affect ground operations in NORMANDY. The key to German defenses in the CHERBOURG PENINSULA was not to be determined by contour lines, inundations, river systems or comprehensive defense against airborne operations, but in the ancient banks around small fields. In some respect it seems unfortunate the Allied intelligence did not make a greater effort to determine the possible effect that the hedgerows would have upon our operations. A careful check of persons in ENGLAND who had travelled or lived in FRANCE would have added materially to the Intelligence estimate of the terrain.