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**THE OPERATIONS OF A REGIMENTAL PATHFINDER
UNIT, 507TH PARACHUTE INFANTRY REGIMENT
(82ND AIRBORNE DIVISION) IN NORMANDY, FRANCE
6 JUNE 1944
(NORMANDY CAMPAIGN)**

(Personal Experience of a Regimental Pathfinder Leader)

Type of operation described: PATHFINDER OPERATION

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THE OPERATIONS OF A REGIMENTAL PATHFINDER UNIT, 507TH
PARACHUTE INFANTRY REGIMENT (82nd AIRBORNE DIVISION)
IN NORMANDY, FRANCE, 6 June 1944
(NORMANDY CAMPAIGN)
(Personal Experience of a Regimental Pathfinder Leader)

INTRODUCTION

This monograph covers the operation of the 507th Parachute Infantry Regiment, 82nd Airborne Division, Pathfinder Team in Normandy, 6 June 1944.

A clear picture of Pathfinder operations can best be obtained by reviewing briefly the organization, development, and early experiences of Pathfinder teams.

Combat difficulties which put the spotlight on the need for Pathfinder troops first appeared in the invasion of Sicily in July 1943. The 82nd Airborne Division was assigned the mission of seizing and holding one of the principle Sicilian airfields and assisting in the amphibious landing of the First Division. Two airborne battalions dropped thirty miles from their designated drop zones. Another battalion jumped fifty-five miles from its objective and fought with the British forces for six days. A fourth battalion, coming in on D plus 1, lost twenty-three of its troop carriers to Allies anti-aircraft fire. (1)

Although Pathfinder teams were not used during the Sicilian operation, training of advance airborne parties had been initiated by the 509th Parachute Infantry Battalion at Oujda, Morocco, in March 1943. Here the Pathfinders were organized as a Parachute Scout Company, consisting of three platoons, each platoon having two squads of eight men. The mission of the Parachute Scout Company, as envisioned at this time, was to precede the main body of airborne forces to the designated areas of initial invasion and by the use of Aldis Lamps (high powered lights that could be seen at a considerable distance), flares, and smoke pots, to mark off drop zones for parachutist and landing zones for gliders. (2)

(1) A-12, p. 2; (2) Personal Knowledge, Statement of Capt. Fred E. Perry, Scout Company Commander, 19 December 1947.

Further Pathfinder work was undertaken at Agrigento, Sicily, in August, 1943, shortly after the completion of the Sicilian campaign, through the efforts of Colonel (now Major General) James M. Gavin, Commanding Officer of the 505th Parachute Infantry Regiment, and Lieutenant Colonel Joel L. Crouch, A-3 of the 52nd Troop Carrier Wing. Lieutenant Colonel Charles Billingslea, former Commandant of the Airborne Training Center at Oujda, Morocco, and chiefly responsible for the work of the Parachute Scout Company there, was placed in direct charge of the organization and training of the Pathfinder units. The 504th, 505th Parachute Infantry Regiments and the 509th Parachute Infantry Battalion each sent three Pathfinder teams to Agrigento for indoctrination in these new Pathfinder methods. In this new plan pathfinders dropped ahead of airborne invasion forces to set up radar apparatus, radio beacons and other improved locator aids. Training was greatly accelerated due to the imminence of the invasion of Italy. (3)

On 13 September 1943 the 504th Pathfinder team took off from Agrigento, Sicily, in planes flown by combat seasoned pilots. With good piloting and dead reckoning navigation the Pathfinder team hit the designated drop zone, south of Paestum, Italy, without error. Radar, radio beacon and other locator equipment were set up immediately. Twenty-five minutes later the first planes of the 504th Parachute Infantry Regiment's main body came directly over the drop zone. Within one and one-half hours ninety plane loads of men and equipment had been accurately dropped. The 505th Parachute Infantry Regiment met with equal success. Both units were dropped in this area to fill a gap existing in the Allied lines. (4)

The Pathfinder team of the 509th Parachute Infantry Battalion parachuted into their drop zone in the vicinity of Avellino, Italy and guided the main elements into the exact area. Eureka's could not be employed by the 509th team due to the fact that planes used in dropping this battalion were not equipped with the necessary "Rebecca" sets. With the employment of the

(3) A-11, p. 7; (4) A-11, p. 10.

"5-C", a British Radio Beacon, men were dropped on small flat areas surrounded by mountains rising sharply to altitudes of three thousand feet. This made it necessary to jump the troops at slightly more than three thousand feet. (5)

The 504th and 505th Pathfinder groups used gasoline drums to mark their drop zones. This innovation, in addition to locating the drop zone for the main elements, indicated the direction of the wind. Other equipment, except for the absence of Rebecca-Eureka sets in the 509th drop, was that used in the training phase at Agrigento, Sicily. (6)

This operation proved conclusively that Pathfinder teams were essential to the success of future airborne invasions. Out of 262 planes 260 dropped their troops on the predesignated targets, a tremendous improvement over the Sicilian campaign. (7)

The eyes of higher commanders began to open to the obvious advantages of employing Pathfinder teams in future airborne operations. A directive from Headquarters, European Theatre of Operations, dated 13 March 1944 established eighteen Pathfinder teams in each airborne division. Two such teams were allotted to a battalion. Each team consisted of one officer and nine enlisted men, reinforced by security personnel. In the procedure outlined by the directive the Pathfinder teams were to drop thirty minutes prior to the arrival of the first serial of the main elements. The thirty minute interval was envolved by mutual agreement between Airborne and Troop Carrier commanders. In the event that the Pathfinder team was neutralized by enemy action a second Pathfinder team, arriving with the first serial was prepared to organize the drop zone. (8)

In order to coordinate operations to a maximum degree the Air Corps was directed to furnish a provisional Pathfinder group to train with the airborne personnel.

(5) A-11, p. 10; (6) A-11, p. 11; (7) A-11, p. 11; (8) A-14, p. 2.

The Signal Corps was given the responsibility of supply and maintenance of special signal equipment (Eurekas, Halophane lights, flares and cerise panels) to be employed by the Pathfinder teams. (9)

The marking of the drop zone was to be accomplished by placing five lights in a "T" arrangement, with a Eureka above the head of the "T". This equipment was to be placed on the ground according to the size and shape of the drop zone and the speed and direction of the wind so that the "Go" signal could be given when the lead plane was directly over the head of the "T". Distances between lights and Eureka are shown in Illustration #1. (10)

Landing zones for gliders were to be marked as shown in Illustration #2. (11)

For operations during daylight hours ^{*}cerise panels and colored smoke, or a combination of both, were to be used in marking drop zones and landing zones. Daylight aids were to be spaced in the same manner as the night aids shown in illustrations number 1 & 2. (12)

Pathfinder planes were to be navigated by dead reckoning, maps checked by Radar aids, and special drop zone and landing zone aerial photographs. (13)

TRAINING FOR NORMANDY

As a result of the European Theatre of Operations directive formally establishing Pathfinders in Airborne divisions, the 505th, 507th and 508th Parachute Infantry Regiments, of the 82nd Airborne Division, each sent six officers and fifty-four enlisted men to North Witham, England for training with the Ninth Troop Carrier Command Pathfinder Group (Provisional). Personnel from the 82nd Airborne Division formed a Provisional Pathfinder company. All potential Pathfinders were "hand picked" from a large group of volunteers. Training consisted mainly in practical work -- dropping

with equipment and organizing drop zones and landing zones for Airborne
(9) A-14, p. 2; (10) A-14, p. 2; (11) A-14, p. 3; (12) A-14, p. 3;
(13) A-14, p. 3.

operations. Special emphasis was placed on night operations. (14)

As training progressed new ideas and practices were developed. A Standing Operating Procedure was set up to control the training and insure coordinated action in combat. The strength of the Pathfinder team was changed to two officers and twelve enlisted men (Team Leader, Assistant Team Leader, Light Section Leader, seven light men, two Eureka operators and two assistant Eureka operators). Instead of the two Pathfinder teams per battalion originally envisioned each battalion group was streamlined to one team. Three Pathfinder teams, each representing a battalion of one regiment, were flown to a drop zone in three planes flying in a tight "V" formation. All Pathfinder troops dropped on the approximate center of a jump field.

Immediately after assembly on the ground the Regimental Pathfinder Leader (usually the senior officer, who was also in command of a Battalion Pathfinder team) selected the location for the "T" of lights carried by his team and ordered them set up. Simultaneously he dispatched the two remaining teams to their general locations, one forward and one to the rear of the base position. The distance between "T's" was usually about 700 yards. As the teams moved away from the base position the Light Section Leader laid assault wire. Each team set up its lights and Eureka's and installed sound powered telephones so that voice communication was available between the battalion teams and the Regimental Pathfinder Leader.

(15)

The Regimental Pathfinder Leader controlled the use of navigational aids by telephone. This permitted the dropping of each Battalion on different sections of the drop zone without losing control and aided considerably the problems of assembly. The Regimental Commander was certain (assuming the Pathfinders were able to complete their missions) of having communication
(14) Personal Knowledge; (15) Personal Knowledge.

with his Battalion Commanders at the very outset of the operation. The organization of a Regimental drop zone is shown in Illustration #3. (16)

Training along these lines was supplemented by additional work in map and aerial photograph reading, physical training and assembly problems. Colored TE-122 flashlights were used in conducting Pathfinder assembly problems. Red, amber and blue lights were employed, each designating the assembly point for one team. The center team (the team commanded by the Regimental Pathfinder Leader) was always designated as the base team to which the other teams reported upon assembly. The Assistant Team Leader for each Battalion was equipped with a light that was raised 15 feet into the air and aided the main elements in assembling. This light, known as the McGill Light, was set up at the battalion assembly point as soon as the battalion serial approached the drop zone. This greatly facilitated the assembly problem, for the light could easily be seen for several miles. A red light indicated the 1st Battalion area, an amber light the 2nd Battalion area, and a blue light the 3rd Battalion area. (17)

This type of training continued up to the time of the invasion. After Pathfinders jumped on and set up drops zones, main elements of the regiments followed them in to carry out complete tactical problems. The Pathfinder teams attained a high proficiency in organizing jump areas. Under favorable conditions twelve minutes ^{was} ~~were~~ all that was required to organize a field from the time the first Pathfinder left his plane until the last light or Eureka was set up. (18)

During the latter part of the training period it was decided to provide Pathfinder teams with security elements. For this purpose one officer and twelve enlisted men from the 504th Parachute Infantry Regiment (all combat veterans) were attached to the 507th and 508th Pathfinder teams. Inasmuch as the 505th had had previous combat experience they provided for (16) Personal Knowledge; (17) Personal Knowledge; (18) Personal Knowledge.

their own security. This meant that each Pathfinder team had four security men. The officer in command of the security detachment accompanied the Regimental Pathfinder Leader. (19)

MISSION

Three weeks prior to the invasion of Normandy the Regimental Pathfinder Leaders from the 505th, 507th and 508th Parachute Infantry Regiments were ordered to return from North Witham, England to their respective units to be briefed for the coming operation. (20)

The mission of the 82nd Airborne Division was to land by parachute and glider during the early morning hours of D-Day west of St-Sauveur-Le-Vicomte; to seize, clear and secure St-Sauveur-Le-Vicomte and the bridge over the nearby Douve river; to block all movement north of the Prairies Marecageuses (swampland); and to block all roads leading to the east coast of Normandy. (21) (See Map A) *(Map H-- should have shown coast and more of landing, both beach and HILBORNE)*

The mission of the Pathfinder teams was to organize the drop zones and landing zones; to assist battalion commanders in assembling their units; and to deliver to their respective commanders all information of the enemy situation that they had been able to obtain. The 505th Pathfinders to use green colored halophane lights, the 507th red colored halophane lights, and the 508th to use amber colored halophane lights. Two Eureka's to be put in operation by each team fifteen minutes prior to designated time of arrival. The 505th Pathfinder team had the additional mission of setting up the landing zone for the 325th Glider Infantry Regiment. (See Map A for drop zones and landing zones) (22)

Aerial photographs of the drop zones were studied at great length, with particular attention given to anti-airborne obstacles. Study of new photos, day by day, revealed that the terrain was very suitable for use as a drop zone. However, small black specks began to appear on the

(19) Personal Knowledge; (20) Personal Knowledge (21) A-8, p. 10;

(22) Personal Knowledge.

photos. As days passed and new photos were studied, more and more black specks were detected. These specks, which formed an irregular net over the field, were finally identified as poles spaced 75 to 100 yards apart. Identified also were weapons emplacements and parking bays for vehicles. The parking bays indicated that the area was organized as a permanent installation. The 82nd Airborne Division G-2 reported that the 243rd German Infantry Division was in the vicinity of the drop zone and that the area was further strengthened by the movement of the 91st German Infantry Division to the vicinity of St-Sauveur-Le-Vicomte. (23)

On the 26th of May, eleven days before the invasion, the mission of the 82nd Airborne Division was changed. This came as a welcome relief to the Pathfinder Leaders, who had become increasingly concerned about the extensive anti-airborne organization of the first area. Later, upon ground inspection of the area (Hill 110) after its occupation by Allied troops, this was verified. Hill 110, from which both coasts of the Cherbourg peninsula could be seen on a clear day, was honeycombed with barbed wire and booby traps in addition to poles. The perimeter was thickly spotted with camouflaged gun emplacements and observation posts from which prepared concentrations covering the entire area could be fired and observed. The Germans expected Allied Airborne troops on Hill 110 -- and were prepared for them. (24)

This last minute change in plans for the 82nd Airborne Division mission moved the operation to approximately ten miles east of St-Sauveur-Le-Vicomte along the Merderet River. The mission was to seize, clear and secure the general area outlined by Neuville-Au-Plain, Ste-Mere-Eglise, Chef-Du-Pont, and Amereville, to destroy the crossings at Etienville and Beuzeville-La-Bastille on the Douve River; to protect the northwest flank of the VII Corps within the Division zone; and to be prepared to advance to the west on Corps Order. (25)

(23) A-8, p. 12; (24) A-8, p. 12 & 13; (25) A-17

The mission of the 507th Parachute Infantry Regiment was to seize, organize and defend the northern section in the Division zone west of the Merderet River, in the vicinity of Amfreville; to assist the 505th Infantry in securing crossings of the Merderet River at LaFiere; and be prepared to advance west to the Douve River. (See Map B) (26)

The drop zones of the parachute regiments were approximately 2500 yards long and 800 yards wide, and composed of small fields marked off by hedgerows. Some of the fields were spotted with orchards. The eastern sector of the 507th zone was adjacent to the Merderet River swamps, a large area which formed a serious hazard. The other two regimental zones were comparatively free of obstacles. No gun emplacements or anti-airborne devices could be detected through the study of aerial photographs. However, small troop concentrations were known to exist in the vicinity, with an estimated Company of Infantry located at Ste-Mere-Eglise. (27) (See Map B)

The Standing Operating Procedure developed for the Pathfinder teams did not change for the new mission.

On the 3rd of June the remaining members of the Pathfinder teams were thoroughly briefed on their mission. Aerial photos and maps were examined again and again until the men "knew every blade of grass" on the drop zone and surrounding terrain. The following day the Pathfinders were informed of the take-off times for Normandy on the 4th of June. The 505th team was scheduled to take off at 2226 and jump on DZ-O at 0121 on the 5th; the 508th team would leave the field at 2243 and jump on DZ-N at 0138; and the 507th team would follow at 2305 and jump on DZ-T at 0156. (28) (See Map B for DZ's) However, due to unfavorable weather conditions the operation was postponed for 24 hours. (29)

Pilots of the Pathfinder ships had been seasoned by extensive (26) A-17; (27) A-17; (28) A-6, Annex No. 3; (29) Personal Knowledge.

combat experience. They had worked closely with Pathfinder personnel during the entire training period in England. A healthy atmosphere of mutual confidence existed between plane crews and Pathfinder teams. Jumpers were secure in the knowledge that navigators and pilots would work together to drop them at the right place on time. (30)

The Troop Carrier flight plan for the combat elements was the most complex one that had been attempted up to this time. It involved the use of 117 planes per regiment in addition to 428 tow planes for gliders and 378 planes for the resupply missions. (31) In the flight plan the 507th using 117 planes was broken down into three serials, as follows:

<u>SERIAL</u>	<u>UNIT</u>	<u>NO. OF PLANES</u>	<u>TAKE-OFF TIME</u>	<u>D-Z TIME</u>	<u>JUMP ALTITUDE</u>	<u>JUMP SPEED</u>	<u>D-Z SECTOR</u>
1	2nd Battalion	36	0017	0232	600 ft.	100-110 MPH	Center
2	3rd Battalion	36	0023	0238	600 ft.	100-110 MPH	Western
3	1st Battalion	45	0029	0244	600 ft.	100-110 MPH	Eastern

(plus Hq & Hq Co)

All Troop Carrier groups were to be provided with fighter escort to and from the drop and landing zones. Each Troop Carrier unit was to assemble over its own airfield. At a predesignated time it was to join its flight serial. On the ground and on the English Channel the route was to be clearly marked by visual navigational aids, giving the planes "clear sailing" to the coast of France. One "Rebecca" operated in each nine-ship flight of the main elements. No planes were to take up evasive action prior to dropping their troops on the Cherbourg Peninsula. (32)

Preparations for the "pay-off" were made in high spirits. The Pathfinders joked, checked equipment, wrote letters, rechecked equipment, posed for pictures, cleaned Tommy guns, sharpened knives, sat and waited, then joked some more. In addition to pathfinder equipment, the men carried (30) Personal Knowledge; (31) A-6, Annex 1C; (32) Personal Knowledge.

field bags and gas masks strapped on their legs, Tommy guns placed underneath chest straps, grenades inserted in pouches on their pistol belts, and .45 calibre ammunition and miscellaneous equipment wherever they could cache it. Eureka operators were armed with pistols only. Gammon grenades were carried for use against mechanized vehicles. In spite of the inevitable nervousness prior to the operation, morale could not have been better. The big test, the goal of all the diligent training of past weeks, was now at hand. (33)

THE OPERATION

At 2305, 5 June 1944, the 507th Pathfinders took off for their first combat mission. From North Witham the formation flew to the southern coast of England, across the channel between the Guernsey and Alderney Islands, to the west coast of the Cherbourg Peninsula in France. From the coastline it was a straight 20 mile run to the drop zone (See Map C for line of flight). The flight over the English Channel was made in close formation without incident. An array of small boats, ships and landing craft spread across the channel as far as the eye could see. It was an impressive and reassuring sight. Some of the men sang, a few slept, most of them chain-smoked cigarettes. Off the coast of Normandy "red golf balls" (anti-aircraft fire) rose to harass the "spearhead" of the Airborne invasion. Pilot and Pathfinder Leader were in contact through the "Intercom" telephone. After passing the coastline it was decided by mutual agreement to change the jump altitude from 600 feet to 300 feet in order to avoid excessive casualties from small arms fire during the descent. Although no small arms fire could be heard because of the noise of the plane's motors, it was obvious, because of the density of the flak, that the ground was probably as well covered by small arms as the sky was with anti-aircraft fire. The planes dipped to an altitude of 300 feet in order to minimize the effect of the flak. Shortly after the Troop Carriers

(33) Personal Knowledge.

had flown into the interior of France the parachutists received the red light warning (ready signal). They stood up, hooked their static lines to the anchor cable and checked their equipment for the last time; the drop zone was only four minutes away. Landmarks which had been studied on aerial photos were easily distinguished as the planes made their way inland. (34)

The planes passed the final check point, a dirt road running through the western edge of the drop zone. The Pathfinder leader (who doubled as jumpmaster) checked the light signals above the door. As he did so the green light (the "Go" signal) flashed on, and with a shout he disappeared out the door, followed closely by the 3rd Battalion Pathfinder team. The 2nd and 3rd Battalion Pathfinders jumped simultaneously. The plane carrying the 1st Battalion team dropped out of the formation approximately two minutes from the drop zone due to the intensity of small arms and 20mm anti-aircraft fire. They were trailing almost a thousand yards to the right rear when the 2nd and 3rd Battalion teams received the green light. (35) (See Map B for Pathfinder Landings.)

As the men left the planes they could hear plainly the nervous peppering noise of small arms fire coming from the ground. Upon landing most of the men were too startled to know exactly what to do other than to protect themselves from rifle and machine gun fire. The Regimental Pathfinder Leader made contact only with the 3rd Battalion Eureka operator, Sergeant James Thore, and the Assistant Team Leader, 1st Lieutenant Claude V. Crooks. To assemble by the use of the prearranged assembly lights was out of the question. It would have invited concentrated fire or an attempt to capture the Pathfinder team intact, thereby completely preventing the accomplishment of the Pathfinder mission. It was quickly decided that the best plan of action was to walk along the line of flight to the eastward in an effort to contact other members of the Pathfinder team. In case they were unsuccessful in

(34) Personal Knowledge; (35) Personal Knowledge.

finding more men they knew that the one Eureka carried by Sgt Thore would be sufficient to guide all three serials of the 507th to the drop zone. The three troopers stealthily made their way down the field for approximately 500 yards to the east but made no contact. There were no signs of any activity of the 1st and 2nd Battalion Pathfinder teams. Time was drawing close for the approach of the first serial (2nd Battalion). Enemy rifles and machine guns could still be heard not far distant. Inasmuch as the drop zone was a series of small fields the Eureka was set up in the corner of the main center field, where advantage could be taken of fair cover and concealment. (See Map B) The search for other members of the Pathfinder team was abandoned. It was better to be sure of having one Eureka operating on time than to try to find a light or two and risk losing everything. Immediately after it was set up the Eureka "triggered in" on the first serial ten minutes prior to scheduled arrival. It was a relief to know that contact had been made. (36)

When the planes came into sight it was noticed that a great amount of irregular dispersion existed in the formation. It was later learned that this was due to a thick fog bank over the coast and to concentrated anti-aircraft fire. The serial flew beyond the Pathfinders and parachuted about one-half mile to the east. They jumped at 0232. Although they had missed their exact area, which was the center, it looked as though they had still landed on the eastern extremity of the drop zone. However, several sticks jumped into the correct area. (37)

Six minutes later, at 0238, the scheduled time, the second serial (3rd Battalion) hit the drop zone in approximately the same general area covered by the first serial. This serial should have parachuted into the western section of the area. (38)

At 0244 the final serial (1st Battalion and Headquarters Company Group) also jumped into the eastern end of the drop zone, the correct area for this serial. During their descent the parachutists were fired upon by German ground troops. (39)

(36) Personal Knowledge; (37) Personal Knowledge; (38) Personal Knowledge; (39) Personal Knowledge)

The Eureka was kept in operation for twenty minutes after the last serial had passed the drop zone. Several stray planes flew over during this time but kept going towards the east without dropping any men. A total of 89 planes flew over the area. (40) From later reports it was determined that only 63 dropped their troops on or near the designated drop zone. (41) (See Map D for Landings)

Immediately after silencing the Eureka the party of three Pathfinders led by the Regimental Pathfinder Leader proceeded directly to a pre-arranged rendezvous point at the drop zone where they were to contact the Regimental Commander. When they arrived at this spot they found no sign of any paratroopers. The three Pathfinders decided to remain there until daybreak, and, if no one showed up, to proceed to the Regimental Command Post, located approximately 1,500 yards southwest of their position. Sporadic firing continued throughout the night. At times German voices could be heard from adjacent hedgerows. It became quite obvious to the three Pathfinders that to keep the Eureka set, classified as secret equipment, with them would not be wise, and they planned to destroy it at the first opportunity by using a detonator installed inside the set for this purpose. (42)

At daybreak the men made an attempt to reach the Command Post but were stopped by sniper fire from several points. After moving 300 yards to the south they found good cover in a hedgerow and remained there through the day. After dark the Eureka set was blown up and the men made their way southward to the location previously chosen for the Regimental Command Post. (See Map B of Route to CP) Again, upon arriving, they found no signs of Airborne troops. They stopped here for the remainder of the night and part of the next morning hoping that someone from the regiment would show up. However, no one came. An examination of the area after daybreak showed no signs of recent occupancy. Fighting could be heard to the northwest, and the three men made their way in that general direction, guiding themselves

(40) Personal Knowledge; (41) A-6, Annex No. 4; (42) Personal Knowledge.

by the sounds of the firing. At dusk they contacted Captain (now Lieutenant Colonel) Paul F. Smith, Commanding Officer of Company F, who directed them to the Regimental Command Post. The Regimental Commander had assembled approximately 150 men who were holding a defensive position about 500 yards west of Amfreville. (43) (See Map B of Defensive Position) ?

The other Pathfinders, whom the Regimental Pathfinder Leader had not been able to locate, also jumped into situations that had not been covered in the text.

The 1st Battalion Pathfinder team, led by 1st Lieutenant George R. O'Brian, landed approximately 500 yards southeast of the drop zone. The use of assembly lights was prohibited by a German machine gun which was firing in the immediate area. Lt. O'Brian joined the Eureka operator after he hit the ground, and together they moved to the southeast edge of the Drop Zone and attempted to put the set into operation. The set would not work, however, so after the final serial had passed they blew it up and worked towards the eastern end of the drop zone where the bulk of the parachutists had dropped. On the way they picked up seven members of their team. Just before dawn they met 1st Lieutenant Charles Ames and three men from the 2nd Battalion team. Both team members joined the main forces at the eastern end of the drop zone. One Eureka set was lost on the 1st Battalion jump. Straps supporting the set snapped with the opening shock of the parachute and it broke away from the operator. (44)

In the case of the 2nd Battalion Pathfinder team, it ~~was~~ was unable to assemble on the ground due to enemy action on the drop zone. However, 1st Lieutenant Charles Ames, Assistant Team Leader, picked up the Eureka operator, assistant Eureka operator and a security man. Lt. Ames made a search for the other members of his team while the Eureka operator and the other two men worked on the Eureka set, but he was unable to find any of them. At 0220, six minutes prior to the scheduled time for the first serial to drop, they set up the Eureka. (See Map B) It made contact immediately. All three

(43) Personal Knowledge; (44) Personal Knowledge, George R. O'Brian, Leader of 1st Battalion Pathfinder Team, 507th. Statement, 31 December 1947.

serials came over but dropped beyond the Pathfinders' position. Most of them dropped between the Merderet River and the drop zone, many drifting into the river itself. Lt. Ames withdrew his men 15 minutes after the last serial had passed and blew up the Eureka set. On their way to the eastern end of the drop zone they encountered rifle fire. Just before daybreak they contacted members of the 1st Battalion Pathfinder team. 1st Lieutenant Ralph MacGill, Leader of the team, had broken both ankles on the jump and had been taken prisoner. (45)

Out of the 54 men who comprised the 507th Parachute Infantry Regiment's Pathfinders 20 were killed, wounded or captured. Others who could not make contact with fellow members of their Pathfinder teams in the general confusion caused by enemy firing and the absence of assembly lights, made their way to the eastern edge of the drop zone where they joined the main body of troops. (46)

THE OPERATIONS OF THE 505TH AND 508TH PATHFINDER TEAMS

The 507th Pathfinder Operation was one of three such operations in the 82nd Airborne Division. A picture of Pathfinders in Normandy, as well as a basis for criticism, is not complete without citing the actions of the 505th and 508th Pathfinder Teams.

The 505th Pathfinder teams dropped on their designated drop zone six minutes early after a smooth run from North Witham. There was little enemy opposition in this area, and the drop zone was organized according to Standing Operating Procedure with the exception of one battalion which did not form its light "T" due to errors in assembly. Eureka sets were set up and made contact with planes fifteen minutes before arrival. All serials jumped their men about ten minutes early on their respective "T's". The third serial jumped its men at a speed in excess of 150 miles per hour (normal jumping speed: 90-110 miles per hour), resulting in ruptures to several men. The landing zone for the 325th Glider Regiment was set up as planned. No casualties were sustained by the Pathfinder teams. (47)

(45) Personal Knowledge; (46) Personal Knowledge; (47) A-16.

The 508th Pathfinder teams were dropped accurately and on time after running through exceptionally heavy flak from St-Sauveur-Le-Vicomte to the drop zone. Anti-aircraft fire was trained on personnel as they came from the planes. Enemy action was aggressive. One Eureka and two lights were put into operation well in advance of the first serial. Only 20 planes hit the drop zone. These planes belonged to the first serial and were ten minutes late. No planes from the second or third serials arrived over the drop zone. The 508th Pathfinder teams suffered 65% casualties. (48)

ANALYSIS AND CRITICISM

In making a study of this operation it is my opinion that the Pathfinder teams employed in Normandy were not trained well enough to overcome the initial situation in which they found themselves when they landed amid the German infested hedgerows of the Cherbourg Peninsula. The possibility of hitting a drop zone that was occupied by enemy troops was not considered in training. When assembly lights could not be used there was no alternate method of organizing the men. The presence of the enemy placed the Pathfinder teams in an exceedingly awkward predicament and came very near to neutralizing their mission completely.

The blame for near failure of the Pathfinder operation, however, cannot be directed alone at the sins of omission in the training of the Pathfinders.

Pilots of planes in the main serials encountered anti-aircraft fire, fog, and German night fighters after crossing the French coast and took evasive action to minimize the danger. This resulted in a tragic dispersion at the drop zones. Planes dropped men at altitudes ranging from 300 to 3,000 feet, some at excessive speeds.

At the 507th drop zone no lights appeared. The pilots had been schooled to expect the lighted "T" as they closed in on the Eureka. The idea that the Pathfinders might be able to set up the Eureka and not the lights was not

(48) A-16.

anticipated in pilot instruction. As a result the pilots were confused; they hesitated. The red light stayed on too long, and the green light was switched on late; causing the men to be dropped beyond the intended area.

Misinterpretation of aerial photos contributed greatly to the confusion. Maps and aerial photos to all appearances, showed the drop zone to be 2,500 yards long and the Merderet River to be a narrow stream. This was not the case. The Merderet River was bordered on the west by a wide marsh, the fringes of which were used for grazing purposes. The marsh contained swamp grass several feet high which concealed water underneath. The marshland was assumed to be pasture favorable for inclusion in the drop zone. Actually, instead of a 2,500 yard drop zone, the area measured only 1,700 yards, the eastern 800 yards being swamp. The bulk of the men who jumped on what was assumed to be the drop zone jumped late and consequently hit the eastern 800 yards of marshland, some even landing in the Merderet River proper.

Many of those who landed in the Merderet Swamp and River drowned. Those who survived were temporarily unfit for action against the enemy. A few of the planes dropped their men over the fields and orchards that comprised the central and western sections of the drop zone. Others of the 507th planes, scattered by flak and fog, dropped their men far from the Division area. One flight of nine planes dropped troops southwest of Carentan, 11 miles from the drop zone; one plane unloaded southeast of Cherbourg; three planes jumped men south of Valognes, one plane north of Montebourg, five planes south of the Douve River, eight planes in the vicinity of Ste-Mere-Eglise, twenty-four planes east of the Merderet River, three planes in the vicinity of Goubersville and one plane west of St-Sauveur-Le-Vicomte. (See Map D for plane dispersion)

(49)

The result of this dispersion in enemy occupied areas and the dropping of troops in unfavorable terrain (swamp and river) was that normal assembly

(49) A-6, Annex 4A.

and prompt coordinated action were delayed. The immediate problem confronting the greater portion of the men of the 507th Parachute Infantry Regiment, whether pinned down by enemy fire or struggling in mud and water, was simply one of self preservation.

The use of the 507th Pathfinder Team is justified by the fact that 63 planes found the Drop Zone due to the operation of the two Eureka sets. If evasive action had not been taken by most of the planes causing them to break formation, many more planes would have followed the Eureka's into the Drop Zone.

By General Order Number 34, Headquarters 82nd Airborne Division, dated 21 July, 1944, the 82nd Airborne Division Pathfinders were awarded the Bronze Star Medal for gallantry in action on the Cherbourg Peninsula.

LESSONS

1. Lights which can be seen for a considerable distance by enemy ground troops must be eliminated. Lights should be constructed so that they can be detected only from the air or by special equipment.
2. Airborne Pathfinders must jump only with equipment necessary to perform the Pathfinder mission of organizing drop zones and landing zones. Excess ammunition, field bags, gas masks, etc. hinder mobility. Speed on the ground is all important.
3. Closer coordination and team work between the Air Force and Airborne Units will work towards singleness of purpose, a greater effort to keep planes in formation in order to jump parachutists together on designated drop zones. A wide dispersion of troops seriously handicaps the accomplishment of a mission and violates one of the most important principles of war--Mass Employment.
4. Assembly in difficult terrain without lights and in the presence of enemy should be stressed in the training of Pathfinder teams.
5. Expert analysis and interpretation of aerial photos and maps will go far towards eliminating the possibility of misjudging the size of a drop

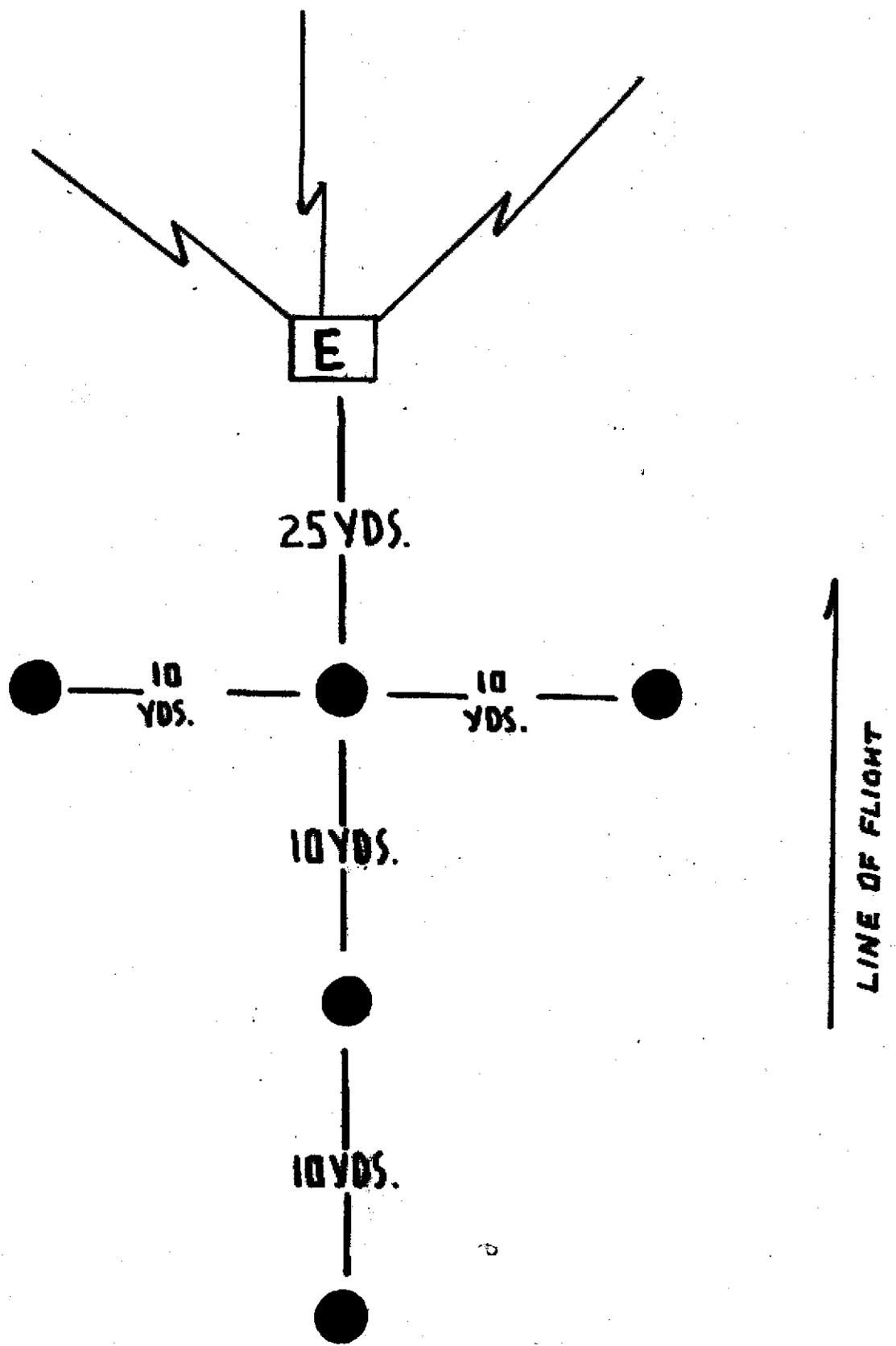
zone and landing in areas similar to the marshes hit by Troopers of the 507th.

6. The Eureka operator and his assistant would be much more valuable to the Pathfinder team if they were instructed in the mechanics and maintenance of the Eureka set. With this knowledge the Eureka operator of the 1st Battalion might have been able to repair his set and to operate it.

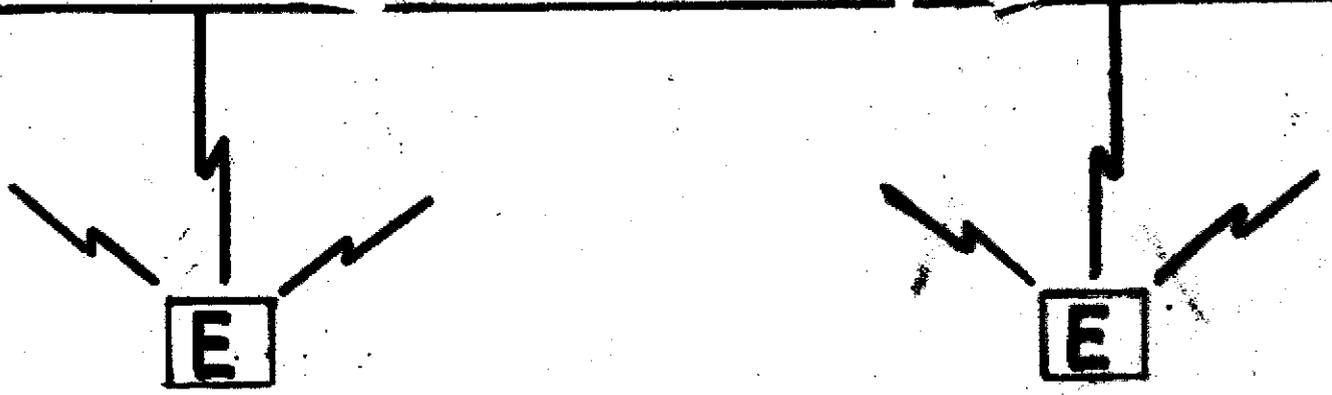
7. Every effort must be made to insure that Pathfinder teams are made up of combat veterans, even though they come from personnel outside the using unit. The strain of accomplishing a job as delicate as that of a Pathfinder team's mission requires all the nervous energy a man possesses. The extra tension of going into combat for the first time is a drawback.

8. It would be a great help to pilots if Pathfinders jumping with lights were trained to use them even in the event that assembly is prohibited by enemy action. If lights were operated and covered by fire from vantage points by the light carriers the job of jumping men on the drop zone would be made easier even though the lights did not form the conventional "T".

9. Until other methods of navigation are devised which will eliminate possible error, Airborne Pathfinder teams are essential to future Airborne operations. Without Pathfinders the chances of the Troop Carriers dropping parachutists on designated drop zones are not good.



PLAN FOR DROP ZONE "T"



300 YDS.

100 YDS.

100 YDS.

100 YDS.

100 YDS.

300 YDS.

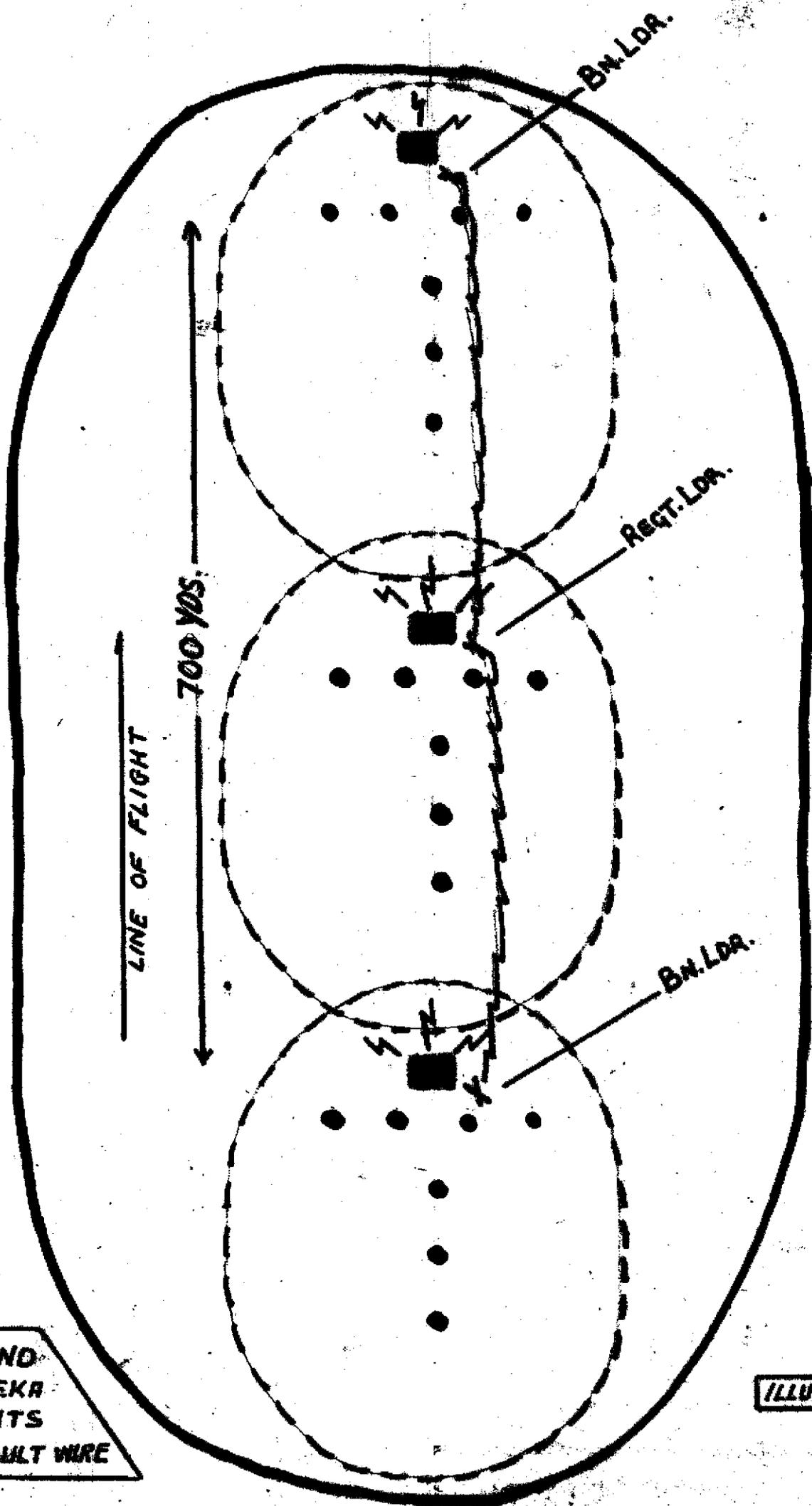
Glider

LINE OF FLIGHT

WIND

PLAN FOR LANDING ZONE LIGHTS, EUREKA

ILLUSTRATION No. 2



LEGEND
 ■ EUREKA
 ● LIGHTS
 — ASSAULT WIRE

ILLUSTRATION 105

REGIMENTAL DROP ZONE
PATTERN ADOPTED FOR AMBUSH TRAINING