

ARMOR ON OKINAWA

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FORT KNOX, KENTUCKY

MAY 1949

*ARMOR ON OKINAWA*

*TANK-INFANTRY TEAM*





SIMON BOLIVAR BUCKNER, JR.  
(18 July 1886-18 June 1945)

Born 18 July 1886, near Munfordville, Ky., son of the celebrated Confederate general, Simon Bolivar Buckner. The younger Buckner chose a military career, as had his father. After attending the Virginia Military Institute, he entered the United States Military Academy, from which he graduated in 1908. He was instructor in military tactics at West Point from 1919 to 1923, and commandant of cadets from 1932 to 1936. During World War I, he commanded aviation training brigades.

General Buckner was given command of the Alaska defense force in July 1940, and played a prominent role in the recapture of the Aleutians in 1942-43. He was awarded the D.S.M. in Oct. 1943, and promoted to the temporary rank of Lieutenant General. He was later sent to the Central Pacific Command, where he gained command of the new U.S. TENTH ARMY. This army, under his command, invaded OKINAWA on 1 April 1945. On 18 June 1945, three days before the close of the Okinawan campaign, General Buckner was fatally wounded by a piece of coral, thrown by the explosion of an enemy artillery shell, as he was visiting a forward observation post.

## PREFACE

The capture of OKINAWA was essentially an infantry effort with the result that armor was at all times in support of infantry units. Because of the scattered nature of such armored activity, detailed reports on the operations of tank battalions were not available. Where some armored unit after-action reports were found, the repetitious accounts of individual small-scale tank actions failed to have an orderly sequence which could be related to the over-all campaign. Only by piecing together many separate, brief reports of tanks supporting small infantry units was a logical sequence attained.

Of considerable assistance, where gaps existed in after-action reports, were the interviews with officers who had participated in the Battle of OKINAWA. Credit is given to Lt. Col. John Collier, 776th Amphibious Tank Battalion; Capt. A. E. Furgeson, 7th Infantry Division; Capt. C. E. Hazel, 534th Amphibious Tractor Battalion; and Capt. A. A. Todd, 711th Tank Battalion, who were able to give authoritative observations and to augment available documents. The subordinate role of armor in the Joint Expeditionary Force required that much of the infantry battle be reported to form the framework on which the small-scale tank actions were super imposed. Inasmuch as the operations of all of the tank battalions were very similar, this report is limited to a full study of the action of one battalion, with

additional consideration given to fragmentary accounts of other tank units when noteworthy performance warranted comment.

Analysis of the present armored doctrine, which emphasizes mobility, mass, great fire power, deep penetration and exploitation, is hardly applicable to the armored action on OKINAWA where most of the tank fighting was limited to tank-supported infantry actions. Only for a brief period during the mopping-up phase, after organized Japanese resistance had been overcome, were tanks massed in formations as large as a company. However, a study of this campaign reveals the many problems of close tank-infantry coordination which would not be so apparent in a fast moving, predominantly armored, campaign. Herein is the value of recounting the many small tank-infantry battles which gave momentum to the steady infantry advance which shattered strong defenses and destroyed a determined enemy.

## TABLE OF CONTENTS

FRONTISPIECE . . . . .	ii
PREFACE . . . . .	iii
TABLE OF CONTENTS . . . . .	v
MAPS . . . . .	vii
PHOTOGRAPHS . . . . .	viii
<u>CHAPTER</u>	<u>PAGE</u>
I INTRODUCTION . . . . .	1
General Organization . . . . .	1
Characteristics of the Area . . . . .	3
Armor's Supporting Role . . . . .	4
Schedule of Campaign . . . . .	7
II TRAINING OF THE ARMORED AND AMPHIBIOUS UNITS (Prior to 1 April 1945) . . . . .	10
Preparations of 20th Armored Group . . . . .	11
Rehearsals . . . . .	18
Waterproofing Equipment . . . . .	23
III EMBARKATION AND MOVEMENT TO OKINAWA (2 March - 1 April 45)	27
Loading Armored Units . . . . .	27
Movement to Attack . . . . .	33
IV AMPHIBIOUS ASSAULT LANDING (1 - 3 April 45) . . . . .	36
Invasion Bombardment . . . . .	36
Landing Organization . . . . .	37
Beachhead . . . . .	40
V OVERRUNNING THE OUTPUT SYSTEM (4 - 19 April 45) . . . . .	46
711th Tank Battalion Advances South (4 - 14 Apr 45) . . . . .	47
The Pinnacle . . . . .	49
Red Hill . . . . .	50
Tomb Hill . . . . .	51
Triangulation Hill . . . . .	52
Technique of Operation, 711th Tank Battalion . . . . .	56
VI THE MACHINATO LINE . . . . .	63
713th Armored Flamethrower Battalion . . . . .	63
Jap Defenses . . . . .	67
XXIV Corps Plan of Attack . . . . .	74

VII	BREAKING THE MACHINATO LINE (14 - 24 April 45)	78
	7th Division Attacks	78
	Skyline Ridge	79
	Rocky Crags	80
	96th Division Assault	87
	Kakazu Ridge	89
VIII	711th TANK BATTALION HITS THE SHURI LINE (25 April -	
	9 May 1945)	95
	Japanese Positions	95
	Terrain 7th Division Zone	96
	Operations 711th Tank Battalion (25 April - 9 May 1945)	97
	Jap Counterattack (4 - 5 May 1945)	101
	24th Division Attacks (4 May 1945)	104
	Operations 711th Tank Battalion (6 - 9 May 1945)	105
IX	763rd TANK BATTALION THROUGH THE SHURI LINE (25 April -	
	31 May 1945)	108
	MAEDA ESCARPMENT	108
	96th Division Reenters the Line	111
	Relief of 7th Infantry Division (9 - 10 May 1945)	113
	Capture of Conical-Dick Hills (10-16 May 1945)	115
	Assault Against Sugar-Oboe Hills (16 - 29 May 1945)	121
	Shuri Defenses Broken (29 - 30 May 45)	122
X	MOP UP PHASE (21 May - 30 June 1945)	126
	"Final Kill" (15 June 1945)	134
	Death of General Buckner	139
XI	SUMMARY	141
	Contribution of Armor	141
	Tank Losses	142
	Japanese Doctrine	143
	Conclusions	144
	Analysis of Application of Present Armored Principles	146
APPENDICES		i
A	AMERICAN ORDER OF BATTLE	i
B	JAPANESE ORDER OF BATTLE	iii
C	STATISTICS OF OKINAWA CAMPAIGN	v
D	AMPHIBIOUS VEHICLES AND LANDING CRAFT	ix
E	GLOSSARY OF AMPHIBIOUS TERMS	xii
F	BIBLIOGRAPHY	xv

MAPS

<u>FIGURE</u>	<u>PAGE</u>
1. Organization Tenth Army. . . . .	1
2. Organization 20th Armored Group. . . . .	2
3. OKINAWA SHIMA. . . . .	5
4. OKINAWA. . . . .	6
5. OKINAWA CAMPAIGN . . . . .	8
6. Tenth Army's Advance (1 - 3 April) . . . . .	38
7. Through the Outposts (4 - 8 April) . . . . .	48
8. Terrain Sketch Island of OKINAWA . . . . .	68
9. Concentric Defense Plan for Main Battle Position . . . . .	69
10. XXIV Corps Attack, 19 April. . . . .	75
11. Enemy Operations (7 - 24 April) . . . . .	86
12. Breaking TANABARU-NESHABARU Defenses (17-23 April 1945) . . . . .	93
13. The KOCHI-ONAGA Sector . . . . .	98
14. Enemy Operations (4 May - 21 May ) . . . . .	103
15. Action Against MAEDA ESCARPMENT. . . . .	112
16. Relief of 7th Infantry Division (9 - 10 May) . . . . .	114
17. Capture of CONICAL-DICK HILL (10 - 16 May) . . . . .	118
18. Assault Against SUGAR-OBOE HILLS (16-29 May) . . . . .	123
19. SHURI Defenses Broken (29 - 30 May) . . . . .	125
20. Fall of SHURI (30 - 31 May). . . . .	129
21. End of Organized Resistance (18 - 21 June) . . . . .	131
22. Enemy Operations (2 - 30 June) . . . . .	132



PHOTOGRAPHS

	<u>PAGE</u>
1. Assault Waves Landing, 1 April 1945 . . . . .	39
2. Close-in Tank-Infantry Teamwork, OKINAWA Campaign. .	56
3. Flamethrower Tank of the 713th Armored Flamethrower Battalion . . . . .	65
4. Typical OKINAWA Terrain, 7th Infantry Division, Looking south from RED HILL. . . . .	71
5. Tanks and Infantry Attack the ROCKY CRAGS. . . . .	82
6. A Flame Tank of the 713th Tank Battalion Supports Infantrymen of the 96th Division . . . . .	110
7. Tanks of the 711th Tank Battalion lay down fires on a Jap Escarpment . . . . .	135
8. American Tanks move in on the Enemy at MAEDA, 22 June, 1945 . . . . .	136
9. Tanks attempting to Dodge Jap 75 mm shells during attack on MAEDA, 22 June 1945 . . . . .	137
10. 713th Flame throwing Tank destroying escarpment on a coral outcropping 17 June 1945. . . . .	138

# CHAPTER I

## INTRODUCTION

OKINAWA! The last barrier to the Japanese Mainland. American power was massed for invasion and readied for a determined step toward final victory. The Joint Chiefs of Staff issued the directive for "OPERATION ICEBERG", as the Okinawan campaign was to be known, to CinC POA (Commander in Chief, Pacific Ocean Area) late in September 1944 with a target date of 1 March 1945 which was later changed to 1 April 1945. Lt. General Simon B. Buckner's TENTH ARMY, composed of the United States XXIV Corps and the III Marine Amphibious Corps, was assigned the mission of seizing OKINAWA. (See Figure 1, and Appendix A).

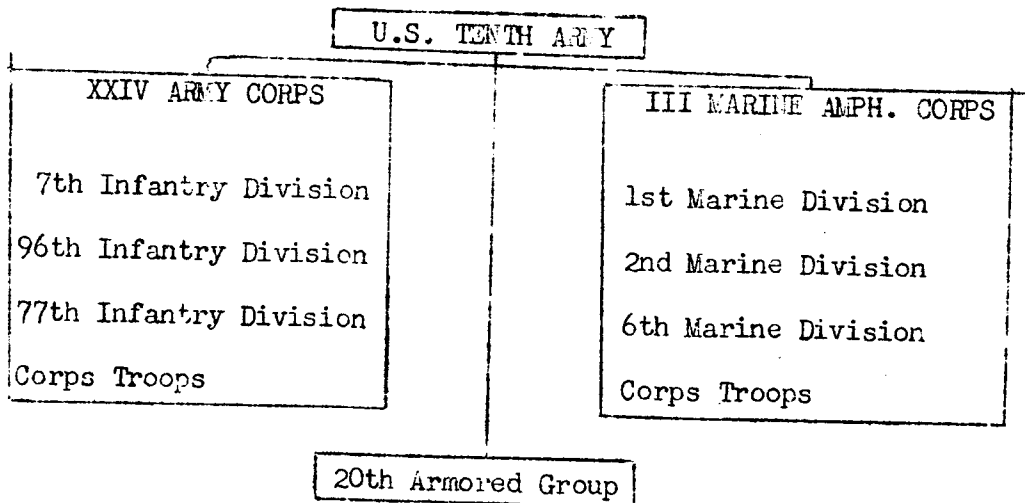


Figure 1

Each infantry division had attached or assigned one standard tank battalion, two amphibious tractor battalions and one amphibious tank battalion from 20th Armored Group. (See Figure 2) Flame thrower tanks from the 713th Armored Flame Thrower Battalion were attached later on in the campaign on the basis of one company per Army division, and within the Marine tank battalions there were twelve flame throwers tanks assigned, four per combat company.

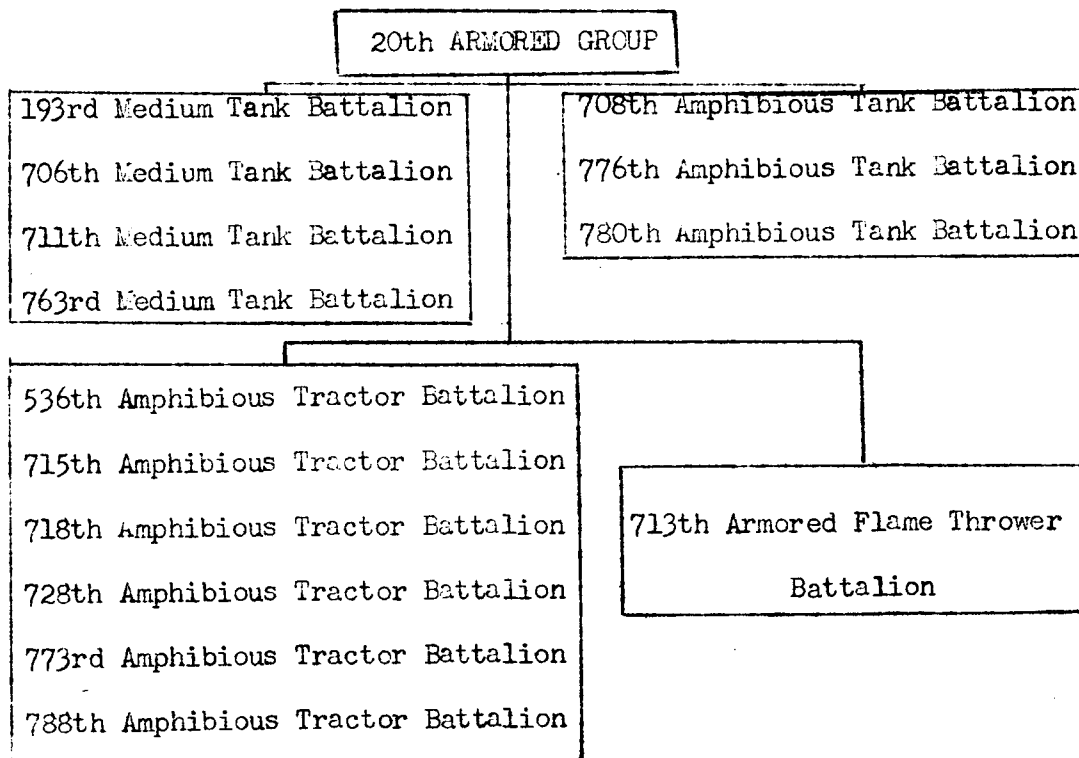


Figure 2

Many unfavorable conditions were imposed on this heterogeneous force which was collected from distant points of the Pacific and was composed of units, few of which had trained or fought together before this time. The very nature of the operation and the variety of units which made up the Joint Expeditionary Force required extensive coordination of the Army, Navy and Marine Corps. Logistical problems were greater than any heretofore encountered in the Pacific Theater due to the great distance to the objective from the mounting points of the assault troops. (See Appendix C, Table 1.) Ground based air support for the operation was not possible, and it was necessary to depend entirely upon carrier aircraft. All of these factors make it understandable that the Japanese hoped to be able to rout the invasion fleet of thirteen hundred naval vessels by air attacks from bases in their homeland. The Japanese sacrificed seventeen hundred aircraft during the first month of the campaign in pursuance of this unsuccessful effort, and as a consequence our initial landings were made against only light ground resistance.

In order to fully understand the significance of the capture of the strategically located island of OKINAWA, it is necessary to study the characteristics of the island, and its relationship to the Japanese mainland. OKINAWA GUNTO consists of approximately fifty small islands, many of which are less than a tenth of a square mile in size, located less than four hundred miles south of the Japanese home islands. OKINAWA, unlike others

in the group of volcanic islands, has a considerable portion of flat terrain suitable for airfields in its four hundred and fifty square miles. (See Figure 3) The capture of its airfields and harbors would provide bases from which operations could be directed against the Japanese mainland and would make possible the cutting of enemy air and sea communications to the south, including the PHILLIPINES and CHINA. (See Figure 4) Pre-invasion estimates of the number of enemy troops on OKINAWA were far below what was actually encountered. The garrison had been estimated to be about seventy-seven thousand troops. (See Appendix B, Table 1.) More than one hundred and ten thousand enemy were estimated killed during the campaign and unestimated thousands more were buried in caves, compared to more than thirty-eight thousand U.S. casualties. (See Appendix C, Table 2).

To assess fairly the role of Armor in the capture of OKINAWA it must be stated that the number of armored units employed in this operation was small; that their employment was solely in support of Infantry; and that employment was dictated by the terrain. The nature of the battles on OKINAWA followed a pattern that was similar for all armored units. Armor in support of Infantry. It is against a background of infantry combat, therefore, that we must study Armor's role on OKINAWA. In order to depict this role, we shall follow principally the action of the 711th Tank Battalion, attached to the 7th Infantry Division, from 1 April to 30 June 1945.



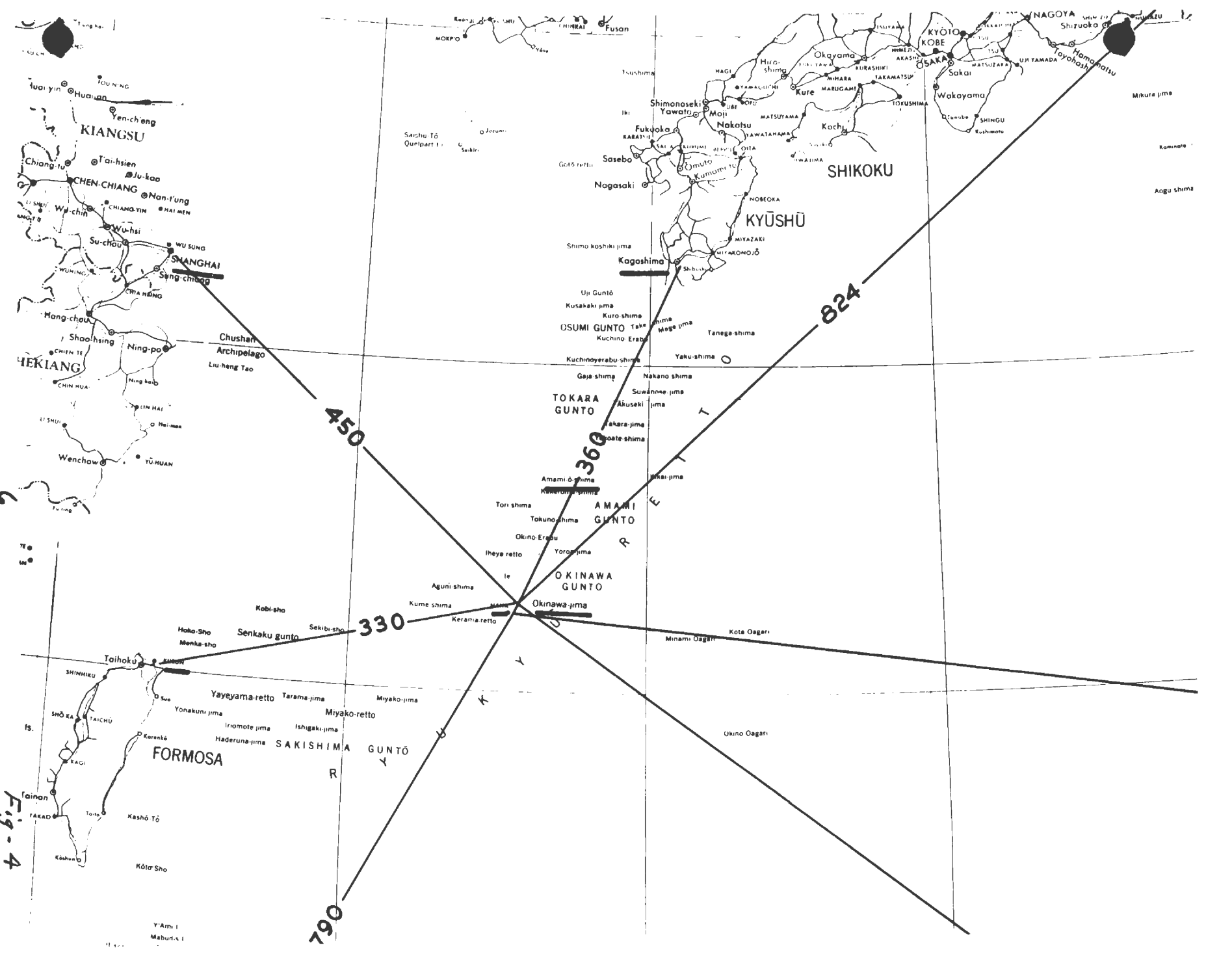


Fig - 4

As the campaign progresses the action of the 763rd Tank Battalion, the 193rd Tank Battalion, and the 713th Armored Flame Thrower Battalion will be covered to a lesser extent. These units illustrate the typical employment of armor of OKINAWA.

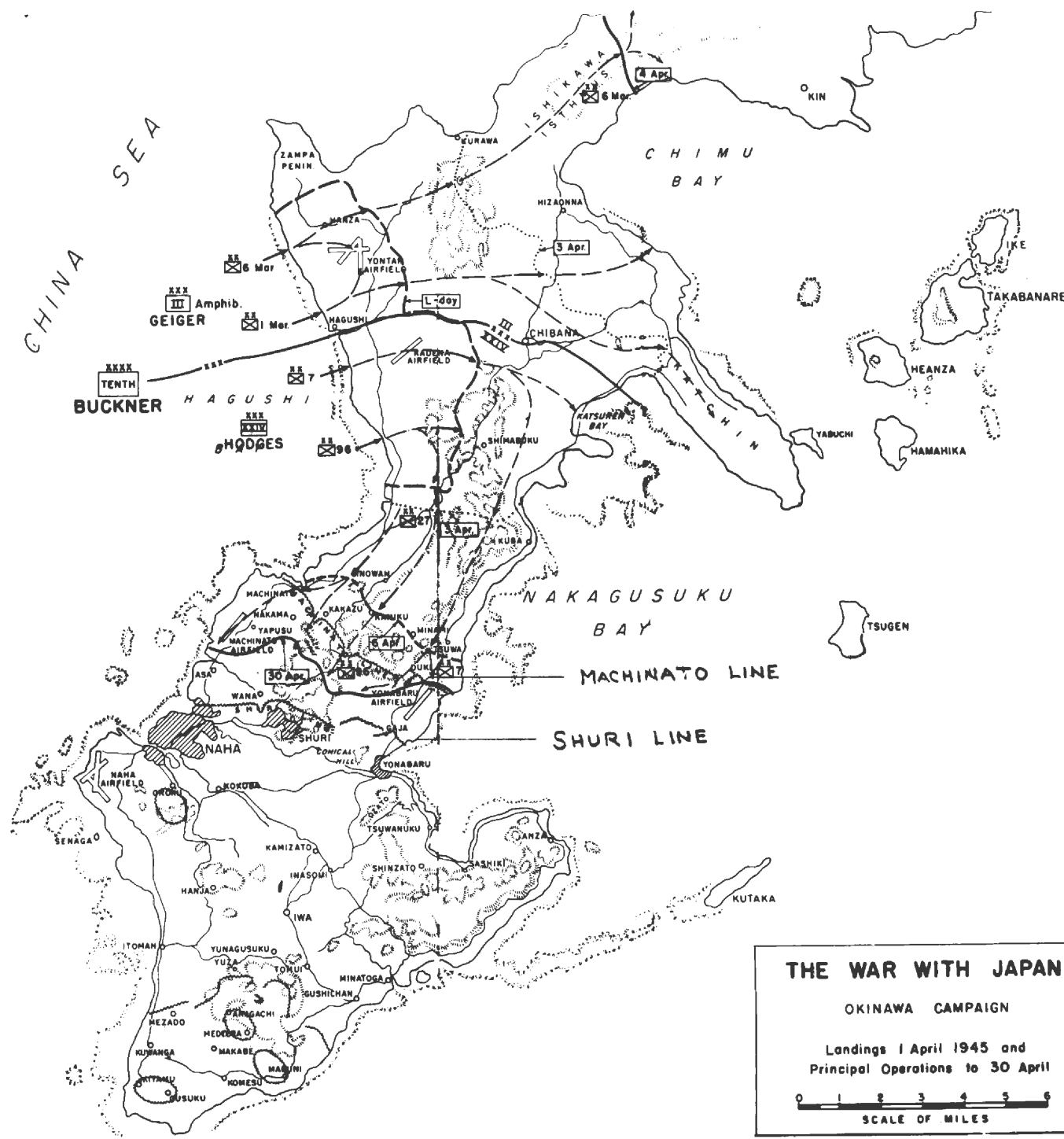
On the morning of 1 April 1945 the heaviest concentration of naval gunfire ever to support a landing was directed against OKINAWA. (See Appendix C, Table 3.) A continuous line, almost eight miles long, of amphibious tanks and amphibious tractors carried troops to the HAGUSHI beaches on the west side of OKINAWA in about twenty minutes. Before nightfall fifty thousand troops and major elements of all divisions artillery were ashore. As a result of the first day's operation a beachhead eight miles long and up to three miles deep had been seized. Within nineteen days the 6th Marine Division had overrun all of northern OKINAWA against almost no resistance. To the south, however, the advance was slow and costly against bitterly held and well established defense lines. It was almost three months after L-day that final mop up operations in southern OKINAWA were initiated. The breaching of the MACHINATO and SHURI lines had been hampered by difficult terrain made all but impassable by heavy rains and by the fanatic tenacity of the defenders. (See Figure 5). Even after the well sited defense was shattered, isolated pockets of resistance held out against hopeless odds. This attitude undoubtedly accounted for the remarkably high number of enemy killed as compared to prisoners taken. The ratio was about fifteen killed to each prisoner taken.



EAST CHINA SEA

8

Fig 5



**THE WAR WITH JAPAN**  
**OKINAWA CAMPAIGN**  
 Landings 1 April 1945 and  
 Principal Operations to 30 April

0 1 2 3 4 5 6  
 SCALE OF MILES

The defenses of OKINAWA were among the strongest encountered in the Pacific. The infantry divisions which overran these defenses and placed our troops within striking distance of the Japanese mainland were materially assisted by their attached armored units. Although in a supporting role, these armored units contributed largely to the overall success of United States Forces in the capture of OKINAWA.

## CHAPTER II

### TRAINING THE ARMORED AND AMPHIBIOUS UNITS (Prior to 1 April 1945)

The time available for training armored and amphibious units of the Tenth Army for the OKINAWA operation was limited. This was due principally to the necessity for the rehabilitation of units after a long period of combat. Many obstacles interfered with the training which had to be accomplished by the units. The training performed by many of the armored and amphibious units in preparation for this operation was, in comparison to that accomplished prior to previous amphibious operations, almost negligible. However, a training program which stressed individual, small unit, special, and combined training was adhered to whenever possible. Command Post Exercises and rehearsal landings were made prior to departure for OKINAWA. Many maintenance and supply problems, peculiar to armored and amphibious units, were experienced. These were dealt with effectively and they did not deter the preparation phase.

Units of the XXIV Army Corps and the III Marine Amphibious Corps were well trained for operations in this Theater and had had considerable combat experience. However, the lack of sufficient training time for replacements immediately preceding the operation, did handicap many of the units. Due to the great distances involved between the location of Headquarters Tenth Army and various units assigned to Corps, Groups, and Divisions, commanders were responsible for supervising the training of their

respective commands in conformity with Tenth Army directives. Monthly status of training reports were submitted to Army reflecting the progress of training during each month. Tenth Army Training Circulars stressed the hardening of troops to engage and defeat a tough, well-trained and fanatical enemy in extremely difficult terrain and under adverse climatic conditions. (No better forewarning could have been sounded.) Emphasis was placed on the need for individual unit, special and combined training necessary to destroy Japanese troops wherever and whenever encountered.<sup>1</sup>

Early in January 1945, the 20th Armored Group, as part of the XXIV Corps, was engaged in the final phase of the capture of LEYTE, received orders that it would participate as part of the assault echelon of Tenth Army in the invasion of OKINAWA. The operation was scheduled for the first week of April.<sup>2</sup> The XXIV Corps, composed of the 7th, 77th, and 96th Infantry Divisions, was engaged in combat on LEYTE, PHILLIPINE ISLANDS, until 10 February 1945 and came under Tenth Army control during the period 10 to 22 February 1945. Initially all armored units were attached to 20th Armored Group for administration and training. These units would be attached to Divisions effective at the time they loaded at the debarkation beaches with:

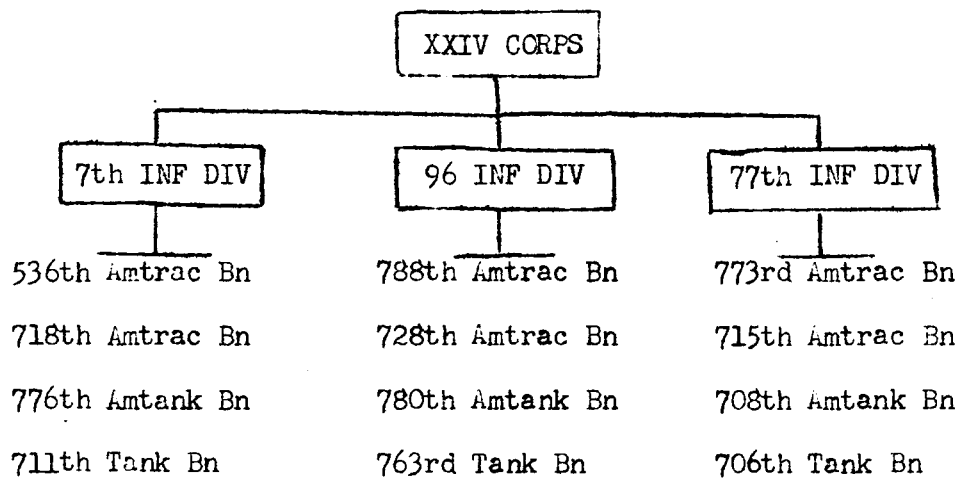


Figure 1. Attachment of armored and amphibious units to Infantry Division of XXIV Corps.

Individual training was stressed during the very limited time available. A general review of basic military subjects was given to all personnel. Special emphasis was laid on such subjects as night training, in both the offense and defense; physical and mental conditioning; sanitation, hygiene and first aid; camouflage; tropical living and weapons firing.<sup>4</sup>

Driver training keyed the training of amphibian unit replacements. The problem was again one of time that could be allotted to this training peculiar to Amtracs and Amtanks. This phase was mainly one of transition to new equipment, and techniques, as the personnel had completed basic and unit training. In many instances, replacement personnel had participated in some amphibious training at a base camp on OAHU in the HAWAIIAN ISLANDS. For ex-tankers, driver training was relatively simple.

which provides traction on land and propulsion in the water, burdened the maintenance crews. This could be considered as excellent training. Past combat experience revealed that when LVTs operated over rough coral reefs under heavy loads, the cap screws and guide pins of the grousers frequently sheared off. Drivers were cautioned against making sharp turns while on rough hard surfaces thus preventing bent or broken grousers. They soon became apt at judging surf, tide and wind in order to put their Amtrac or Am-tank upon a reef without broaching or capsizing. All personnel soon learned to be on the lookout for jagged coral heads which might "hang up" their vehicle and rip a hole in the hull.<sup>5</sup> Upon completion of the individual training phase units were ready for small unit training.

All units placed particular emphasis upon small unit training. It was desired that this phase would develop strong leadership in all commanders; smoothness of night operations; control of fire and maneuver; and the spirit of the offensive. Infantry, Artillery and Tanks (including Amtanks and Amtracs) trained as a rugged, hard-hitting team. Small unit problems with Infantry emphasized the use of flame throwing tanks as part of the attack team on caves and fortified positions.<sup>6</sup> The flame thrower tanks were not the same type as the special type of tank employed later by the 713th Armored Flame Thrower Battalion, however, the spirit of team work was developed which later paid dividends.<sup>7</sup>

During this phase proficiency in formation driving was

The engine, power train and controls were similar to those in tanks. New drivers went through a short period of land driving for the purpose of getting the feel of the vehicles. This was followed by water driving to enable the drivers to observe the water handling characteristics of the LVTs, (Amtracs and Amtanks).

The training quickly progressed to the more critical phases; land-to-water, water-to-land driving through the surf. Initially, new personnel had a feeling of skepticism as to the capabilities of the Amtracs and Amtanks. After a few days, this feeling was replaced by the realization that the Amtracs and the Amtanks were sturdy, capable, seaworthy, seagoing craft. Confidence and enthusiasm was usually high after a few night beach driving exercises.

Basic maintenance was stressed continuously as it would be the largest single factor in the successful operation of amphibious vehicles. The ratio of maintenance time to operating time was approximately 4:1, each hour of operation requiring four hours of maintenance. This was due to the fact that LVTs operated on land and in water. Daily exposure to salt water and salt air made rust and corrosion a constant maintenance must. Daily fresh water washdowns were S.O.P., when fresh water was available. Final drives were checked and usually drained after each day's water operation. Grease seals were checked daily for evidence of salt water. About 50% of maintenance was spent on track maintenance. Frequent failures of the hydraulic grousers, that part of the track

accomplished in all Amtrac and Amtank units. Exercises began at section (5 Amtracs) level and progressed to include platoon and company formations. Fortunately, good weather and quiet seas aided this difficult type of training. Communications, both radio and visual, were practised and great stress was placed upon adherence to close time schedules.<sup>8</sup>

Aforementioned subjects were considered most important, however, of no less importance, were the miscellaneous subjects. Amtrac and Amtank units were trained to spend extensive periods at seas with the Navy. Some called themselves "seagoing soldiers". It was natural that they should have basic knowledge of the Navy. This would promote better coordination and cooperation. A few of the subjects covered in an extensive miscellaneous group were naval customs and terminology; navy numeral and letter flags, and navy boat signals. All personnel were given a short course in semaphore and blinker codes. Practical exercise using arm, hand and light signals were scheduled, as were periods on knots and knot tying. Frequent orientation lectures were given on the latest information on Japanese tactics, material and obstacles.

In addition to normal training for combat, armored and amphibious units received special training, in joint amphibious operations; combat in built-up areas; and cave warfare, to insure success in battle.<sup>9</sup> Additional amphibious training was given, not mentioned previously, but not to the degree some desired. Since the units were considered experienced in this type of operation,



the weight of training was on the tank-infantry-artillery team. Amphibious tanks were given additional training on indirect firing, so that they would be capable of functioning as field artillery for the Infantry. This would be their mission pending the arrival of artillery on shore.

Having completed specialized training, the armored and amphibious units were ready for combined training on the regimental level. Regimental problems were conducted when time was available. The objective of this training was to weld units into an effective hard-hitting tactical force of all arms. These units were capable of sustained effort against a determined, rugged, and ruthless enemy, in any type of terrain and under adverse weather conditions. This type of training covered, as far as possible, all phases of tank-infantry and air operations.

There were many stubborn training limitations, experienced by the majority of all units who were to participate in the assault landing. The most common one imposed on armored units in conducting training was that all units were not withdrawn from combat simultaneously and many units were scattered. Most of the limited time between the LEYTE operation and the RYUKUS Campaign was devoted to rehabilitation and cleaning, repairing, and replacement of equipment. Considerable time was consumed by units constructing their own camps. The inadequacy of ranges was outstanding and units were required to construct ranges of all types.

Another restriction, experienced by all units, was the numerous large details of men that were called for. These details unloaded thirty-one ships. The materiel and equipment were repacked and assault loaded. This unexpected work load was a great detriment to a training program.

Practical work with the troops that Amtracs would support, and be supported by, keyed the combined training phase. This was usually accomplished by alternating platoons from the line companies to work with Army and Navy units. With a Landing Ship Tank (LST), an Amtrac platoon developed and perfected the definite technique of loading and unloading at sea. The efficiency and speed of loading was dependent on wind, swells, and tide. Sufficient practice was received to attain a satisfactory standard of proficiency. The criteria for rapid loading was cooperation between the Amtrac crews and LST personnel. It was found that well trained crews of a platoon under ideal sea conditions could load their Amtracs in about 45 minutes. However, under adverse conditions, the loading time ran as long as  $2\frac{1}{2}$  hours. Night loading exercises completed this type of training.

In combined training with their respective Infantry Divisions, the Amtracs were full-loaded with men and equipment. The loading took place on a beach, after which the Amtracs drove out to sea, where they went into formation, passed a simulated line of departure from which they made their run to the beach. This built up confidence of the infantrymen that had little or no experience

with Amtracs.

Unit training was culminated during Regimental Command Post Exercises. Simulated landings on a hostile shore were made with units of the Infantry Division with which the Amtrac units were training.<sup>11</sup>

Following the CPXs, XXIV Corps directed that all Divisions, 7th, 77th, and 96th Infantry, conduct rehearsals on LEYTE between 15-19 March 1945. The 27th Infantry Division at ESPIRITO SANTO, with the 193rd Tank Battalion, which was attached to Tenth Army during course of operation, conducted three amphibious rehearsals prior to movement to the target area.

Beaches were located and marked similar to the beaches on the target. The rehearsals culminated in a full-scale, non-firing landing, with troops advancing inland 1500 yards. Assault battalions made two landings; the assault regiments made one landing, as did each infantry division. Two critiques were held following the landings, one after the assault battalions completed their landings, the second on conclusion of the full-scale rehearsal. Deficiencies were brought to the attention of all concerned, and the necessary corrective measures to be taken to prevent a recurrence during the actual landings on the target.

The rehearsals were conducted in areas in close proximity to the proposed embarking points. These areas were deemed suitable based on a primary consideration that there would be a minimum of personnel and vehicular casualties. The amphibious landings were

designed to familiarize and to review debarkation procedures of the assault troops. Tests of ship to shore communications and lateral troop communications were made . A close check was made for distances and intervals between rendezvous areas, lines of departure, guide boats and control vessels.

Primarily the rehearsals were made to acquaint the various landing force personnel, who would be working together in the actual landings, with one another. This was accomplished by issuing an operation order exactly the same as that which would be issued for the actual assault landing. No reference whatsoever or intimation was inferred that could be construed as an indication as to the projected target area. The size of the landing area, disposition of troops, communications and supply plans were exactly the same. Naval gun fire was simulated, supporting aircraft were present to dry run all preplanned air strikes.

The most important phase in the rehearsals was the close observation of the greatest striking force of the amphibious assault, the armored elements. The offensive nature of armor was to be the key weapon of the inaugural plan of the amphibious assault and its offensive characteristics would be thoroughly exploited. It must seize the enemy held beaches by an exposed approach from the sea. Therefore, the initial landing wave was composed of ant tanks. Their mission was to provide close fire support to Infantry assault units during the ship-to-shore movement and initial operations ashore. The Ant tank (LVT-A-5) had for its armament a 75mm howitzer;

a cal. 30 machine gun mounted forward; one cal. 50 machine gun and one cal. 30 machine gun with pedestal mounts on the turret.

An interval was allowed between the first wave of Am-tanks and the initial wave of troop-carrying craft, the Amtracs (LVT 2 and 4s). This interval was required in order that the Am-tanks would provide effective landing protection. The Am-tracs armament was one cal. 50 and two cal. 30 machine guns.

The standard tank units of the assault infantry echelons were embarked and followed the proposed landing plan. In most cases, the tanks were not landed. This decision was made based on the premise that in an actual landing the possibility of losing some tanks and inflicting considerable damage to their waterproofing would not warrant the effort. The few that were landed satisfied requirements. The tank battalions remained intact for the purpose of preservation of tactical unity and centralized control.

The time that the tank company with infantry regiment or battalion would be landed would depend on the situation ashore. The tank liaison parties with the infantry regiments did land and simulated carrying out missions assigned for the actual landing. They tested communications with their tank battalions and companies to a limited extent. The rehearsals were of great value to the tank companies. This was shown by the benefits derived by the liaison parties with the infantry unit commanders. It gave the unit commanders the opportunity to become familiar with communications with his support, and his command liaison with the naval forces.

responsible for landing his unit.

At the outset of training, the Commanding Officer of the 20th Armored Group directed that all armored and amphibious units maintain close liaison with the division to which they were to be attached. Attachments to these divisions would be effective at the time the armored and amphibious units crossed the beach to load. Tank units of the Group remained with the divisions that they had been working with during the LEYTE Campaign.<sup>13</sup>

The training and rehearsal phases for this operation were uniquely limited by the time required to perform maintenance. It was necessary to keep vehicles in condition for not only training but for the final assault, after the training and rehearsals had been completed. This was due largely to the specialized maintenance required on amphibious vehicles and special adaptations to be mounted on land tanks.

Final preparations were completed when 20th Armored Group arranged for the staging areas, and the armored units were assembled for the assault loading. Divisions were responsible for the assault loading.<sup>14</sup>

Upon the release of all armored and amphibious units, assigned to 20th Armored Group, from active participation with divisions still in contact with the enemy on LEYTE, 20th Armored Group Headquarters directed all units to conduct show-down inspections and to submit requisitions, as expeditiously as possible, for all shortages. During the preparatory phase, the Group

Headquarters acted in an advisory capacity regarding tactical and logistical matters. The issue of major items of equipment for the armored units was controlled by Group, through coordination with XXIV Corps Special Staff Sections. The initial phase of supply involved the preparation of special list of equipment, peculiar to armored amphibious operations.

Major items of equipment were issued by Group. This system proved highly satisfactory, as it enabled the specialized equipment to be placed within the Corps promptly and impartially. Frequently, limited supplies required an uneven distribution to place the bulk of the supplies with the unit making the major effort.

Throughout the training phase, many supply problems developed which caused delays in reaching the desired standards in maintenance of armored vehicles and required equipment. A change in T/O&E of amphibious units required requisitioning of 3500 life-vests, Air Corps type. An outstanding critical shortage was a half million "cap screws", 3/4 inch bolts that hold the grousers on the tracks of LVTs enabling them to maneuver in water. A severe shortage of gasket material caused an unusually large number of vehicles to be deadlined. All of the aforementioned items had to be requisitioned from the Zone of Interior. Deliveries were made by air and ship with but one exception, "cap screws", which arrived late and were delivered from ship to ship in convoy by landing craft. This necessitated units to perform

"last maintenance" actually enroute to the target.<sup>15</sup>

Great emphasis was placed on proper water-proofing of vehicles. All tank personnel were thoroughly imbued with the fact that despite excellent hydrographic information, tanks are seldom landed without going through varying depths of water, and distances which in some cases exceed 1000 yards. It was stressed that there was no assurance that tanks would not have to ford to get ashore. The electrical system of all vehicles was thoroughly and completely waterproofed, as salt water would render inoperative the communications system, gyrostabilizers and power traverse. (In Amtanks and tanks) All armored units were inspired with the determination that all armored vehicles would reach the beaches in fighting condition. Continuous inspections to detect any discrepancies was the order from the time waterproofing was applied until the vehicle was ready to debark from the landing craft.<sup>16</sup>

The time consuming task of preparing medium tanks and other landing craft for the amphibious operation was another prominent problem. The preponderance of precise planning in the preparatory phase for an amphibious operation will be to no avail if the pertinent details of waterproofing have been neglected. There was an acute shortage of Standard Ordnance Kits for waterproofing. Those that were on hand had many shortages of critical items. This problem was overcome by innovations and a somewhat adequate supply which arrived just prior to the departure of



units to the mounting points.

The Standard Ordnance Kit contained necessary attachments for exhaust outlet and air inlet. It also contained waterproofing tape, asbestos grease, insulating spray, and all other materials to effectively seal off all possible outlets, joints, crevices, including the main armament and gun shield. This processing would still leave the tank turret free to fire and traverse. The only service required upon arrival on the beach would be to remove the air inlet and exhaust stack by a jettisoning rope.

The waterproofing processing continued over a period of weeks as the armored vehicles become available (mechanically sound). This processing would allow tanks to negotiate 6 to 8 feet of water for short distances over solid bottoms. The major portion of the work was accomplished by the crews under Battalion supervision. Welding of adapter brackets, for exhaust outlet and air inlet attachments, to the hulls of tanks was done by the Battalion Maintenance platoon. Therefore in both Company and Battalion, a great deal of work was going on simultaneously which cut down considerably on the over-all preparation time per organization.

For armored amphibious units and standard tanks units, the cessation of training and preparation of equipment meant but an increase work load at an accelerated rate. Preparation for embarkation commenced immediately.

The veteran armored and amphibious units of the XXIV Corps overcame seemingly unsurmountable obstacles during the preparatory phase for the OKINAWA operation. Although the time allotted for training and rehabilitation of equipment was short, all units were ready for embarkation on time. Despite a discouraging time factor all units accomplished a strenuous training program which included individual, small unit, special, and combined training. Rehearsals of assault landings were held to perfect landing techniques and to familiarize all personnel with assault landing procedures. The high standard of maintenance which all units achieved reflected the splendid morale and discipline that armored and amphibious units had developed. All units assembled at their mounting points fully prepared to meet and successfully defeat the enemy.

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#### NOTES FOR CHAPTER II

<sup>1</sup>Action Report, Ryukus Campaign, 26 March to 30 June 1945, Tenth Army, 3 July 1945, Vol. I, Ch. iv. p. lff.

<sup>2</sup>Major D. E. Westervelt, "Armored Group in An Amphibious Operation", a student monograph, (Fort Knox, The Armored School, 1948) p. 2ff.

<sup>3</sup>Ibid, passim.

<sup>4</sup>Op. Cit. Action Report, Ryukus Campaign, Tenth Army, passim.

<sup>5</sup>Capt. Russel T. Hoghton, "The Amphibian Tractor Battalion", a student monograph, (Fort Knox, The Armored School, 1948) passim.

<sup>6</sup>Op. Cit. Action Report, Ryukus Campaign, Tenth Army, ch ii, p. 2ff.

<sup>7</sup>Capt. A. A. Todd, "Standard Tank in Pacific Amphibious Operations", a student monograph (Fort Knox, The Armored School, 1948) passim.

<sup>8</sup>Op. Cit. Action Report, Ryukus Campaign, Tenth Army, ch iv p. 2ff.

<sup>9</sup>Op. Cit. Capt. Russel T. Houghton, student monograph, passim.

<sup>10</sup>Op. Cit. Action Report, Ryukus Campaign, Tenth Army, ch iv, p. 3.

<sup>11</sup>Paraphrased information from personal interview with Capt. A. F. Ferguson, 7th Inf. Div., Capt. C. E. Hazel, 534th Amtrac Bn.

<sup>12</sup>Op. Cit. Action Report, Ryukus Campaign, Tenth Army, ch. iv, p. 3ff.

<sup>13</sup>Op. Cit. Major D. E. Westervelt, student monogram, passim.

<sup>14</sup>After Action Report, Okinawa, 20th Armored Group, passim.

<sup>15</sup>Op. Cit. Major D. E. Westervelt, student monogram, passim.

<sup>16</sup>Capt. W. D. Stone, "Tank Employment--Marine Corps", a student monograph (Fort Knox, The Armored School, 1948) p. 4ff.

### CHAPTER III

#### EMBARKATION AND MOVEMENT TO OKINAWA (2 Mar - 1 Apr 45)

Loading the ships and mounting the assault troops for the OKINAWA operation, where they were stationed, in the scattered reaches of the Pacific Ocean and Southwestern Pacific Areas, required close and intricate timing to have all elements at the target at the appointed time. Altogether, 111 APAs, 184 LSTs and 89 LSMs were loaded in mounting the Joint Expeditionary Force. Previous experience in assault loading greatly enhanced the efficiency and speed of operation at the mounting points. Minor changes in loading schedules and inclement weather did not hinder the operation. Armored and amphibious units were loaded on special type ships. These ships had been designed for such amphibious assault operations. All personnel received a thorough briefing of the plans after the ships had left the mounting points. Units conducted an orientation and training program during the voyage. The assault troops arrived at the target area as scheduled but only after a tremendous amount of precise planning.

Directives issued by ComPhibPac specified mounting points, dates for loading, tactical grouping of ships with arrival dates at mounting points, time of availability, rehearsals, sailing dates and arrival dates on target.<sup>1</sup> The Tenth Army was directly responsible for the loading of assault shipping.

Loading plans of the troop units were subject to the approval of the captain of the ship. All loading was conducted according to the Transport Doctrine, Amphibious Forces, Pacific Fleet, and the logistical directives of Tenth Army.<sup>2</sup> Trained Transport Quartermaster Teams loaded troops and equipment. Two combat loading teams, trained in embarkation procedures and familiar with the policies of the commands, assisted in the loading of XXIV Corps units at LEYTE. The majority of the armored and amphibious units of XXIV Corps were at LEYTE.

Ships characteristics pamphlets were forwarded to the various commands prior to arrival of the ships at mounting points. Some inaccurate ships characteristic pamphlets were received. The lack of accurate information affected the efficiency and speed of loading.<sup>3</sup> Plans called for all ships to be provisioned before the training and rehearsal period and to be topped off at the conclusion of that period and prior to their departure from LEYTE. As was expected, minor adjustments in time schedules had to be made. Schedules were disrupted by inclement weather and late arrival of some ships.

Loading of the assault convoys of the 77th Infantry Division and its attached armored units commenced on 27 February 1945 and were substantially finished by 14 March. This was required due to the Division's earlier departure from LEYTE to strike at KERAMA RETTO area prior to L-Day.<sup>4</sup> No difficulty was experienced in the loading of the other Divisions, other than the

usual necessity for changes of ship assignments. Loading of all units commenced on time. All loading was conducted on open beaches. The 96th Infantry Division embarked in the vicinity of DULAG, LEYTE, and the 7th Infantry Division in the vicinity of the BITO RIVER, LEYTE, early in March.

During the loading period, the sea and surf conditions were bad. The latter being so high that it was seldom practicable to beach any craft smaller than LCTs (Landing Craft Tank) with safety. LCTs and even LSMs (Landing Ship Medium) had to be held on the beach by tractors to keep them from broaching. Because of this, ship-borne landing craft could not be used for more than a small fraction of the loading. The bulk of the loading had to be handled with LCMs and LCTs. The 96th Infantry Division was loaded with all three RCT (Regimental Combat Teams) being loaded simultaneously. Only one RCT at a time was loaded by the 7th Infantry Division. These units were loaded in APAs (Attack Transport Ships), APDs (destroyer type high-speed transports). Assault troops, Battalion Landing Teams, were later transferred by LCVPs (Landing Craft Vehicle Personnel) to LSTs where a company would join a platoon of Amtracs which would carry them to the beaches.

The LSMs and LCTs were beached at high tide and immediately began loading the other ships which were held off shore due to the sea and surf conditions. The tank battalions loaded one M4 medium tank per LCM, or four M4 medium tanks in a LCT. These, in turn, were floated into LSDs (Landing Ship Docks) which would hold

eighteen LCMs or three LCTs. The LSDs were, in some cases, loaded with forty-one Amtracs or Amtanks. Temporary decks could be constructed within the tank deck of a LSD which enabled it to carry up to ninety-two Amtracs.

The 193rd Tank Battalion, with the 27th Infantry Division at ESPIRITO SANTO, was loaded in ten LSMs. The three medium tank companies (one company complete on three LSMs), were loaded on nine LSMs. The command and staff tanks, assault gun platoon, and miscellaneous wheeled vehicles on the other LSM. All light tanks and the remaining vehicles, M10 ammunition trailers, and 1-ton trailers, were spread loaded on five APA and one AKL. No more than normal difficulties were encountered during their loading operation.<sup>5</sup>

Amtracs and Amtanks were loaded, generally, in LSTs. In some cases, LSMs were used, in which seven Amtracs or Amtanks were loaded. The LVTs were loaded from the water. Due to the conditions of the sea, a few were damaged when thrown against the LSTs while loading through the bow ramp. The Amtank companies were loaded one company per LST. An Amtank company consisted of eighteen Amtanks, two Amtracs, two 2½-ton trucks, two 1¼-ton trucks and one 1-ton trailer.

Battalion Headquarters, Headquarters and Service Company of the Amtank Battalion, was, as a rule, loaded with one of the four line companies' LSTs. The LST had top deck space for nine

LVTs or other vehicles. These vehicles were secured on planking spanning the hull frames and chained down, as were the LVTs on the tank deck below. Some of the wheeled vehicles of the Headquarters were spread loaded.

One Amphibious Tank Battalion was attached to each Infantry Division. The divisions attached two Amtank companies to each assault RCT, and the RCT attached one company to each assault BLT. They were to form the first wave, furnish flank protection for the assault landing force, and close fire support until land tanks and artillery were landed.<sup>6</sup>

The Amtracs were loaded by platoons, each having sixteen Amtracs. Company headquarters platoon (3 Amtracs, 2 2½-ton trucks, 1 1/4-ton truck and 1 1-ton trailer) was loaded on the top deck of one of the company's LSTs. Battalion Headquarters, Headquarters and Service Company (17 LVTs, 8 2½-ton trucks, 1 truck Wrecker, 3 1-ton trailers) was loaded in one LST. The wheeled vehicles were spread loaded on other LSTs carrying the battalion. As in the case of the Amphibious Tank units, the wheeled vehicles were loaded on to the top decks from piers prior to the loading of the LVTs. However, in the Amphibious Tractor units, the 1/4-ton trucks were loaded in Amtracs prior to their departure from the beach for the LST.<sup>7</sup>

The majority of the LCTs were carried to the target area mounted on side-launching cradles, on the weather deck, of LSTs.



Some of the LCTs were loaded aboard AKAs, AKs, or APs. When the carrier ship arrived in the forward area, the LCTs would be launched or lowered by a cargo boom and then loaded with tanks, heavy artillery, vehicles, troops or supplies.

The plan of transferring assault troop personnel to LSTs and LSMs was ideal as they would be with the personnel and vehicles which would carry them to the beaches. It was excellent for command, liaison, briefing and dissemination of last minute intelligence and orders. Discussions of common problems between the Infantry and the Amtrac personnel made for better cooperation and coordination. The loading plan directed that the CO of the BLT be on the LST of the Amtrac Company Commander who would land his battalion. The CO of the Amtrac Battalion with part of his staff was normally aboard the APA of an assault RCT Commander. This organization was based on the tactical organization of the Assault Regiments and the Battalion Landing Teams. Amphibious Tractor Battalions would land the assault elements, two assault RCTs, of an Infantry Division. Each RCT required an Amphibious Tractor Battalion. One Amphibious Tractor Company would land one of the Infantry Battalion Landing Teams (BLTs). After landing the assault BLTs, one tractor company would return to the landing ship area to carry in initial beachhead supplies while the other would be used to land the reserve BLT of the RCT.<sup>8</sup>

Immediately upon embarking aboard ship, all troops were informed of the proper ship's decorum, conservation of water, hours for use of washrooms and showers.<sup>9</sup> Care and maintenance of equipment was stressed throughout the voyage to the target area. For security reasons, no information pertaining to the operation had been disseminated to individuals below key staff officers prior to departure from the staging areas. Shortly after the ships had departed from the mounting points, all troops were thoroughly briefed and informed in detail of the coming operation.<sup>10</sup> Maps, aerial photos, and other subject matter pertinent to the forthcoming action was made available for this purpose. Many units used a relief map of the target area which proved to be an excellent aid for briefing.

All units conducted several classes each day covering such subjects as the geography and history of the target area; strength and composition of the enemy, to include enemy capabilities of counterattack by air and amphibious forces. The strength and composition of our own forces, to include air and naval units, the identity of commanders of the expeditionary units, was given emphasis. All personnel were schooled in the general plan of attack for the first phase; the surface and air support for amphibious assault. Great weight was placed on the mission of the unit being oriented.

Despite that many of the troops were seasoned "island-hoppers", special emphasis was placed on warnings regarding "trigger happiness", indiscriminate AA-firing, pilfering, disposition of captured materiel, countersigns, and priority of routes or roads.<sup>11</sup> All troops proved to be particularly anxious to gain all the information possible from the program, especially enemy information.

Daily maintenance periods were accomplished on both vehicles and weapons. Constant checks on all equipment, by all personnel, were enthusiastically performed. The movement to the target area was made under the outstanding and disconcerting conditions of overcrowding of troops and adverse weather conditions. The orientation programs and training programs kept all personnel active and prevented serious morale problems during the six to nine day voyage. All troops arrived at the assault area with a keen sense of anticipation and were ready to participate in the largest amphibious assault landing ever to be attempted.

Armored and amphibious units, teamed with their respective infantry units, were waiting eagerly at the target assembly area for H-Hour. They had come from far distant points of the Pacific Theater. The assault loading of all ships had been successfully accomplished by these veteran units of previous amphibious operations. The team play and great coordination between the Army and Navy personnel had been outstandingly smooth during the mounting

period. Amphibious tanks loaded in LSTs and LSMs were alert and ready to disembark and move to their line of departure. Amtracs with personnel from the assault BLTs were grouped together in LSTs ready to disembark and form the assault waves.

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NOTES FOR CHAPTER III

<sup>1</sup>Action Report, Ryukus Campaign, 26 March to 30 June 1945, Tenth Army, 3 July 1945, Vol I, Ch V, p. 5f.

<sup>2</sup>Ibid, ch. v, p. 1f.

<sup>3</sup>Ibid, ch v, p. 7f.

<sup>4</sup>Amphibious Operations "Capture Okinawa", 27 March to 21 June 1945, Navy Department, Office Chief Naval Operations, 22 June 1946, ch. 7, p. 21ff.

<sup>5</sup>After Action Report, 1 January to 30 June 1945, (Loading and Embarkation Phase), 193rd Tank Battalion, passim.

<sup>6</sup>FM 17-34, "Amphibious Operations," passim.

<sup>7</sup>After Action Report, 1 January to 30 June 1945, 536th Amphibious Tank Battalion, passim.

<sup>8</sup>Capt. Russell T. Houghton, "The Amphibian Tractor Battalion" student monograph, (Fort Knox, The Armored School) 1948, passim.

<sup>9</sup>Capt. W. D. Stone, "Tank Employment" (Marine Corps) student monograph (Fort Knox, The Armored School) 1948, passim.

<sup>10</sup>Lt. Col. R. C. Williams, "Observers Report", Okinawa Operation, Headquarters, Army Ground Forces, 8 June 1945, p. 6ff.

<sup>11</sup>Op. Cit. Capt. W. D. Stone, student monograph, passim.

## CHAPTER IV

### THE AMPHIBIOUS ASSAULT LANDING (1 - 3 April)

An amphibious force of over 1300 major units converged on OKINAWA in the early morning of Easter Sunday, 1 April 1945, prepared to assault the HAGUSHI beaches. At 0406, the Commander, Joint Expeditionary Force, signaled "Land the landing force."<sup>1</sup> The fire support force of 10 battleships, 9 cruisers, 23 destroyers, and 177 gunboats, began the pre-H-Hour shelling of the HAGUSHI beach and its approaches. This was the heaviest concentration of naval gunfire ever to support a landing of troops.<sup>2</sup> Air strikes were closely coordinated with Naval gunfire on pre-planned missions on the target area. The HAGUSHI beaches were 9000 yards long, with the ground rising gently behind to an elevation of 50 feet. These beaches were adequate to support a four-division landing and would facilitate the quick capture of two airfields.

While the Naval gunfire and air strikes were being delivered, the landing craft were being launched and the assault battalions were loading into the Antracs.<sup>3</sup> Landing waves were formed and led to the line of departure, which was 4000 yards out from the beaches, by Naval Control Craft. The first wave was Amphibious Tanks. The second, third, fourth, fifth, sixth, and eighth waves were amphibious tractors loaded with 16 battalions of infantry from the four divisions making the assault landing.

The seventh wave was water-proofed land tanks carried in LCMs, which had been brought to the landing area in LSDs.<sup>4</sup> These waves were formed abreast under control of Naval guide boats with intervals of two or three minutes between waves. The leading wave of Amtracs crossed the line of departure at approximately 0800, and an almost continuous eight mile line of armored, amphibious vehicles swept toward the landing beaches.<sup>5</sup>

Naval gunboats led the way in to the beaches, firing rockets, mortars, and 40-mm shells into pre-arranged target squares. Upon approaching the reef, the gunboats turned aside and the amphibian tanks and tractors passed through and proceeded to the beach, firing 75-mm howitzers and machine guns directly forward at targets of opportunity.<sup>6</sup> Simultaneously, two carrier groups of 64 planes each saturated the landing area with machine gun fire while the Naval gunfire was shifted to targets further inland. The only sign of opposition was an occasional mortar or artillery shell.

The Tenth Army landed with the III Amphibious Corps on the left, and the XXIV Army Corps on the right. In the III Amphibious Corps beaches, the 6th Marine Division was on the left and the 1st Marine Division on the right. In the XXIV Corps, the 7th Infantry Division landed on the left and the 96th Infantry Division landed on the right. (See Map 6) The entire



39



Movement of first assault waves upon the landing  
beaches at OKINAWA on 1 April 1945.  
(Note naval fire support craft in lead.)



landing took place according to plan with an ease and lack of opposition incredible to the veteran troops making up the landing force.<sup>7</sup> 16,000 troops were landed the first hour. The troops moved inland according to plan. Scattered mines and empty trenches were encountered but no Japs were found. The almost complete absence of opposition made the men suspicious, and they searched carefully for a trap. The immediate objectives were the KADENA and YONTAN airfields. The 7th Infantry Division took the KADENA airfield by 1030 and the 6th Marine Division took the YONTAN airfield by 1130.<sup>8</sup>

The troops pushed on rapidly, and by nightfall, the front was 15,000 yards wide and in places up to 5,000 yards deep. More than 60,000 troops were ashore by 1600, including the reserve regiments of the assault divisions. The direct support battalions of divisional artillery were in place by dark.

The landing had been completely successful; proceeding according to plan. The first wave was formed of amphibious tanks. A typical amphibious tank battalion action was that of the 780th Amphibious Tank Battalion, which participated in the assault landing in support of the 96th Infantry Division.<sup>9</sup> The LSTs, carrying the Battalion, anchored approximately 5500 yards off the HAGUSHI beaches early in the morning of 1 April. The Amphibian Tanks were launched from their respective LSTs and led to a position 100 yards in rear of the line of departure by Naval Control Boats.

A and B Companies were in support of Regimental Combat Team 381 landing on WHITE beaches #1, 2, and 3, and C and D Companies were in support of Regimental Combat Team 383, which landed on BROWN beaches, #1, 2, and 4. Each Amtank company formed the first wave preceding an assault battalion of infantry. The tanks crossed the LD at 0800 on signal from the control boats. Each company was in line; each platoon in a wedge formation. All vehicles opened fire at H-2 when they were 300 yards off shore. All companies landed between 0830 and 0835 and proceeded inland in support of the assault infantry battalions. Company A moved inland 600 yards with no opposition. Companies B, C, and D moved inland 100 to 500 yards encountering mines and light mortar fire. All companies supported the forward movement of the infantry with direct fire.

After the infantry pushed inland, the 7th wave of standard tanks in LCMs was landed. A secured beachhead was desired for landing the tanks because the LCM is vulnerable to fire, and approximately one half hour is required for de-waterproofing the tanks and reorganization.<sup>10</sup> One Company of standard tanks was attached to each regimental combat team for the initial landing. These tanks reorganized quickly and pushed inland in support of the infantry. Thereafter, the amphibian tanks were used for patrols, perimeter defense, beach defense, and indirect fire support. The Amtank is too thin-skinned to operate successfully as a standard tank on land.

The primary mission of the Amtank is to make the initial landing, while the mission of the standard tank is to support the infantry once they are ashore. The mission of the amphibious tractor is to land the infantry on the beaches. A typical Amtrac battalion action was that of the 536th Amphibious Tractor Battalion, which landed the 32nd Regimental Combat Team of the 7th Infantry Division in the initial assault on the HAGUSHI beaches.<sup>11</sup>

The battalion embarked from LSTs at 0645, 1 April, and came under control of Naval control boats. The Battalion Commander and Executive Officer boarded the central control ship of the 7th Infantry Division to control and coordinate the Amtracs of the battalion with the Division G-3 and Naval control personnel. The S-2 was aboard the control vessel of the Commanding Officer, Regimental Combat Team 32, as the representative of the Amtrac Battalion Commander. The Battalion S-3 was aboard another beach control ship. All were netted together by radio, which gave maximum control and flexibility. Company A loaded the 1st Battalion while Company B loaded the 2nd Battalion. The first wave of Amtracs carrying infantry crossed the line of departure at 0805 and landed on ORANGE beaches #1 and 2 at 0840. The assault battalions of infantry were landed against little opposition, consisting of sporadic enemy artillery and mortar fire. Both assault battalions of infantry were landed by 0930.

Company A began landing the reserve battalion of infantry at 1042, and completed the landing by 1145. At 1500, the battalion assumed defensive positions on the right flank of ORANGE Beach 2, from the shore to approximately 800 yards inland. At 1700, on L-Day, the battalion was assigned the mission of transporting supplies from LCMs and LCVPs across the 400 yard reef to inland dumps. From 1 - 9 April, the battalion hauled supplies under control of the 7th Infantry Division Shore Party. Trucks later became available to haul supplies inland but the amphibious tractors continued to transport supplies across the reef from ship to shore. From 10 April to 15 April, the battalion operated with the XXIV Corps Shore Party. During this period, this battalion landed 5536 loads of supplies, for an estimated total of 17,332 tons.

Each company had 42 Amtracs assigned. Thirty-six were used to transport infantry, plus 1 for the infantry commander of the Battalion Landing Team, 1 for the Amtrac Company Commander, 1 for the company medical support, 2 for company maintenance and 1 for company kitchen. Battalion Headquarters was allotted 9 Amtracs of which 5 were for Battalion maintenance and 4 for Battalion Headquarters. This battalion landed a regiment of infantry successfully, set up a perimeter defense of an assigned area, and landed some 17,000 tons of supplies in the period before the Shore Parties were prepared for this work.

We have studied the operation of typical armored units in this huge Army-Navy assault. Let us return to the over-all

action of the Tenth Army. Nightfall of 1 April found four divisions in a perimeter defense after making an unopposed landing. The American forces pushed forward on the morning of 2 April and by 1400, the 7th Infantry Division cut across the island and reached the opposite shore. The 96th Infantry Division had slower going in its zone on the right half of the island. They met hilly terrain with empty caves and dugouts and scattered minefields and tank traps. On this day, the 96th had two sharp but quickly successful attacks on Japanese positions.<sup>12</sup>

On 3 April, the III Amphibious Marine Corps turned north with the 1st and 6th Marine Divisions, and the XXIV Corps turned south with the 7th Infantry Division on the left and the 96th Infantry Division on the right. The 7th Infantry Division gained 5000 yards to occupy KUBA, killing and driving off a few Japanese. The 96th Infantry Division wheeled to the right and coordinated their advance with that of the 7th Infantry Division against scattered, unorganized resistance.<sup>13</sup> (See Map 6). XXIV Corps had not met the main Japanese defensive positions, but the Battle of OKINAWA was about to begin.

The landing phase of the Battle of OKINAWA was completely successful. Conditions were perfect for the landing, and the Japanese did not defend the beaches. Troops and supplies were landed more quickly and easily than planning estimates. The

landing craft and amphibious equipment proved to be satisfactory, although it did not receive a true test due to lack of opposition on the beaches. Four divisions were landed on the first day. The 7th Infantry Division cut across the island on the second day against little opposition. On 3 April, the 7th and 96th Infantry Divisions wheeled to the right and advanced south. The main Japanese defensive positions were as yet unlocated.

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NOTES FOR CHAPTER IV

<sup>1</sup>The War in the Pacific, OKINAWA, The Last Battle, pp. 68-69.

<sup>2</sup>Amphibious Operations, Capture of OKINAWA, Navy Department, OPNAU 34-P-0700, passim.

<sup>3</sup>Tenth Army Action Report, RYUKUS 7-111-1.

<sup>4</sup>RYUKUS Campaign Action Report, 536 Amphibian Tractor Battalion, p. 6.

<sup>5</sup>Op. Cit. Tenth Army Action Report.

<sup>6</sup>Op. Cit. OKINAWA, Last Battle, p. 70.

<sup>7</sup>Ibid.

<sup>8</sup>Ibid., p. 75.

<sup>9</sup>Op. Cit. Action Report, 780 Amphibian Tank Battalion, RYUKUS Campaign, passim.

<sup>10</sup>Monograph, Capt. A. A. Todd, Cav. "Standard Tanks in Pacific Amphibious Operation."

<sup>11</sup>After Action Report, 536 Amphibian Tractor Battalion, passim.

<sup>12</sup>Mulford and Rogers, 96th Division History, Part I, pp. 10ff, and Part II, pp. 11 ff.

<sup>13</sup>Op. Cit. OKINAWA, Last Battle, pp. 76-77.

## CHAPTER V

### OVERRUNNING THE OUTPUT SYSTEM (4 - 19 April 1945)

American troops were firmly established on terrain vital to the defense of JAPAN. By 4 April, Tenth Army had occupied an area of central OKINAWA fifteen miles long and from three to five miles wide.<sup>1</sup> Little opposition had been encountered thus far from enemy ground action, since the Japanese, having found in earlier campaigns that defense of the beaches was over-costly, had resolved to conduct a defensive battle inland until American supply lines to the island could be cut. The first few days of the operation had been deceptively easy; the days to come, however, would prove that the Japanese were capable of bitter and sustained defense.

XXIV Corps began its advance from the beachhead into southern OKINAWA on 4 April 1945. For the next fifteen days, the two assault divisions of the corps fought their way through the outposts of the enemy's main battle position. Two tank battalions, the 711th and 763rd, participated in this phase of the campaign, meeting ever increasing resistance. The 711th Tank Battalion from 4 - 10 April engaged in a series of actions which illustrate clearly the nature of the fighting that armor experienced in overrunning the enemy's outpost system.

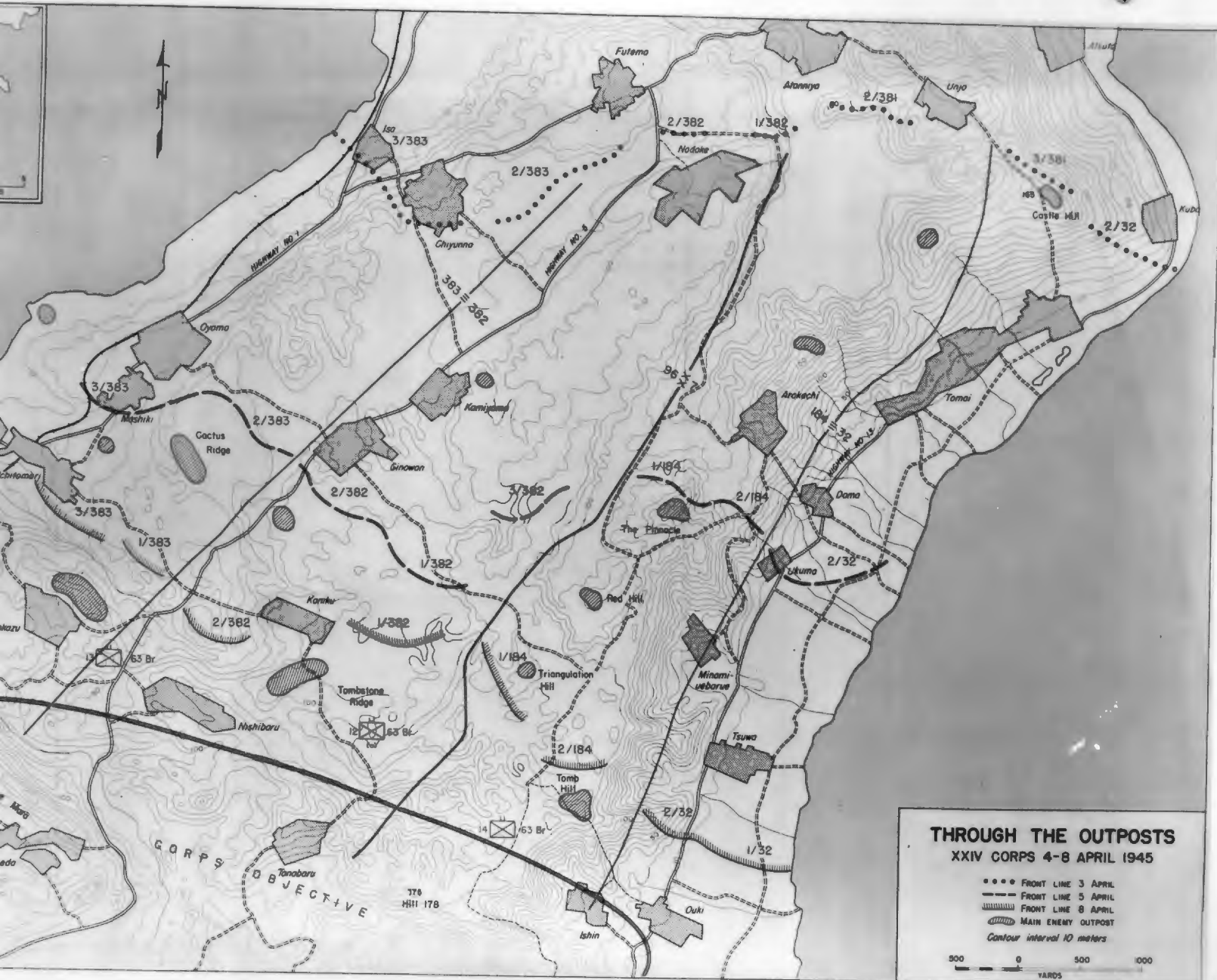
The 711th Tank Battalion Advances South (4 - 11 April 1945)

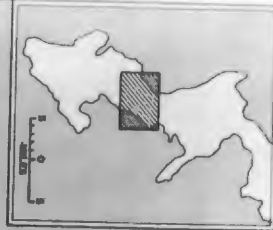
On the east flank of XXIV Corps the 711th Tank Battalion prepared to support the 7th Infantry Division in its move south. The 7th Division's objective was HILL 178, a dominating terrain feature six thousand yards to the south. (See Map No. 7 ). In the division zone, the terrain was varied in nature. Along the left flank stretched the coastal flats, commanded everywhere by the high ground which paralleled the coastline. In front of the division, was an area of small hills, sharp ridges, and open plateaus. Roads were few and exceedingly poor. Nowhere was the terrain really "good tank country."

On 4 April, the advance began auspiciously. Hill 165 fell to the infantry after a short and rather half-hearted defense by second rate Jap troops. However, any advance beyond Hill 165 drew heavy fire from the high ground of CASTLE HILL to the southwest. In this area, the 184th Infantry Regiment, advancing on the division right, had progressed some two thousand yards when heavy fire from CASTLE HILL struck its left flank. This enemy held area could not be ignored. After two assaults on the hill failed, the division began to dig in and to consolidate the gains of the day.

The tanks saw little action on 4 April. Company D's 2d platoon supported the unsuccessful attacks on CASTLE HILL. Initially, a destroyed bridge prevented the tanks from moving forward, but by 1330 they had reach the front lines. Direct







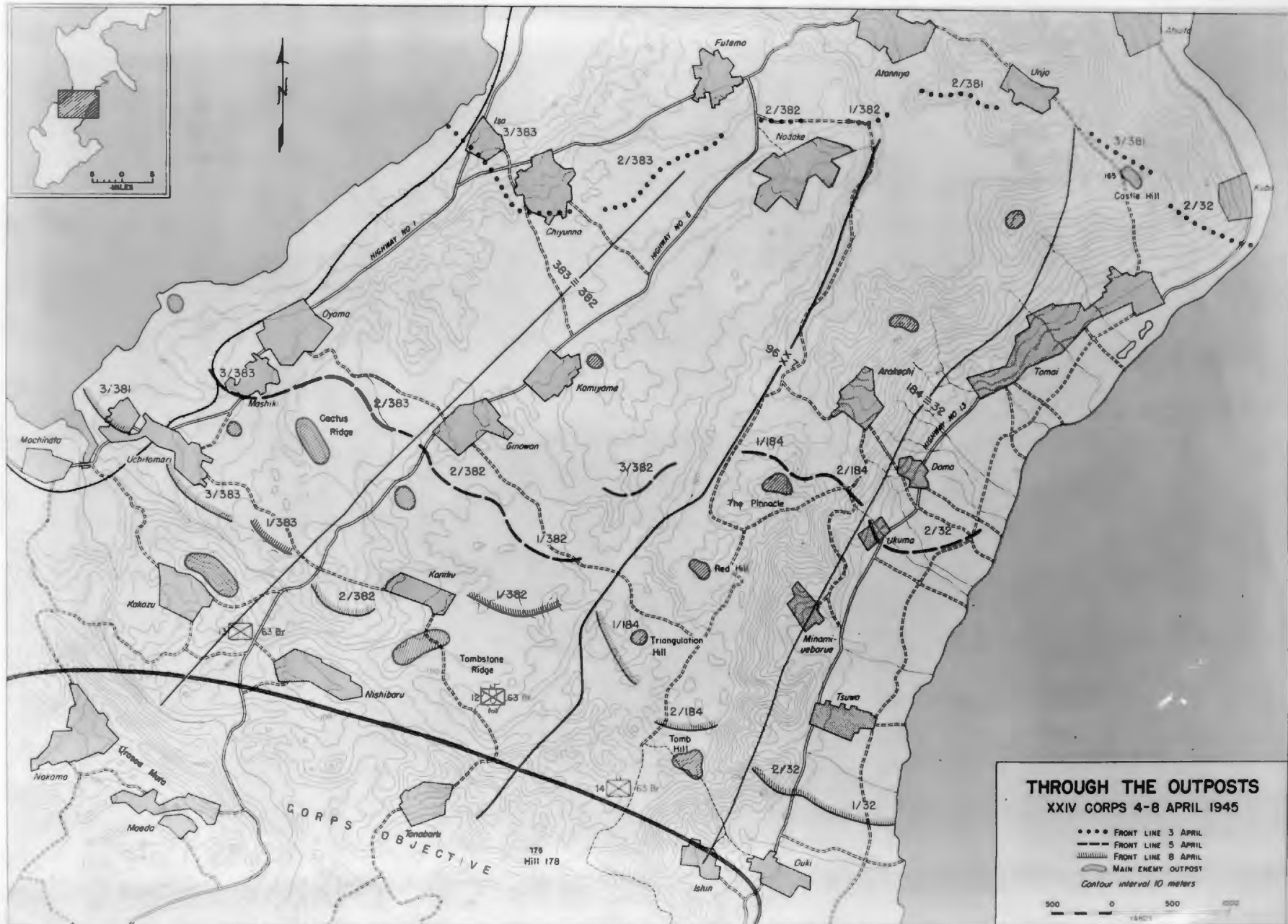
**THROUGH THE  
XXIV CORPS 4-6-68**

- ..... FRONT LINE
- FRONT LINE
- FRONT LINE
- MAIN ENEMY
- CONFIRM INTERVAL N

0 500 1000  
YARDS

48

Fig 7



**THROUGH THE OUTPOSTS**  
**XXIV CORPS 4-8 APRIL 1945**

- ..... FRONT LINE 3 APRIL
- FRONT LINE 5 APRIL
- FRONT LINE 8 APRIL
- ▭ MAIN ENEMY OUTPOST

Contour interval 10 meters

500 0 500 1000

tank fire accounted for two enemy pillboxes that were holding up the infantry advance. Later in the afternoon, two tank platoons fired on enemy positions in KUBA. Otherwise it was a quiet day.<sup>2</sup>

Before daylight, the Japs abandoned their positions. The 2d Platoon of Company D moved out with the 1st Battalion, 184th Regiment. Past CASTLE HILL went the advance to a point south of ARAKACHI. Here the infantry began to extend to the left in order to cover the entire regimental zone, for the 2d Battalion had dropped behind in a very cautious advance toward CASTLE HILL. Suddenly, accurate fire from a hill four hundred yards to the front stopped the 1st Battalion's extension.

Across two hundred yards of cultivated land south of ARAKACHI, four ridges joined at right angles to form a mound called the PINNACLE. Firmly entrenched on the high ground, enemy troops awaited attack. When it came, the Japs held their fire until the last moment. Then they poured forth a withering fire which stopped the men in their tracks. The 1st Battalion withdrew. By evening the 2d Battalion was up, and the 32d Regiment extended the line to the east coast.

Supported by additional fire and by smoke, the infantry attacked again on the 6th. Armor now came into play. A platoon of light tanks and a platoon of assault guns directed fire on the PINNACLE at a range of six hundred yards. Again the attack failed. A third assault had better fortune. Locating a covered

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approach, an infantry company slipped up to the top of the PINNACLE undetected. Few enemy troops survived the following mop-up.

South of the PINNACLE lay a valley a thousand yards wide. On the far side of the valley, RED HILL dominated all movement forward. Into this area moved the 3rd Platoon, Co. "C" and a platoon of "Company. The small force proceeded unmolested on a reconnaissance in force along the ARAKACHI road two miles into enemy territory. In the vicinity of RED HILL heavy concentrations of mortar and artillery fire dropped on the tanks. Having softened the Jap defenses, they returned with information of the terrain to the front that would aid in the next day's advance.<sup>3</sup>

On 7 April, resistance increased. Two medium tank platoons, from "C" Company, and a platoon from "D" Company, moved toward RED HILL in support of the 3rd Battalion, 184th Infantry. As they neared the base of RED HILL, the light tanks were ordered forward to neutralize the area beyond the objective. Two tanks struck mines almost immediately. A third tank was knocked out of action from satchel charges. The two remaining tanks reached firing positions from which they tried to prevent enemy reinforcement of RED HILL. While two light tanks tried desperately to accomplish their mission, the infantry assaulted RED HILL. The enemy, however, beat off this attack and yet another. The third attack, an envelopment, drove the Japs from their strong point.

With RED HILL in friendly hands, the tanks advanced around the west end of the high ground to explore the area beyond. They moved through the valley south of RED HILL to a depth of three miles. At 1500, Japanese troops attacked the small force with satchel charges. This enemy action was repulsed without loss, but the tanks were forced to withdraw. They returned with valuable information of Japanese dispositions and defenses.

On the same day, another armored group composed of the 3rd Platoon, Company "A", and a platoon from the Reconnaissance Troop, 7th Division, reconnoitered one mile into enemy territory. This force, however, encountered such heavy artillery fire that it also was forced to withdraw.

In the advance to this date, the 32d Infantry Regiment had moved along the coastal plain against scattered enemy resistance to the front, but Jap strongpoints in the high ground to their west had constantly prevented rapid gains. It was vital that the commanding ground be cleared, and this was the job of the 184th Infantry. During this period, Company "A", 711th Tank Battalion, plus a platoon of light tanks supported the 32nd Infantry. Throughout the daylight hours the tanks provided the direct support required by the foot troops. At night, they established road blocks and flank security for the regiment.

While the attack on RED HILL was in progress, enemy fire from TOMB HILL struck both assault regiments of the 7th Division. It became increasingly obvious that TOMB HILL was heavily defended.

On 8 April, two battalions on a two thousand yard front advanced toward the south. Objectives were TOMB HILL and TRIANGULATION HILL, 800 yards south of RED HILL. Enemy reaction was immediate and violent. Heavy fire struck the attacking troops along the entire front. Just beyond the line of departure infantrymen of the 3rd Battalion, 184th Regiment, were pinned to the ground. Two tank platoons of Company "C" supported the movement forward. Both platoons struck minefields which slowed their advance.

Unable to continue forward, the 2d Platoon, Company C, "joined an artillery concentration firing over the ridge behind RED HILL."<sup>4</sup> The 3rd Platoon cleared a path through the mines by using 75mm gunfire. Meanwhile, as the infantry had been pinned to the ground by heavy mortar and artillery concentrations, the 3rd Platoon received orders to cover the withdrawal of the infantry. This maneuver was successful, but when the tanks themselves attempted to withdraw, they ran into difficulty. The lead tank overturned on the narrow road, blocking the way for the rest. Under mortar and sniper fire, tank crews dismounted to dig a by-pass by hand. When the work was nearly completed, the enemy attacked in force. One tank was satchel charged. Despite the covering fire of the remaining tanks, two crew members were bayoneted as they tried to escape. Finally, the close-in attack was beaten off by tank machinegun fire; the tanks withdrew to friendly lines.



By 1430 the 3rd Battalion had reorganized its attack to the south. Tanks again supported the foot troops as they crossed the line of departure, but as soon as the armor appeared enemy artillery opened up with heavy concentrations of 150-mm shells. This intense fire caused so many casualties to the exposed infantry that the tanks were ordered back. The enemy fire subsided. Pushing on rapidly, the 3rd Battalion captured TRIANGULATION HILL, where the advance halted for the day. Meanwhile, the 2d Battalion had been unable to reach TOMB HILL. They had crossed open ground to take a small hill some three hundred yards short of their objective, but the slow advance of the unit on their right made further movement dangerous.

The 7th Division resumed the attack at 090700 April. Company "B" plus the assault gun platoon supported the main effort, again being made by the 184th Infantry. The 3rd Battalion came to a standstill on a ridge five hundred yards beyond the line of departure. Preceding the infantry by six hundred yards, the 3rd Platoon, Company "B" and the assault gun platoon neutralized the ridge by direct fire. One tank and three crew members were lost when enemy artillery scored a direct hit.

The 2d Battalion was more successful in its zone. The terrain was unfavorable for tank employment except for a strip along the right flank. It was here that the two supporting tank platoons were forced to operate. Consequently, the bulk of the enemy fire was directed on this area. Covered by the

direct fire of medium tanks, men of the 2d Battalion crossed the open ground rapidly. Up TOMB HILL they went, sealing the defenders in their caves. "...massed fire of M-8s, self propelled 75-mm guns, 81mm mortars, and tanks cracked hostile defenses, making possible an advance of 800 yards."<sup>5</sup> However, TOMB HILL was under observation from HILL 178, and any movement beyond the crest drew accurate enemy fire. The result was that the reverse slope of TOMB HILL remained for the time, at least, in Japanese hands.

The fall of TOMB HILL opened the way for an advance on the division's final objective, HILL 178. In the coastal area, the 32d Regiment had secured high ground overlooking the village of OUKI. It was now possible to change from frontal assaults along the high ground to an envelopment of the objective. This became the 7th Division's plan of attack for 10 April. While the 184th Infantry exerted pressure against HILL 178 from the north, the 32d Infantry plus the 2d Battalion, 184th, would seize SKYLINE RIDGE, thus exposing the enemy right flank to envelopment from the east.

As the 32d Regiment moved out, Japs were discovered in OUKI. The 2d Platoon, Company A, 711th Tank Battalion advanced on the town to eliminate the threat from the flank. Heavy fire fell on the small force; mines and an antitank ditch barred entrance into OUKI. Three tanks were disabled, two by mines and one by artillery. In support of the 2d Battalion, 32d Infantry,

the 1st Platoon, Company "A" and 3rd Platoon, Company "D" fired on the ridge running east from TOMB HILL. Forced to withdraw by enemy artillery fire, they first succeeded in destroying twelve enemy positions and eighty enemy troops. Meanwhile, the 2d Battalion, 184th Regiment, had run into trouble. The enemy troops entrenched on the reverse slope of TOMB HILL resisted all efforts to dislodge them, and the attack could not progress toward HILL 178 until the reverse slope had been cleared.

During the early afternoon, the attack was called off. One cause of all the difficulty was the weather. Rain fell on the 9th for the first time since the invasion began. It continued on the tenth. The OKINAWA clay turned to a slick mud that slowed down foot movement and all but stopped vehicular movement. There were other reasons for a halt. By now it was obvious that the XXIV Corps had reached the enemy's main defenses. Captured maps and ever increasing resistance indicated that additional troops, more supplies, and a build-up in artillery were vital before a major attack could be successful. Consequently, from 10 April until 19 April, large scale offensive operations ceased. The troops of the 7th Division made themselves as comfortable as possible in the rain and prepared for coming battles.

In the campaign to date, the tankers of the 711th Tank Battalion had accomplished feats of which they could well be proud. They had landed successfully on a hostile shore. Though handicapped by very unfavorable terrain, they had played a major

part in reducing enemy strongholds in the 7th Division's zone. Because its freedom of maneuver was restricted and because the enemy occupied organized fortified positions, the armor had seen action on a more limited scale than might otherwise have been the case.

#### Technique of Operations, 711th Tank Battalion

The 711th Tank Battalion did not operate as a complete tactical unit, nor did any of the tank battalions on OKINAWA. The battalion commander's chief duty was to allot tank support to the infantry regiments. Usually each day he sent tank companies to assault regiments depending upon the tactical situation, the nature of the terrain, and the plan of maneuver. In addition to supervising battalion administration and supply, he acted as the chief advisor to the division commander on questions relating to tank employment.

Once the attachments were made, the tank company commanders reported to the infantry regiment, where the infantry commander or his S-3 briefed them on the plan of attack. At this time, the tank company was further attached to a battalion. The next step in coordination involved contact with the battalion commander. Whenever possible, the two commanders studied the terrain to the front from the battalion observation post. There they settled the detailed plans for the next day's operation.

During the attack the tank company commander might supervise the action of his platoons on the ground or join the

battalion commander at his observation point. Usually the platoons were spread over a large area, and the company commander could operate best at the O P. Here he kept in communication with his platoons and with the 711th command post. The executive officer or liaison corporal reported to regimental headquarters to provide a direct link to regiment.

On the platoon level, control and coordination took several forms. If the tank turrets were open, voice of hand signals sufficed for target designation and direct contact. With turrets closed, the telephone attached to the back of each tank provided a ready means of communication. However, if the infantry were pinned down any distance at all way from the tanks, as happened frequently, messages followed an indirect course. The infantry platoon had no radio which could net with the tank radio. Consequently, requests for support went from the infantry platoon to company headquarters. From here the message was transmitted over the company SCR 300 to battalion headquarters. At the battalion OP the tank company commander or his representative received the message from the infantry and relayed it to the platoon. It was a roundabout method, but it worked. It is true that each tank contained an AN/VRC3 which could net with the infantry company's SCR 300. Still, the reception on these sets was poor. Although the tankers monitored the SCR 300 net, most of the messages followed the procedure described above.

Before dark, the tank companies withdrew to a bivouac area. Here they performed what maintenance they could in the time available. The company established a perimeter defense defiladed from enemy observation and direct fire some ten to twenty minutes drive behind the front lines. Tanks remained dispersed for protection against artillery and bombing. The crews slept in trenches under their tanks, alternating on turns as guard throughout the night. As added security against enemy infiltration and night raids, the men placed trip wires, flares, and wire (when it was available) around the end of the perimeter. In addition, the anti-aircraft machine guns were dismounted for grazing fire. Occasionally, if enemy attacks were expected, platoons established their own bivouacs close to the front lines.

Supply for the battalion did not become a major problem only because the distances were short. The battalion supply officer worked through the 7th Division supply agencies for most of the necessary items. Gas and ammunition usually required a trip to Army supply points. The S-4 kept on hand a small reserve of 3000 gallons of gas and 500 gallons of oil for emergency use.<sup>6</sup> Gas consumption varied between 800 and 1500 gallons per company per day. It is interesting to note the comparatively low figure for gas consumption. Slow movement over short distances accounts for this small requirement. Other fuel and lubricant requirements were correspondingly low. The ammunition expenditure, on the other hand, is an excellent index of the stiff nature of the fighting.

Average daily requirements were as follows:

75mm gun . . . . .	700 rounds
105mm How . . . . .	126 rounds
30 cal. MG . . . . .	51,377 rounds <sup>7</sup>

When it is considered that only a portion of the battalion was committed each day and that only five assault guns fired the 105 mm Howitzer ammunition, it can be seen that truly the tank weapons fired continuously.

An almost crippling handicap was the shortage of cargo trucks. During the first forty-two days of the operation, the battalion had only eleven 2½-ton supply trucks. Twenty-eight trucks had been left with the rear echelon at LEYTE because of shortage in shipping space.

Replacements were another critical item. Fortunately, the casualty rate in the tank battalion was low, for tank commanders and gunners were hard to replace. Later on in the campaign replacements were drawn from the amphibious armored units.

In the field of tactics, emphasis had been placed on the tank-infantry team. It had not been anticipated that the members of this team might become separated. But the Japanese defense was designed to do this very thing. As each new advance was made enemy artillery and mortar fire grew more intense. This heavy fire was designed to pin down the infantry thus exposing the unprotected tanks to close-in attacks by Jap suicide squads.

As the attack on RED HILL continued, it was impossible for the infantry to stay with the tanks due to the heavy artillery and mortar fire that was thrown against the tanks. The heavy artillery never before encountered in the Pacific; immediately "put on the shelf" all close-in tank infantry tactics of platoon covering platoon, section covering section, and even tank covering tank, was resorted to with the tank-infantry coordination effected from regiment and battalion OPs, the tank commander and his respective liaison teams with each of the infantry battalions on the front.<sup>3</sup>

It appears that the change in tank-infantry tactics caused an initial breakdown in cooperation. Gradually, the tanks became more independent. Frequently, they advanced ahead of the infantry to reconnoiter or to neutralize and destroy enemy positions prior to the general advance. Even so, it was still imperative that foot troops advance rapidly behind the tanks to mop up and consolidate the ground gained. Tanks could not hold the ground alone, and they were in constant danger of close-in attacks.

Nevertheless, in spite of the difficult OKINAWA terrain and the able defense adopted by the Japanese, tanks played a major role in destroying the enemy's cushion of outposts. The resistance encountered had dissipated all hopes for a quick and painless victory. Changes were required in the original concept of the "tank-infantry team" for ahead lay the task of penetrating defenses far stronger than any the troops had yet encountered.



NOTES FOR CHAPTER V

<sup>1</sup>Tenth Army Action Report, RYUKUS, 26 March to 30 June 1945, Chapter 7, Sec III, p. 3.

<sup>2</sup>Action Against the Enemy Report, RYUKUS Campaign, 711th Tank Battaion, p. 6.

<sup>3</sup>7th Infantry Division operations Report, RYUKUS Campaign, p. 49.

<sup>4</sup>Op. Cit. Action Against the Enemy, Report, p. 9.

<sup>5</sup>Op. Cit. 7th Infantry Division Operations Report, p. 50.

<sup>6</sup>Major John B. Robinson, RCAC, Report on U.S. Armour in the RYUKYUS Campaign, (Canadian Observer's Report, July 1945) p. 71.

<sup>7</sup>Op. Cit. Daily Requirements computed from totals as given in Action Against the Enemy Report, p. 20.

<sup>8</sup>Op. Cit. Action Against the Enemy Report, p. 8, 9.

## CHAPTER VI

### THE MACHINATO LINE

Before discussing the formidable MACHINATO LINE, it is well to understand the composition of the 713th Armored Flame-thrower Battalion, a unique organization which was destined to play a decisive role in breaking through the MACHINATO LINE.

#### The 713th Armored Flamethrower Battalion<sup>1</sup>

During the build-up (11-19 April) for large scale operations against the main enemy defenses, a new and terrifying weapon arrived on OKINAWA. For the first time in the PACIFIC, an effective flame throwing tank was available for use by American troops. The flame tanks belonged to the 713th Armored Flamethrower Battalion, the only organization of its type in the American Army. It is true that other tanks had employed a flame gun mounted in place of the bow machine gun; but the range of this flamethrower was limited, the fuel supply small, and the over-all operation of the weapon unimpressive.

Originally a standard tank battalion, the 713th received word that it was to be converted to an armored flamethrower battalion in November 1944. The battalion at this time was stationed in the Hawaiian Islands. Few changes were made in the organization. The mortar platoon and the light tank company were deactivated. The personnel of these units went to augment the ranks of Service Company. Otherwise the battalion remained the

same. The personnel, their grades and ratings, were not changed.

The flamethrower tank was equipped with a modified Ronson type flamethrower gun fixed in the tube of the 75mm gun. Operating under high pressure, with a fuel capacity of 300 gallons, the gun had an effective range of eighty to one hundred yards. A clock-type indicator was installed to show the gunner just how much fuel he was expending. After much experimentation, it was found that the best fuel was a six percent Napalm mixture, consisting of three parts gas, one part diesel oil, and six percent Napalm powder as a thickener.

Inasmuch as the armored flamethrower was a new and untried weapon, many problems faced the battalion commander. Tactical doctrine did not exist. There were no experience tables to guide the staff in its planning for organization, supply, maintenance and administration. After exhaustive studies, the battalion commander and his staff submitted their recommendations. Meanwhile, work progressed on the conversion of the tanks. Schools were set up for training all personnel in the use of the new weapon. Special fuel trucks for supply of the Napalm mixture and a special spare parts kit for each gun were added to the equipment of Service Company.

Movement orders for OKINAWA came on 22 January 1945, with a Readiness date of 15 February 1945. The last thirteen flamethrower tanks were issued to the battalion on 24 January 1945. Between 22 February and 1 March 1945, the battalion loaded on

ten LSMs. The movement from OAHU, T. H., to OKINAWA took thirty days with stops at SAIPAN and ENIWETOK, en route.

Unloading at OKINAWA began on 7 April 1945 over the HAGUSHI beaches. The battalion, assigned to Tenth Army, was kept under Army control for administration, and attached for tactical purposes to 20th Armored Group, XXIV Corps.

A directive on the anticipated employment of the flame tanks had been issued by Tenth Army to infantry divisions, tank battalions, and other interested groups. On 8 April, Company A was attached to the 711th Tank Battalion for operation with the 7th Infantry Division. Company C was attached to the 763rd Tank Battalion for operation with the 96th Infantry Division. Company B remained with the 713th headquarters near KADEMA AIRFIELD.

By 10 April, Companies A and C had joined the 7th and 96th Divisions respectively. Although Company A committed one platoon in support of the 7th Division on 10 April, the tanks did not use their flame. It was not until 19 April that flame tanks appeared in mass. On this date, Company B participated with the 193rd Tank Battalion, 27th Division, in the unfortunate attack on KAKAZU RIDGE. From 19 April until the end of the campaign, the three companies of the 713th Armored Flamethrower Tank Battalion saw continuous service. It is difficult to over-emphasize the importance of the role played by these tanks. Working closely with standard tanks and infantry, they were invaluable in clearing out the strong enemy positions.

Since the flame tanks had the same essential characteristics as the medium tanks, and since they operated under the tactical control of the tank battalions to which they were attached, their operations are included in the narrative of the tank battalions.

#### The Jap Defenses

From the time of the American landings until 19 April, the Japanese had been content to delay. Now they had fallen back to strong fortifications which they planned to hold at all costs. The enemy selected the SHURI area as his main battle position. (See Map No. 8 ) In front of the American troops lay the first major fortified line in the Japanese defense system. "The positions contained roughly between MACHINATO, MAHA, YOHABARU, and OUKI, about 8000 yards wide and 600 yards deep can be considered the main defense zone."<sup>2</sup> Around the town of SHURI, the enemy had constructed a series of concentric strongpoints designed to withstand attack from any direction. (See Map No. 9 ) The outermost of these lines ran from MACHINATO on the west coast along the high ground of KAKAZU RIDGE to SKYLINE RIDGE and HILL 178, the eastern anchors of the line.

The terrain in this area was formidable.

The ground back of the main front lines had no appearance of system or organization, but was a confused arrangement of little mesa-like tabletops, deep draws, rounded clay hills, gentle valleys, bare coral ridges, narrow ravines, sloping finger ridges extending downward from the higher cube hills that seemed to emerge from nowhere, all thrown together in haphazard arrangement with respect to each other.<sup>3</sup>

65



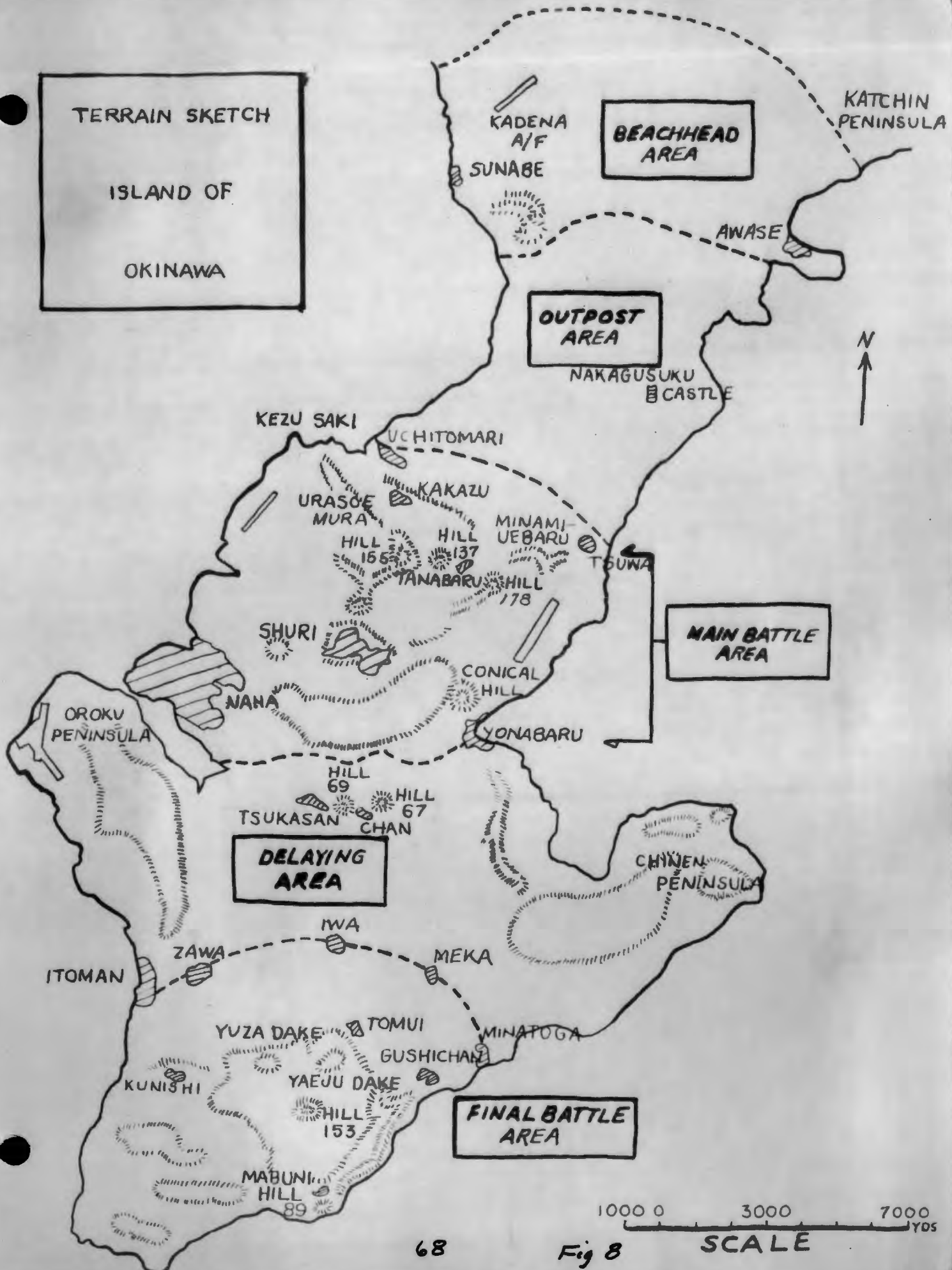
A Flamethrower Tank of the  
713rd Armored Flamethrower  
Battalion



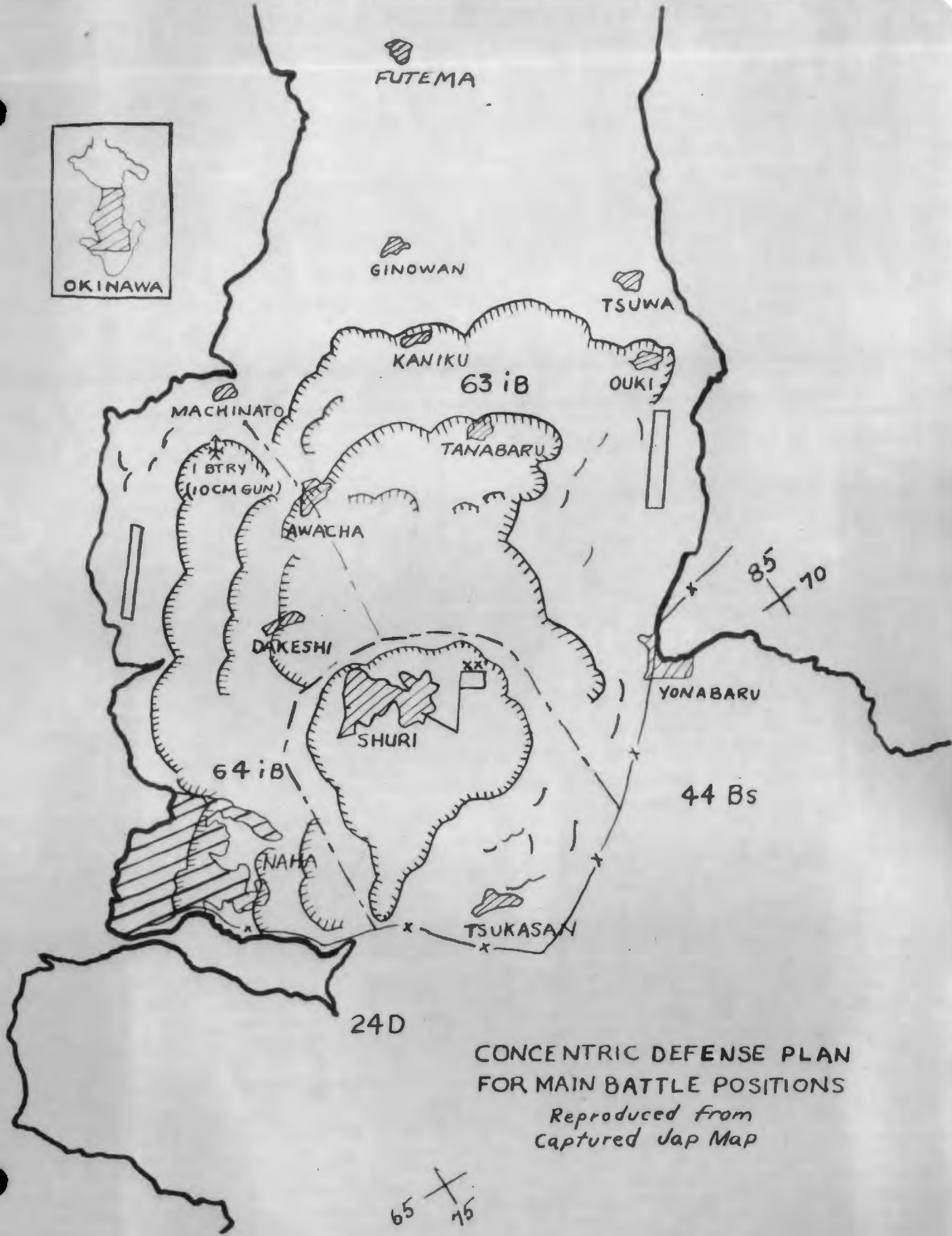
TERRAIN SKETCH

ISLAND OF

OKINAWA







CONCENTRIC DEFENSE PLAN  
FOR MAIN BATTLE POSITIONS

*Reproduced from  
Captured Jap Map*

With great industry the Japs had organized the ground for a strong defense. All existing obstacles were utilized to the fullest extent. Caves, pillboxes, burial tombs, trenches, and weapons emplacements were located to bar all avenues of approach. Underground tunnels provided covered approaches for rapid reinforcement or local counterattack. Even the numerous artillery pieces were hidden in caves when inactive. Defensive works, so thoroughly camouflaged as to be virtually invisible, studded forward and reverse slopes of each dominating terrain feature.

The Japanese plan for anti-tank defense was excellent. They realized that the tank-infantry team was an irresistible combination. Consequently, the first step in their defense was the separation of tanks from infantry. Once this was accomplished small attack units could close with the tanks without being stopped by the accompanying infantrymen. On OKINAWA, the Japs had more artillery and mortars than they had employed in any of the other Pacific battles. Artillery of all calibers was considered as anti-tank. Whenever tanks and infantry appeared together, enemy artillery shifted to being them under fire. We have seen already that the method was effective in causing casualties that the infantry could ill afford and that frequently the tanks had to proceed alone. Once a separation was effected, small groups of Jap infantry attacked the tanks.

71



Typical OKINAWA Terrain, 7th  
Infantry Division Zone, Looking  
South from RED HILL

178 178

Although the suicide attacks on tanks did not cause armor to stop, nor in fact, account for a large share of tank casualties, they were a constant source of danger. The tankers could never relax. The enemy groups, called "satchel charge squads" were teams of from three to nine men. Each man had a specific job. The first step was that of blinding the tank by the use of smoke grenades. To decrease the radius of vision of the tank the Japs forced the tank to button up by hurling fragmentation grenades. Then a "yardstick" or "tape measure" mine was placed under a track to immobilize the tank. The final touch was destruction of the tank (and crew) by placing a box mine under the tank.<sup>4</sup> Attacks varied from carefully planned ambushes to fanatic charges across open ground toward the tanks.

A much more effective weapon of destruction was the 47 mm. anti-tank gun. This small and easily concealed weapon accounted for many American tanks. Its high muzzle velocity would send a projectile through any part of a medium tank except the glacis plate.<sup>5</sup> The guns were employed in depth, located in camouflaged positions covering all tank routes. Many times they were placed in caves or emplacements which allowed only limited sectors of fire but which made detection nearly impossible. It was the usual practice to allow tanks to pass the position, thus exposing their side armor to fire at close ranges. In addition to specific anti-tank units armed with the 47mm. gun, Japanese anti-aircraft artillery fired anti-tank missions. In this work, however, they were only partially successful.

Mines, always a source of trouble for armor, were employed extensively by the Japanese. Contrary to their usual thorough organization of the terrain, the Japs had no apparent system in their use of mines. Although road cuts, intersections, trails and natural tank routes all had their share, tanks might suddenly strike a small field of isolated mines in the middle of a clearing. Often Jap troops would sneak through the lines at night to mine routes previously cleared. Once located, however, the enemy mine fields were not a major problem. Usually they were small. Often they could be bypassed. Many times, they were not adequately covered by fire, so that once clearing had begun, the work could be pushed to completion. Nevertheless, Jap mines did account for 31% of all tank losses on OKINAWA.<sup>6</sup>

Nature aided the defender. In his use of antitank means, guns, mines, and close attack squads, the Japanese were helped tremendously by the terrain. The numerous steep ridges and marshy areas prevented cross country movement. In the flat country any tank that moved off the narrow OKINAWA road bogged down. Sooner or later the road would pass through a narrow cut where a strong anti-tank defense could be set up. Before tanks could reach the crest of most of the ridges an armored bulldozer or heavy engineer equipment had to cut a road along the slope. It is true that American armor often achieved surprise by finding routes over terrain the enemy considered impassible, but most of the time tanks were definitely canalized.

Manning the defenses of the MACHINATO LINE was the 62nd Jap Division and its supporting units. In the course of the delaying action from 4 - 19 April, the 62nd had lost heavily. Its organic strength at the beginning of the campaign had been 11,670, including two attached infantry battalions. The addition of OKINAWAN HOME GUARDS increased this strength to 13,000-14,000.<sup>7</sup> By 21 April, the division was so depleted that the 22d Regiment of the 24th Division, the Japanese general reserve, began to take over the defense of the eastern half of the enemy line.

#### XXIV Corps Plan of Attack

During the week of 11 - 19 April, American forces had built up strength for a coordinated attack on the MACHINATO LINE. Three divisions faced the enemy fortified line, from west to east: 27th Division, 96th Division, 7th Division. The 27th Division, not intended originally for commitment to the OKINAWA battle, had moved into the line on the right of the 96th Division.

Maj. Gen. Hodge, XXIV Corps commander, planned a coordinated attack on 19 April. Three divisions would execute the only maneuver possible against an enemy whose flanks were unassailable-- a frontal penetration to the Corps' objective, the NAHA-YONABARU road. (See Map No. 10) Twenty-seven battalions of artillery would support the attacking infantry. At 0600, the artillery would fire for twenty minutes on the enemy from lines. Then the fire would shift five hundred yards to the rear. While the



75

Fig 10



artillery hit the enemy rear areas, the infantry would simulate an advance. It was hoped that the appearance of activity would convince the enemy that the attack had begun, thus bringing them out of their caves. At 0630, the artillery fire was to shift suddenly back to the front lines, where, it was planned, the Japanese troops would be decimated.

The attacking divisions were staggered in jump off time. Thus, the attack would start with the 7th and 96th Divisions at 0640 and be taken up by the 27th Division at 0730. This timing would allow the massed artillery to give maximum support to each division as it jumped off.

Unfortunately, the Japanese defenses were so well constructed that the artillery preparation failed to be decisive. The results were disappointing. Very few enemy casualties resulted from the terrific pounding that their positions received. Enemy troops simply waited under cover until they saw the tanks and infantry advancing. Then they manned their weapons and poured a withering fire into the attacking troops.

The coming battle would be one of the fiercest struggles of the PACIFIC campaign. XXIV Corps had built up supplies and additional troop strength, including the new flame tanks of the 713th Armored Flamethrower Battalion, for an all out attack on the enemy's MACHINATO LINE.

NOTES FOR CHAPTER VI

<sup>1</sup>Details relative to the 713th Armored Flamethrower Battalion throughout this subsection were extracted from After Action Report, 713th Tank Battalion, Armored Flamethrower, Provisional, 10 Nov 44 through 30 June 45.

<sup>2</sup>Tenth Army Action Report, RYUKYUS, 26 March to 30 June 1945, Chap. 8, Sec O, p. 4.

<sup>3</sup>Major. Roy E. Appelman, The XXIV Corps in the Battle of OKINAWA. (Washington: Historical Division, War Dept Special Staff), Vol I, p. 165.

<sup>4</sup>Major John B. Robinson, RCAC, "Report of U.S. Armour in the RYUKYUS Campaign" (Canadian Observer's Report, July 1945), p. 47.

<sup>5</sup>Ltr, 20th Armd Gp. to Brig. Gen. P.M. Robinett, 2 August 1945.

<sup>6</sup>Op. Cit. Robinson, p. 48.

<sup>7</sup>Tenth Army Intelligence Monograph, July 1945, Part I, Sec C, Chap. 3, p. 3.

## CHAPTER VII

### BREAKING THE MACHINATO LINE (19 24 April)

In discussing the role of armor through the MACHINATO LINE, let us follow the actions of the 711th and 763rd Tank Battalions, in support of the 7th and 96th Infantry Divisions respectively; as these units' actions show typical employment of tanks in this phase of the battle for OKINAWA. It will be necessary to follow the infantry action to maintain continuity, however, many details of the infantry actions will be omitted, not being within the scope of this report.

#### The 7th Division Attacks

The 7th Division's plan of attack called for an envelopment of HILL 178 from the east. Since the XXIV Corps's objective was the NAHA-YONABERU HIGHWAY, that portion of the road in the 7th Division's zone of action was, of course, the division's final objective. Before this objective could be reached, however, SKYLINE RIDGE, HILL 178, and CONICAL HILL, 3500 yards south of HILL 178, would have to be cleared of enemy troops.

One company of medium tanks, a platoon of flame tanks, and a platoon of light tanks were allotted to each of the two assault regiments. Plentiful artillery support, two batteries of 90 mm. anti-aircraft guns, and five naval vessels were available for additional fire support for the 7th Division.<sup>1</sup>

At 0640, Company A, 711th Tank Battalion, reinforced by a platoon of light tanks and a section of flame tanks, led the attack of the 7th Division, through OUKI toward SKYLINE RIDGE. For some 15 minutes the tanks covered the area with fire and flame. It was impossible for tanks to reach the steep crest of the ridge, for the top was barely wide enough for a path. Infantrymen followed the tanks to consolidate the gains. However, Jap troops along the crest and reverse slope showered the foot troops with grenades and mortar fire which set fire to the grass. A Jap counterattack of platoon size was beaten off only to be followed by a more determined counterattack by 100-150 enemy troops. One tank platoon had moved around SKYLINE RIDGE to fire on enemy positions on the reverse slope. One section remained on the north side of the ridge in excellent positions firing in support of the assaulting infantry. When the enemy counterattacks were detected, another section of tanks and the flame tanks moved 600 yards beyond SKYLINE RIDGE to break up the enemy formation. In these actions, the tanks had excellent results, but fire from the front, from above, and from both flanks, pinned the infantry to their insecure position on the ridge. The final blow came when several rounds of friendly artillery landed among the tenacious infantrymen. Morale sagged; casualties were high. Consequently, since the position seemed untenable, the troops withdrew.

Meanwhile, to the west along the division's right flank, the advance had stopped. To the front stretched a narrow north-south ridge barely fifty yards wide by several hundred yards long. Two coral peaks jutted out of the ridgeline some thirty feet to form the "ROCKY CRAGS". From positions on this ridge, the Japanese commanded the approaches to HILL 178. Observers on this high ground could call down accurate fire on any movement into the numerous draws and gullies north of HILL 178, while direct fire weapons on the crags could pick up targets immediately. As long as the enemy held the ROCKY CRAGS, they could prevent any movement in force toward HILL 178. In fact, the attacks of the two battalions in the center toward HILL 178 had been unable to make headway for this very reason. Enemy troops on SKYLINE RIDGE and OUKI HILL, a small knoll atop SKYLINE RIDGE, prevented an envelopment of HILL 178 from the east, and the enemy on the ROCKY CRAGS, stopped the attacks to the south from the TOMB HILL area.

"B" and "C" Companies, plus the Assault Gun Platoon, 711th Tank Battalion, supported the 184th Regiment on the division right. "B" Company supported the advance on HILL 178 by overhead fire from TOMB HILL. When heavy mortar concentrations fell on the advancing infantry, the assault guns used a reduced charge to destroy the mortars on the reverse east slope of HILL 178, and the infantry was permitted to advance.<sup>2</sup> After an advance of 400 yards, "C" Company had found the terrain on the extreme right impassable, and, leaving one platoon to fire on the CRAGS, it moved back toward the center to support the attacks on HILL 178.

Under continuous Jap artillery and mortar fire, the tanks reached positions on SKYLINE RIDGE, from which they could neutralize the forward slopes of HILL 178. For the rest of the day, Company C's two platoons beat off numerous Jap attempts to satchel charge their tanks. No losses were received although the artillery fire did cause some damage to radiators.

The 1st platoon, Company C, operated on the extreme right under great handicaps. Several loads of ammunition were fired into the crags. At one point, the platoon evacuated wounded infantrymen under cover of a tank laid smoke screen. It was difficult to get effective fire on the ROCKY CRAGS. The infantry advance had stopped; good firing positions could not be located. The fire that was directed on the CRAGS seemed to have little effect.

The following day saw a repetition of the day before. All attempts to take the ROCKY CRAGS failed. However, in the center the Japs had been caught off guard. A quick dash by tanks and infantry had placed a small force on OUKI HILL, astride SKYLINE RIDGE. Here was a foothold which might bring about the seizure of the entire ridgeline. By nightfall, it was questionable whether the gain could be expanded. The enemy had reacted to the unexpected advance by isolating the troops on OUKI HILL with a ring of intense fire. As mentioned earlier, the tanks were unable to operate on the crest of SKYLINE RIDGE. Consequently, they had withdrawn for the night. On two occasions this day, tanks were used to take supplies to forward infantry units.

On 21 April, medium tanks of Company B supported Company B, 17th Infantry, which had been committed to bolster the attack on the ROCKY CRAGS. The tanks were led around the west end of the CRAGS, reaching positions from which they could deliver fire at a range of 200 yards. Spotting the machine guns that were holding up the infantry advance, the tanks took them under fire. Then flame tanks moved up the face of the ridge to burn the northernmost crag. Meanwhile, the medium tanks had moved toward the second crag to keep the enemy under cover while friendly infantry consolidated their positions on the ridge. At this point, the tanks ran out of ammunition. As they withdrew for resupply, the enemy realized what had happened. Manning their positions, the Japs delivered heavy fire on both the tanks and infantry. A toehold had been secured, but the enemy strongpoint seemed as formidable as ever.

SKYLINE RIDGE, however, had fallen. From OUKI HILL an advance had progressed east along the ridge, past a roadcut and steep embankment, to join with troops attacking the eastern tip of the ridge. Except for enemy positions on the reverse slope, one of the fortresses on the right flank of the MACHINATO LINE was in American hands.

Between the ROCKY CRAGS and SKYLINE RIDGE the advance had been a slow yard by yard reduction of numerous concrete pillboxes and block-houses in the draws controlling the routes to HILL 178.

Here, says the 7th Infantry Division Operations Report, "In this action flame thrower and medium tanks, operating with close infantry support, proved extremely effective."<sup>3</sup>

For one more day, the 22nd of April, the Japanese beat off all attacks on the ROCKY CRAGS. Company B, 711th Tank Battalion, two platoons of flame tanks, and the assault guns supported the 184th Infantry. As tanks started down the same route they had taken the day before, the accompanying infantry spotted movement in some of the shell holes. Investigation revealed enemy troops hiding under shelter halves and debris waiting to ambush the tanks as they passed.<sup>4</sup> For some twenty minutes the infantry killed individual Jap soldiers.

Tanks on both sides of the ridge fired at enemy positions while the flame tanks burned the slopes. It seemed impossible to reach the enemy in his many tunnels and caves. Even the direct fire of a 155 mm. howitzer, emplaced in the front lines, had little effect. The enemy still prevented the infantry from occupying the ROCKY CRAGS.

Meanwhile, tanks supported the advance in the center toward HILL 178. The gain for the day was 250 yards of smashed pillboxes and weapons emplacements. On the left, the 32nd Regiment used its tank support to aid in cleaning out the eastern slopes of SKYLINE RIDGE.



On the 23rd, the ROCKY CRAGS were undefended. Tank-infantry teams moved cautiously along the ridge to find that after four days of exhausting combat the enemy had withdrawn.

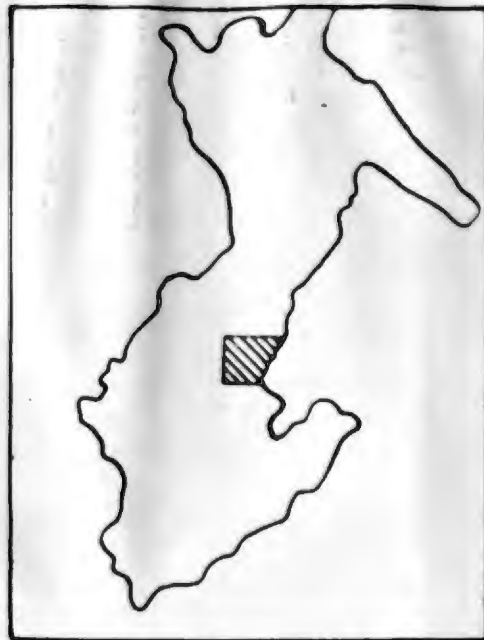
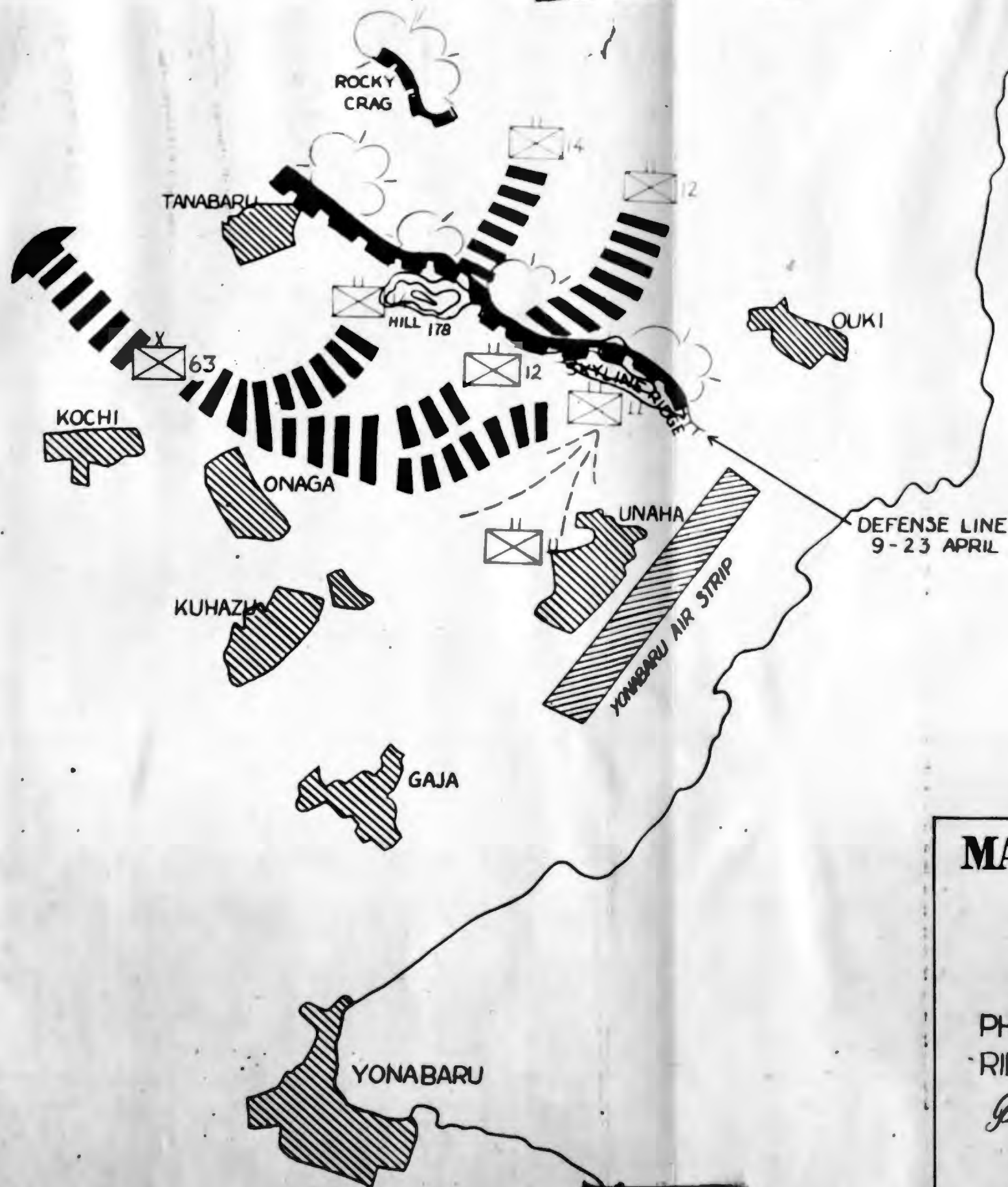
During the night of 23 April, fog and mist settled over the area. The Japanese artillery came out of its protected hiding places and fired tremendous concentrations along the front of the 7th Division. Under cover of the mist and their own artillery the enemy withdrew. When the tanks and infantry of the 7th Division attacked on 24 April, they found nothing in front of them but the scattered OKINAWA soil. HILL 178 was occupied without a struggle.

Four Independent Infantry Battalions of the 63rd Brigade, 62nd Japanese Divisions had manned the defenses from the ROCKY CRAGS to SKYLINE RIDGE. Close in support was rendered by three AT Battalions, two Independent Machine Gun Battalions and two Mortar Companies, each with twelve 81 mm.-90 mm. mortars. In addition to battalion and regimental guns, artillery support was provided by the 7th Heavy Artillery Regiment and the 23rd Medium Artillery Regiment. It is interesting to note that the Japanese considered one tank or a concentration of thirty infantrymen a profitable target.

In citing the 11th and 14th Battalions, 63rd Brigade, for the defense of HILL 178 and SKYLINE RIDGE, the commanding general, 62nd Division said in part,

The above mentioned units under the command of Col. Miura Hideshiro, took up the defense of the right flank in the Northern Sector. On 4 April, during the enemy's assault on those positions, the above units, coordinating with the 12th Independent Infantry Battalion on their left, met the enemy's

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**MAP SHOWING ENEMY OPERATIONS**

**7 APRIL To 24 APRIL**

PHASE 2: DEFENSE OF SKYLINE RIDGE AND HILL 178

*Prepared by OAC of Lt. G-2*

*7th Inf. Div.*

MAP: OKINAWA SHIMA, SCALE 1/25,000

SECRET



7th Infantry Division--and with brilliantly executed tactics inflicted heavy blows on the enemy and broke their advance. Although during the battle, its casualties among officers and men gradually increased due to superior enemy tanks and the furious shelling and bombardment, the battalion carried out numerous raids, close combat, and counterattacks, with bravery and determination and inflicted heavy casualties on the enemy. 5

For five long days the tank-infantry teams of the 7th Infantry Division had attacked the same positions. The ambitious plan of the 19th had failed on the first day. The struggle then became a slow battle of attrition. However, the enemy had suffered greatly. His strongpoints had been battered beyond recognition. His strength had been depleted to the point where a withdrawal was the only course of action which could salvage the troops remaining in the MACHINATO LINE.

Of first importance in the reduction of the ROCKY CRAGS, SKYLINE RIDGE, and HILL 178, were the medium and flamethrowing tanks which supported the 7th Division's attacks. Well organized though it was, the Jap anti-tank defense failed to prevent armor from reaching key points in the MACHINATO LINE.

#### The 96th Division Assault

The 96th Infantry Division, which landed just south of the 7th Infantry Division on 1 April, had advanced on the right of the 7th Division, meeting the same type of opposition. Until 15 April, XXIV Corps had been attacking south with two divisions abreast. The 96th Division on the west and the 7th Division on the east.

On 15 April, XXIV Corps committed the 27th Infantry Division on the right flank, shifting the 96th Division to the central sector of the island.

The 763rd Tank Battalion, a normal tank battalion, was attached to the 96th Infantry Division for the entire OKINAWA operation. This battalion had sustained some casualties in its previous operations on OKINAWA, and on 19 April, its combat strength was approximately 85% in tanks.

Company C, 713th Tank Battalion (Provisional, Flamethrower) was also attached to the 96th Division during the period of its attack on the MACHINATO LINE.

During the period 15 - 18 April, the 96th Division rearranged its front line and reserve units, and made preparations for the Corps' attack, which was to begin on 19 April. Attachments from the 763rd Tank Battalion for the support of the coming attack was as follows:

- Co. A to support the 381st Infantry Regiment;
- Co. B to support the 921st Field Artillery Battalion;
- Co. C to support the 382d Infantry Regiment;
- Co. D in reserve.

It is interesting to note here that "B" Company was to support the 921st Field Artillery Battalion by assisting in laying wire, and in making position area surveys. It was also to be used in an artillery role, as will be seen.

In this attack the 96th Division faced two successive enemy defense lines, each consisting of intricate caves and pillboxes,

which were typical of the over-all Japanese defenses in this area. Each of these lines was centered on a hill mass; the first on the TANABARU-NISHIBARU RIDGE, and the second on the MAEDA ESCARPMENT.

The division attack plans called for the 381st Infantry to attack on the right, and the 382nd Infantry to attack on the left. An artillery preparation was to precede the attack, which was to jump off at 0640. The artillery plan included a preparation to be fired by Company B, 763rd Tank Battalion, beginning at 0600.

On the morning of 19 April the division jumped off on schedule, following the heavy artillery preparation. Initial gains were rapid, but after 0730 the attack was slowed by the enemy using rifle and machinegun fire from the front and flanks. The 381st Infantry on the right was pinned down after gaining about 700 yards. The fire which pinned them down was mainly grazing fire from KAKAZU RIDGE on their right in the 27th Infantry Division zone. Medium tanks from Company A, 763rd Tank Battalion, and reserve companies of the front line battalions were committed in the gap between the battalions, but themselves became pinned down by the fire, and were unable to aid in the advance. (See Map No. 17)

On this same day, an unusual action was taking place in the vicinity of KAKAZU RIDGE, which had held up the 96th Division previously, and was now in the zone taken over by the 27th Division. The 27th Division committed thirty tanks, including armored flame throwers, and assault guns around the left end of the ridge on the morning of 19 April. These tanks were committed without infantry aid.

In passing around the ridge, six of the tanks were lost. The remainder of the force continued to attack KAKAZU VILLAGE. Fourteen of the tanks were destroyed in and around the village by mines, 47mm. anti-tank guns, suicide close-in attack units, artillery and mortar fire. Six of the tanks destroyed in this action were the result of suicide attackers, using twenty-two pound satchel charges, which were usually thrown against the bottom plates of the tanks. Most of the tanks' crewmen were still alive after their tanks were disabled, but many were killed by enemy squads who forced the turrets open and threw grenades in. Some crewmen got out and dug pits under the tanks, where they remained for about forty hours before escaping, strangely unmolested by many Japs within a hundred yards of their location. Only eight of the thirty tanks which went out that morning returned in the afternoon. Four of the tanks knocked out were flame throwers of the 713th Armored Flamethrower Battalion, and this their first day of action.<sup>6</sup>

KAKAZU RIDGE remained in enemy hands and was later bypassed by the 27th Division. It was not until the main line had been broken that a task force consisting of elements of the 7th, 27th, and 96th Divisions, supported by tanks, cleaned out the area on 24 April, against light resistance.

Back in the 96th Division zone, the end of the first day of the attack found the 361st Infantry just north of the TANABARU-NISHIBARU RIDGE, and the 382d Infantry on the northern tip of TOMBSTONE RIDGE.

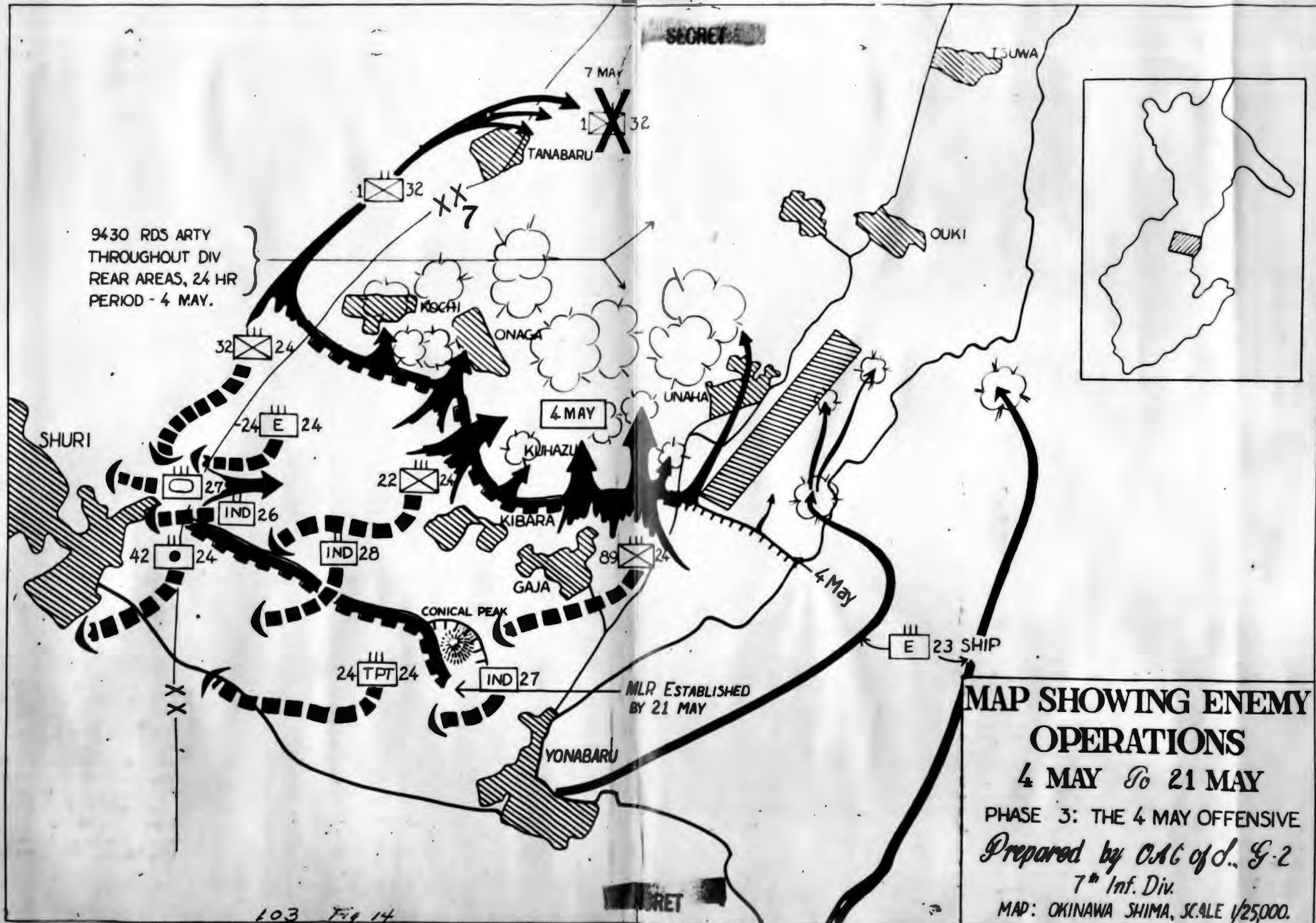
In the next few days the 96th Division pushed forward slowly against heavy opposition and treacherous terrain. Tanks from A and C Companies of the 763rd Tank Battalion spearheaded the attacks on TOMBSTONE and TANABARU-NISHIBARU RIDGES.

On the 21st of April, the 381st Infantry advanced over the crest of the TANABARU-NISHIBARU RIDGE in one place, and had to advance without tanks or other direct fire weapons, as the slopes of the ridge were too steep for the vehicles to negotiate. Tanks could not circle to the right because they would then come under direct fire from KAKAZU RIDGE. All of the front line units of the 96th Division attacked, making small gains, on this day. The following day again produced only small gains.

The 96th Division did not gain much yardage on 23 April, but by the end of the day four battalions were solidly emplaced along the entire TANABARU-NISHIBARU RIDGE, with the exception of the very eastern end. On this day, the 383rd Infantry, which had relieved the 382d Infantry on the previous day, in its attack on the ridge; called up an armored bulldozer to prepare a crossing over a gulch. The tanks of Company B, 763rd Tank Battalion and a platoon of flamethrowers from Company C, 713th Armored Flamethrower Battalion crossed the gulch and took the ridge and the TANABARU ESCARPMENT beyond the ridge under direct fire. The flamethrowers burned the north face of the escarpment, and the slope of the ridge. With this excellent support by the tanks and flamethrowers, the 3d Battalion, 383d Infantry gained the saddle in the TANABARU-NISHIBARU RIDGE against strong resistance.



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9430 RDS ARTY  
THROUGHOUT DIV  
REAR AREAS, 24 HR  
PERIOD - 4 MAY.

4 MAY

MLR ESTABLISHED  
BY 21 MAY

**MAP SHOWING ENEMY  
OPERATIONS  
4 MAY To 21 MAY**

PHASE 3: THE 4 MAY OFFENSIVE  
*Prepared by OAC of Lt. G-2*  
7<sup>th</sup> Inf. Div.  
MAP: OKINAWA SHIMA, SCALE 1/25,000.

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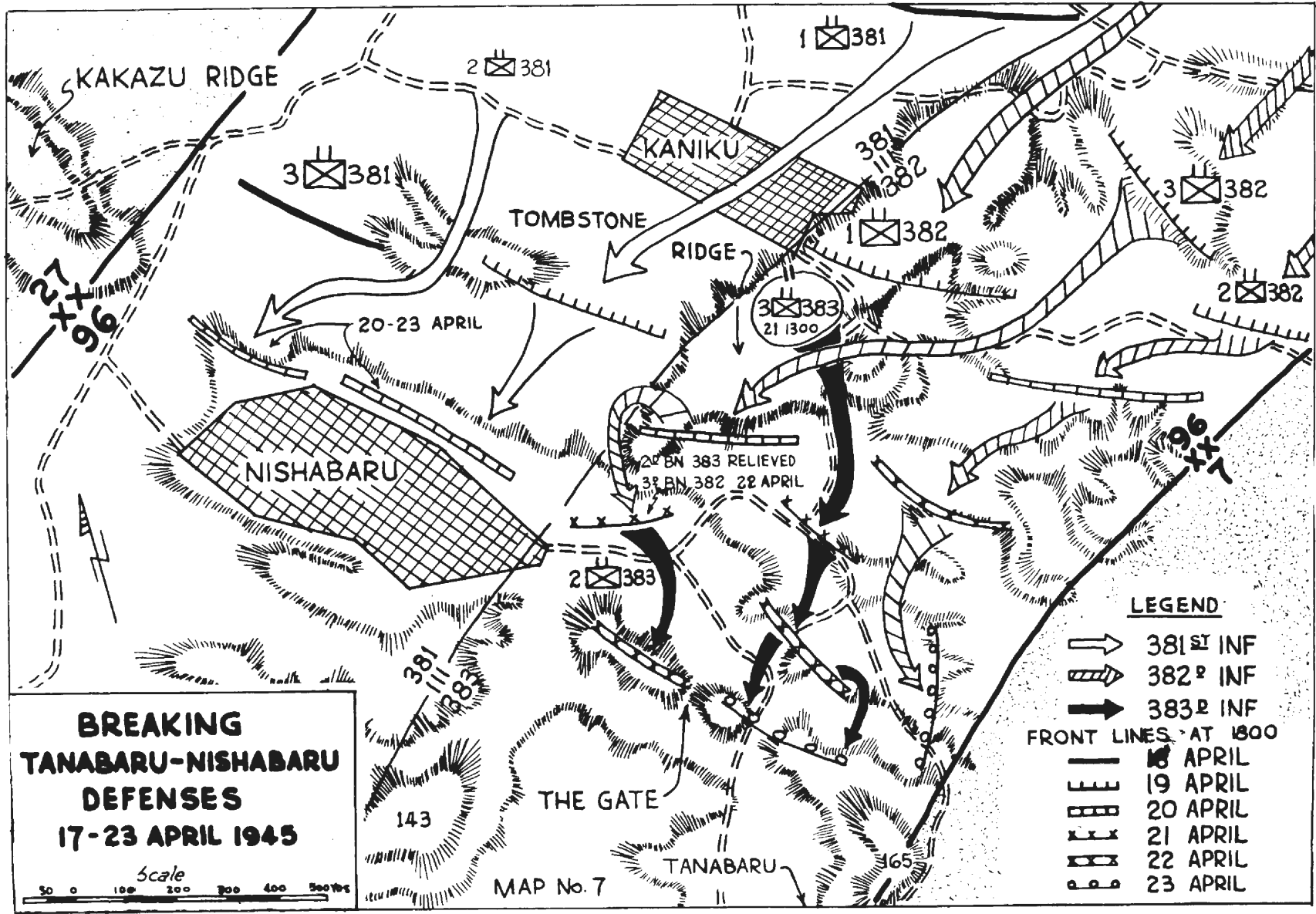
With the 96th Division on the ridge by the evening of 23 April, the strong defense line which was hinged on the ridge, was broken. During the night 23 - 24 April the enemy made a withdrawal of his main forces from this line. (This explains why the aforementioned composite task force had little trouble in mopping up KAKAZU RIDGE on the 24th.) (See Map No. 17)

On 24 April, the 96th Division went through the process of mopping up the ridge area and consolidating; in addition to which they advanced some 1100 yards. By the close of the day TANABARU and TANABARU HILL had been taken, in addition to other hills in the area. The 381st Infantry was within about 600 yards of the MAEDA ESCARPMENT, and the division had gained physical contact with the 7th and 27th Infantry Divisions on its flanks.

The 763rd Tank Battalion, with attached flamethrowers, had spearheaded attacks on TOMBSTONE and NISHIBARU RIDGES against strong resistance. Their progress had been slow and costly as a result of Jap artillery and mortar fire, as well as mines and AT guns. Many enemy attempts to separate the infantry from the tanks and then satchel charge the tanks were unsuccessful as a result of the fine mutual tank support. The tanks had been instrumental in the success of this operation. In many cases the tanks laid smoke to cover the infantry very effectively.

Thus in five days of hard fighting in most unfavorable terrain, tank battalions, with the assistance of flamethrowers from the 713th had effectively supported the 7th and 96th Infantry

93  
Fig 12



**BREAKING  
TANABARU-NISHABARU  
DEFENSES  
17-23 APRIL 1945**

Scale  
0 100 200 300 400 500 Yds

MAP No. 7

- LEGEND**
- 381<sup>st</sup> INF
  - ▨ 382<sup>d</sup> INF
  - ➔ 383<sup>d</sup> INF
- FRONT LINES AT 1800
- 18 APRIL
  - ▤ 19 APRIL
  - ▥ 20 APRIL
  - ▧ 21 APRIL
  - ▩ 22 APRIL
  - ⋯ 23 APRIL

Divisions in breaking the MACHINATO LINE. Armor proved to be of great assistance, even in such adverse terrain, but armor's role in the battle for OKINAWA was not over, by far. The SHURI LINE was yet to be crushed.

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#### NOTES FOR CHAPTER VII

<sup>1</sup>Capt. Russell A. Gugeler, The Operations of the 7th Infantry Division on Okinawa 1 April to 22 June 1945 (Washington: Historical Div., War Dept Special Staff, 1948) p. 96.

<sup>2</sup>Action Against the Enemy Report, Ryukyus Campaign, 711th Tank Battalion, p. 11.

<sup>3</sup>7th Infantry Division Operations Report, Ryukyus Campaign, 7th Infantry Division, p. 50.

<sup>4</sup>After Action Report, 713th Tank Battalion Armd Flamethrower Provisional, 10 Nov 1944 thru 31 June 1945, 18 July 1945, p. 5.

<sup>5</sup>Op. Cit. Gugeler, p. 144.

<sup>6</sup>Okinawa, The Last Battle, pp. 203-204.

## CHAPTER VIII

### THE 711TH TANK BATTALION HITS THE SHURI LINE (25 April - 9 May 1945)

The NAHA-YONABARU road remained an elusive prize. Although the MACHINATO LINE had been pierced, a fanatic and skillful enemy would do his utmost for the coming thirty days to prevent XXIV Corps from reaching its objective.

The 711th Tank Battalion continued the attack past the strongholds of the MACHINATO LINE into the rugged hill masses of the SHURI LINE. From 25 April until 9 May 1945, standard and flamethrower tanks pressed home attacks in the KOCHI RIDGE - ROULETTE WHEEL area, but before a complete penetration could be made the tanks and infantrymen of the 7th Division were sent to the rear for a well earned breathing spell.

#### The Japanese Positions

When the Japanese 32d Army commander ordered a withdrawal of his forces from the MACHINATO LINE, he realized that American troops would soon destroy his first line of defense whether his troops remained in position or not. Behind the MACHINATO LINE was an even stronger fortified area. It was to this position, sometimes called THE SHURI LINE, that Jap troops withdrew on the night of 23-24 April.

The SHURI LINE extended in depth from the west coast of OKINAWA eastward along the steep ridges of the URASOE MURA ESCARPMENT to high ground near the villages of KOCHI, KUHAZU, and

ONAGI, in the east. This was no brittle line of strong points. It extended in depth through all of the rugged, chopped-up terrain in the SHURI area. The flanks were secure, so refused as to resemble a huge perimeter around SHURI. The 32d Army knew that the position must be held at all costs. Should the line snap, a withdrawal to the southern tip of OKINAWA would be the inevitable result--if a withdrawal could be made at all.

The 62d Jap Infantry Division, having borne the brunt of the fighting to date, was sadly depleted in men and materiel. In the new position boundaries were shifted. The 24th Division, whose 22d Regiment had occupied the eastern defenses of the MACHINATO LINE on 21 April, took over responsibility for the eastern half of the SHURI positions. Thus, two enemy divisions would face the American onslaught. Each division had approximately one half of the line.<sup>1</sup>

#### Terrain 7th Division Zone

The men of the 7th Division on HILL 178 could look south along a ridgeline that tapered off toward CONICAL HILL, 3500 yards away. It will be remembered that the division's final objective from 19 April had been the NAHA-YONABARU road, but that no advance could be made until the enemy had been driven from his positions on the high ground commanding the area. From CONICAL HILL ridges extended to the north dropping off to a valley floor some 800 yards wide. On the other side of the valley floor the ground began rising again to form the southern ridges of HILL 178.

CONICAL HILL was, as the name implies, a cone-shaped hill that rose evenly from the base which covered 1500 yards of the 7th Division's sector.

Southwest of HILL 178, open ground led to the towns of KOCHI and ONAGA. (See Map No. 13) These two villages were situated at either end of curved HORSESHOE RIDGE. Extending southwest from the western tip of HORSESHOE RIDGE the high ground of KOCHI RIDGE culminated in ZEBRA HILL. A winding road from KOCHI to ONAGA passed through the ridge in a deep, vertical cut at the northern base of ZEBRA HILL. South of SKYLIE RIDGE, the ground was low and flat, except for a long southerly extension of HILL 178. "No movement of tanks was anticipated in entire drive on CONICAL HILL due to open country completely covered by enemy observation, and artillery fire."<sup>2</sup>

Operations 711th Tank Battalion (25 April - 9 May 1945)

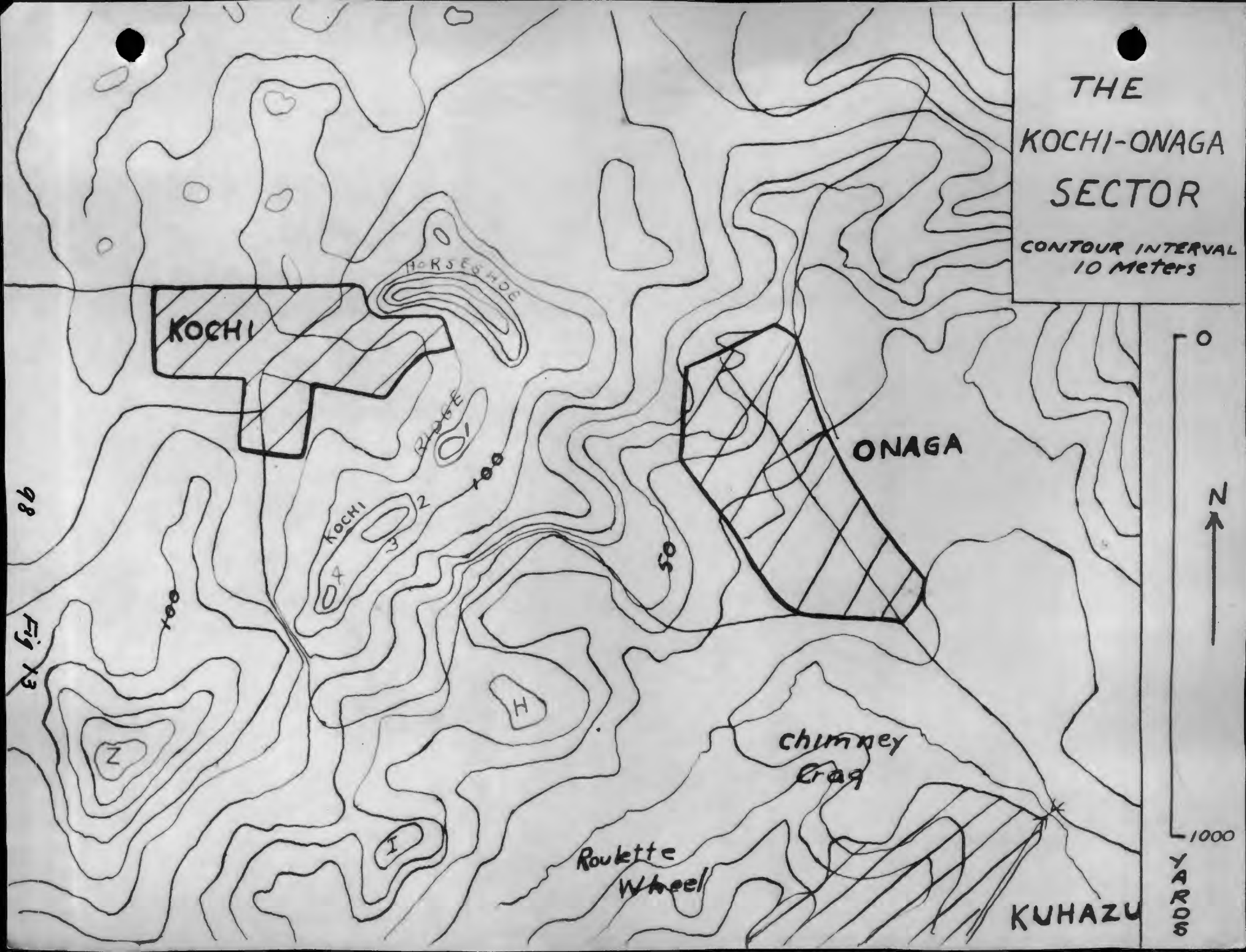
The 25th of April was a quiet day. Tank-infantry teams advanced south down the spurs of HILL 178 against scattered enemy fire. Patrols of the 17th Infantry probed south and succeeded in seizing a foothold on the north side of HORSESHOE RIDGE. Three tanks moved forward to eliminate enemy machine guns which were firing on the advancing infantry, silencing the enemy weapons by direct fire.

The following day, three tanks and an infantry patrol moved into KOCHI to protect the flank of infantry on the ridge.



THE  
KOCHI-ONAGA  
SECTOR

CONTOUR INTERVAL  
10 METERS



98

Fig 13

1000  
YARDS

Unfortunately, one tank crew thought the friendly troops on the high ground were enemy. The tank machine gun wounded 12 infantrymen before the mistake was discovered.<sup>3</sup> Another patrol supported by medium and flame tanks investigated the west end of KOCHI. Mortars and direct fire from a 75mm. gun forced them to withdraw.

The enemy defense of HORSESHOE RIDGE was based on reverse slope tactics. Cave type defense was not so much in evidence in this area. Instead the local commander relied upon an elaborate and skillfully organized system of pillboxes, trenches, and mutually supporting positions.

For three more days, the 17th Infantry tried futilely to break the defenses of KOCHI RIDGE. Tanks supported as best they could, but the terrain was too rugged for cross country movement. Only slight gains were made toward the south. The fanatic enemy defense thwarted any rapid advance on ZEBRA HILL.

Meanwhile, the 32d Infantry had made slight gains on the division's left. The regiment's objective was the high ground of ROULETTE WHEEL and CHIMNEY CRAG, south of ONAGA. On 28 April, the attack jumped off, only to stall half-way. As tanks moved up to eliminate enemy positions in KUHAZU, deep shell holes and rugged, constricted terrain prevented them from entering the village.

On 29 April, Company A, 711th, sent its 1st platoon through OUKI along the road to UNAMA in an effort to reach positions from which the tanks could fire on CHIMNEY CRAG RIDGE. This route had been used previously, but enemy troops had mined it during the night.

Near UNLHA the leading tank struck a mine and was disabled. While trying to bypass this obstacle, three of the other tanks bogged down.

The third platoon, Company A, plus a platoon of flame tanks succeeded in reaching ONAGA, but here their progress forward was stopped by immobilized tanks of Company B, which had been supporting the 17th Infantry.

In a pre-dawn attack on 30 April, the 32d Infantry placed troops on CHERNEY CRAG RIDGE and the ROULETTE WHEEL area. The enemy waited until nightfall and then began infiltrating troops to the flanks of CHERNEY CRAG while counterattacking the ridge itself. This enemy activity hampered the scheduled relief of the 32d Infantry by the 184th Infantry.

Meanwhile, extreme measures were being employed on the division right to bring tanks into better supporting distance. An armored bulldozer began industriously scraping a tank path up the steep slope of KOCHI RIDGE between KNOBS 1 and 2.<sup>4</sup> On this high ground an enemy pillbox had created a stalemate. Covered by smoke, two tanks, one medium and one flamethrower, crept up the newly constructed tank road to the saddle between KNOBS 1 and 2. Two trips were made up the slope, but each time the range was too great for the flame to have effect. The pillbox remained undamaged.

On 2 May, tanks and bulldozers again began the slow work of reducing the enemy position. Bulldozers rebuilt the tank path under trying conditions, for rain had turned the ground into a slippery mire. When the path was ready, two tanks climbed to the crest. Again the pillbox was out of range of the flame. In addition, the enemy had moved a 47mm. AT gun into a position which allowed it to fire through the saddle. Although low visibility hampered the enemy gunners, they temporarily disabled the tanks by hits on the turrets.

A new approach seemed desirable. Engineers bulldozed a path around the eastern edge of the KNOBS. On 3 May, tanks finally moved into firing positions from which they could support an advance to the south.

#### The Jap Counterattack (4 - 5 May)

While American troops gnawed their way into the Japanese defenses around SHURI, an important decision was being made at Jap 32d Army Headquarters. The over-all Jap strategy for the defense of OKINAWA had been to allow the landing and then to attack the U. S. troops on the ground. Defensive tactics could not destroy the Americans. It was time, the aggressive souls at army headquarters insisted, for the all-out counterattack to smash the Yankee troops. Brushing aside the objections of a few conservatives, General Ushijima ordered a major counter offensive for 4 May.

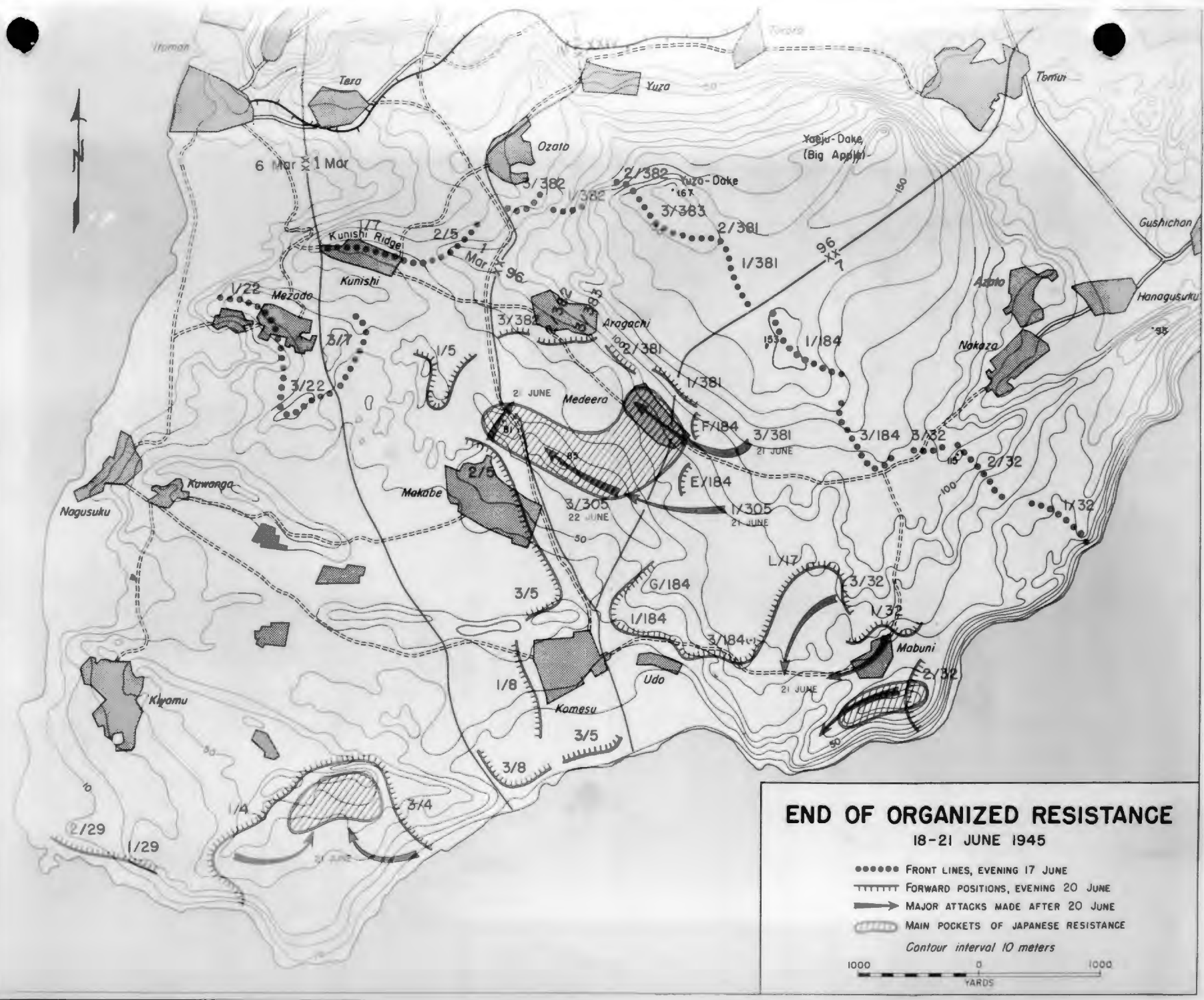
The Japanese plan was ambitious. The attack forces included air, ground, and amphibious units whose over-all objective was destruction of XXIV Corps on OKINAWA. (See Map No. ) Objective of the ground attack was the critical terrain running from FUTEWA to the east coast.<sup>5</sup> Jap intelligence had learned of a headquarters in this vicinity which they believed to be TENTH ARMY HQ. Actually FUTEWA was the site of the 96th Division command post.

The 24th Division with the 27th Tank Regiment attached was to open the attack at daybreak on 4 May. Penetrations were to be effected at two points, MAEDA and ONAGA, in the American lines. One Jap regiment supported by tanks and artillery would create the rupture at each point. Then the remaining troops of the 24th Division would pour through the gap. The 44th Independent Mixed Brigade was to protect the left rear of the 24th Division. After pushing through the MAEDA gap it was to swing to the west, thus isolating the U. S. right flank.

Japanese artillery moved out of the cover of protected hiding places to regroup; the 27th Tank Regiment clattered up from reserve for the big event; small parties of infiltrators began working their way forward to disrupt the American command and communications system. "The time of the attack has finally come. I have my doubts as to whether this all-out offensive will succeed, but I will fight with the thought in mind that this war for the Empire will last 100 years."<sup>6</sup>

131

Fig 21



### The 24th Division Attacks (4 May 1945)

Early on the morning of 4 May the Japs attacked. Their way had been prepared by artillery fire of unparalleled violence, during the night of 3-4 May. In front of the 7th Division, the enemy advanced under cover of darkness to the ridges east of ONAGA. Here they were on the flank of the troops on CHIMNEY CRAG and ROULETTE WHEEL. Daylight revealed the enemy trying to organize for attack. Coordination had broken down in the movement forward; the Jap troops milled about in the open.

American observers called down artillery fire on the groups of exposed enemy troops. Tanks moved forward to disperse close in enemy groups. Having lost surprise and all cohesion, the Japanese seemed lost, neither attacking in force nor withdrawing.

The attack in the center had suffered the same fate. American artillery prevented the Jap medium tanks from reaching their attack positions, and the Jap light tanks were knocked out quickly by U. S. tanks and artillery. The enemy infantry advance came to an abrupt stop in front of the American lines.

On 5 May, despite the misfortune of the day before, the attack was renewed. Fresh units were thrown into the KOCHI area. The battle raged all day with enemy units penetrating along the boundary of the 7th and 77th Infantry Divisions. However, the 32d Army's attack had been smashed. The penetration was more of

an infiltration, and while a nuisance, could not effect the outcome of the battle. Jap casualties totalled approximately 5,000 troops. The 24th Division was depleted and discouraged. The 27th Tank Regiment had failed to achieve success anywhere, and its remaining tanks were earmarked for use as pillboxes. Jap artillery, in the open for once, had been hammered unmercifully by XXIV Corps counter battery fire.

#### Operations 711th Tank Battalion (6 - 9 May 1945)

The Japanese counter attack had been smashed, but there still remained approximately three-fourths of the enemy defensive system in front of SHURI. On 6 May, an attack supported by tanks was launched along the eastern side of KOCHI RIDGE toward HOW and WILLIAM HILLS. The tanks were late arriving, for in order to reach forward positions they had to move through the zone of the 77th Infantry Division. The road through TANABARU was mined and had not been cleared. Again the attack failed to make decisive gains.

Two battalions of infantry jumped off on 7 May for ZEBRA HILL. Company A and a platoon of flame tanks led the attack. When enemy fire pinned down the infantry shortly after the jump off, the tanks proceeded alone. Three tanks moved along the road to the west end of the road cut; three others moved around the northern extension of ZEBRA HILL to take up firing positions from which they could cover the main portion of the objective. Enemy fire slackened enough to allow the infantrymen to join the tanks.



The road cut between ZEBRA HILL and KOCHI RIDGE was barely wide enough for one vehicle. An enemy strongpoint in a cave on the north side of the road stopped all attempts to take the passage. Tanks could fire through the cut but could not reach the enemy position. Under heavy fire a flame tank moved into the cut. It flamed the area and moved back. Medium tanks moved in to fire 75mm. at the position. Just as the position seemed about to fall, the tanks ran out of ammunition. The enemy were quick to sense what had happened. Rapidly they remanned their position. When the tanks returned at 1330, the Japs were as strong as ever.

Rain had fallen on 7 May. It increased on the 8th, immobilizing armor. Thus, in a very gloomy setting the 7th Division prepared to turn over its positions to the 96th Infantry Division. Although ZEBRA HILL remained in enemy hands, the constant attacks by the 7th Division had softened the area considerably. Infantrymen and tankers were tired to exhaustion. The relief began on 9 May. On 11 May, the 711th Tank Battalion moved to a rest area to take stock of its condition, perform maintenance and prepare for coming actions.

The SHURI LINE proved to be the toughest nut the tank-infantry teams of the 7th Division had yet encountered. In this area, the Japanese fought with the tenacity of fanatic desperation, realizing full well that penetration meant defeat. By 11 May, a bite had been taken from the KOCHI-OMAGA-KUHIZU defense system. Although the line remained unbroken, the 711th Tank Battalion

had aided greatly in creating a springboard from which another division, the 96th, could pass on through to break the defenses of the east flank.

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#### NOTES FOR CHAPTER VIII

<sup>1</sup>Tenth Army Intelligence Monograph, July 1945, Part I, Section C, Chap. 3, p. 8.

<sup>2</sup>Action Against the Enemy Report, RYUKYUS Campaign, 711th Tank Battalion, p. 14.

<sup>3</sup>Capt. Russel A. Gugeler, The Operations of the 7th Infantry Division on OKINAWA, 1 April to 22 June 1945, (Washington: Historical Div., War Dept. Special Staff, 1948) p. 172.

<sup>4</sup>After Action Report, 713th Tank Battalion, Armd Flame-thrower Provisional, 10 Nov 44 thru 30 June 45, p. 9.

<sup>5</sup>Op. Cit. Tenth Army Intelligence Monograph, Part I, Sec A, p. 6.

<sup>6</sup>Roy E. Apploman, James M. Burns, Russell A. Gugeler, and John Stevens, OKINAWA: The Last Battle (Washington: Historical Div., Dept of the Army, 1948), p. 287.

## CHAPTER IX

### THE 763RD TANK BATTALION THROUGH THE SHURI LINE (25 April - 31 May)

Facing the enemy on the 7th Division's right flank, the 96th Division prepared to break through the SHURI LINE. On the 25th, no major advances were attempted, but plans were made for the Corps attack which was to be launched the following day. The 96th Division was to attack the hill mass to its front with the SHURI area as its objective.

The attack jumped off as scheduled at 0700 on the 26th following an artillery preparation. The attacking elements of the 96th Division were supported by "A" and "C" Companies of the 763rd Tank Battalion. Initially, advances were made against light enemy resistance and the 381st Infantry Regiment on the right gained the north slope of HILL 155 just short of the crest, except in the zone of the 2d Battalion where an enemy strongpoint was encountered. Further gains were slight because of the heavy fire placed on the top and south slope of the ridge. The west end of the MAEDA ESCARPMENT was a cliff which made the employment of tanks impossible. The entire zone of the 381st Infantry was in extremely rough terrain, and it was later found necessary to cut roads with tank dozers so that the left flank of the regiment could be supported. (See Map No. 15)

The 383rd Infantry also met initial light resistance, and by 0845 the regiment was on the high ground from the Division left boundary through the east edge of MAEDA. In the regiment's area, tanks and armored flamethrowers reached the edge of MAEDA, where they were able to cause many casualties among the enemy. Numerous Japs were flushed from their caves by the flamethrowers and shot down as they fled. Intense fire on the forward slope of the hill denied the regiment further advances during the day.

The remainder of the day the division, with the assistance of its supporting weapons, located and destroyed enemy guns and emplacements in its zone.

The 96th Infantry Division launched another attack at 0730 on 27 April, following a twenty (20) minute artillery preparation. This was spearheaded by the medium tanks of the 763rd Tank Battalion, and flamethrowers of the 713th. A four hundred (400) yard advance was made in the day except on the right flank where the 381st Infantry was immediately prevented from crossing the ridge by enemy fire from mortars, machine guns, and small arms. Demolition patrols, however, worked on the south slope, finding and destroying many emplacements, caves and pillboxes. The 2d Battalion, 381st Infantry continued to mop up caves and pillboxes in the zone, assisted by a platoon of flamethrower tanks. Units in the east portion of the regiments section worked their way between HILL 150 and 152. This action was supported by tanks of the 763rd and flamethrowers of the 713th Battalion.



SC 208936

A flame tank of the 713th Tank  
Battalion supports infantrymen  
of the 96th Division.



The cooperation between the tanks and infantry in this operation resulted in hours of wreaking havoc with the enemy. After the tanks and flamethrowers flushed the Japs from their positions, the Infantry and tank machine guns cut them to pieces.

In the area of the 383rd Infantry Regiment only slight gains were made against determined enemy resistance.

On the 28th of April, the right flank of the division was again denied advances by the same strong resistance. On the division's left, the 383rd Infantry continued to slug ahead gaining three hundred yards, despite intense fire from their exposed right flank. This advance on the east of the MAEDA ESCARPMENT was closely supported by the fire of the tanks, and close in support of the flamethrowers, with the result that numerous enemy positions were destroyed. Thus the enemy defenses were being torn apart laboriously, piece by piece by the tank-infantry-armed flamethrower team.

Early on the following morning the 2d Battalion, 383rd Infantry, was heavily counterattacked and sustained severe losses. After repulsing the counterattack, the infantry went to work to destroy the remainder of the enemy force. Later in the day, with tanks and armored flamethrowers leading the action, over 200 of the enemy were destroyed. The 3rd Battalion, 383rd Infantry, on the division east flank advanced rapidly during the morning and "L" Company siezed HILL 138. A platoon of tanks from "B" Company, 763rd Tank Battalion got into position near the top of the hill and exchanged fire with enemy 47mm anti-tank guns to the south.

From this advantageous position they placed direct fire on enemy positions in the town of SHURI. This was the first time that direct fire was put in the town, which was slightly more than a mile to the southwest of the tank position.<sup>1</sup>

The 381st Infantry on the division right continued to mop up its area until relieved by the 307th Infantry of the 77th Infantry Division at 1020 hours.

The 77th Division relieved the 96th Division on 30 April. "A" and "C" Companies of the 763rd Tank Battalion remained in support of the 77th Division for two days before joining the remainder of the battalion in bivouac area.

The 96th Division with the 763rd Tank Battalion were destined for a short well earned rest, as well as a chance to get replacements and perform maintenance and training. Company "C" 713th Tank Battalion (Provisional, Flamethrower) was released from the 763rd Tank Battalion and was attached to the 706th Tank Battalion, 77th Division.

#### The 96th Division Reenters The Line

While the 96th Division and its attached units were in their rest area receiving replacements, training, performing maintenance, and taking the maximum advantage of the special services available; the division received orders to relieve the 7th Division. At this time the 7th Division was on the line on the Corps' left flank, on the eastern side of the island of OKINAWA.



Company "A", 713th Tank Battalion, was attached to the 96th Division on 7th of May.

The 763rd Tank Battalion made attachments for the coming operation as follows:

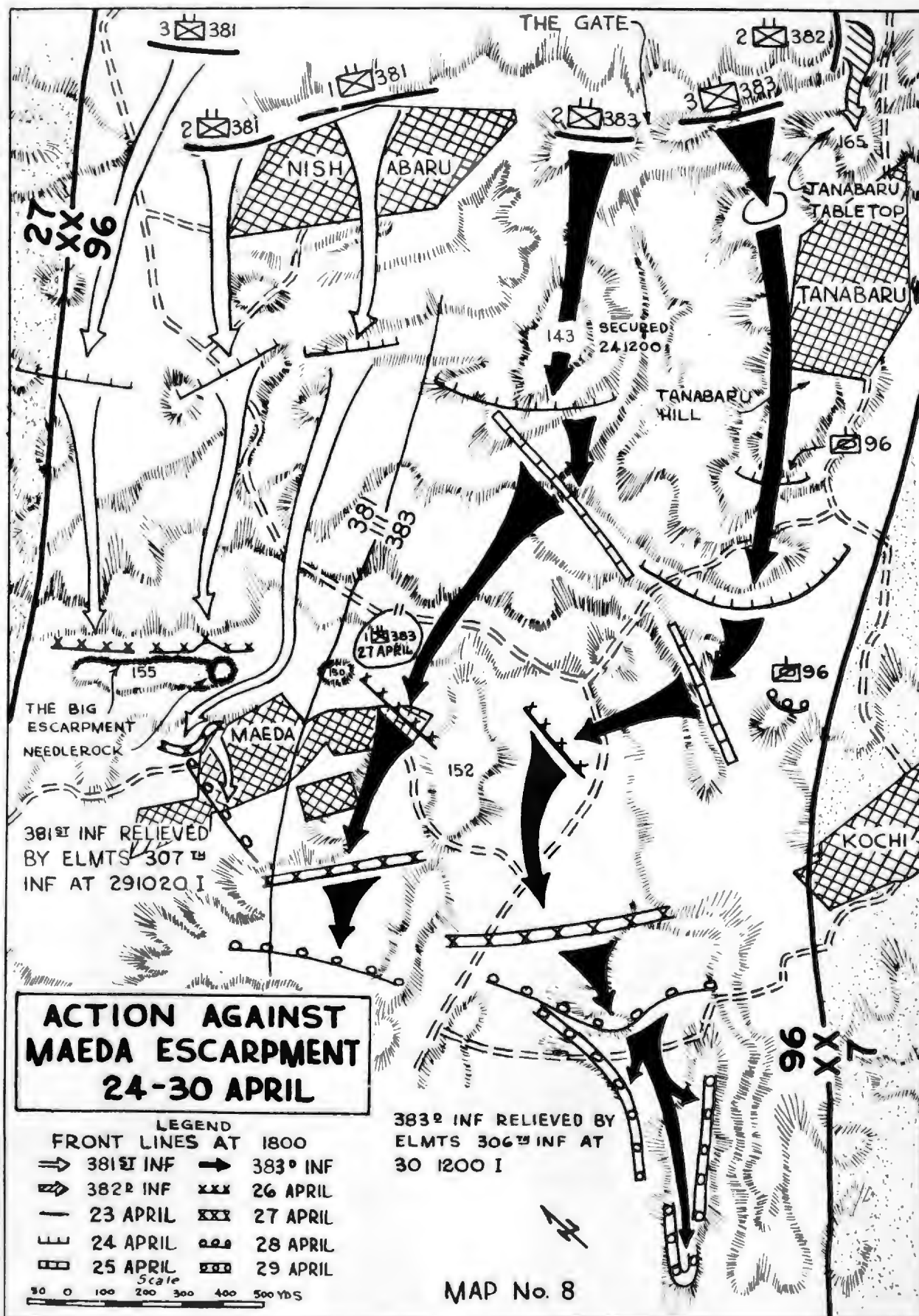
Co. "A" in reserve.  
Co. "B" to the 383rd Infantry Regiment.  
Co. "C" to the 382d Infantry Regiment.  
Co. "D" in reserve.

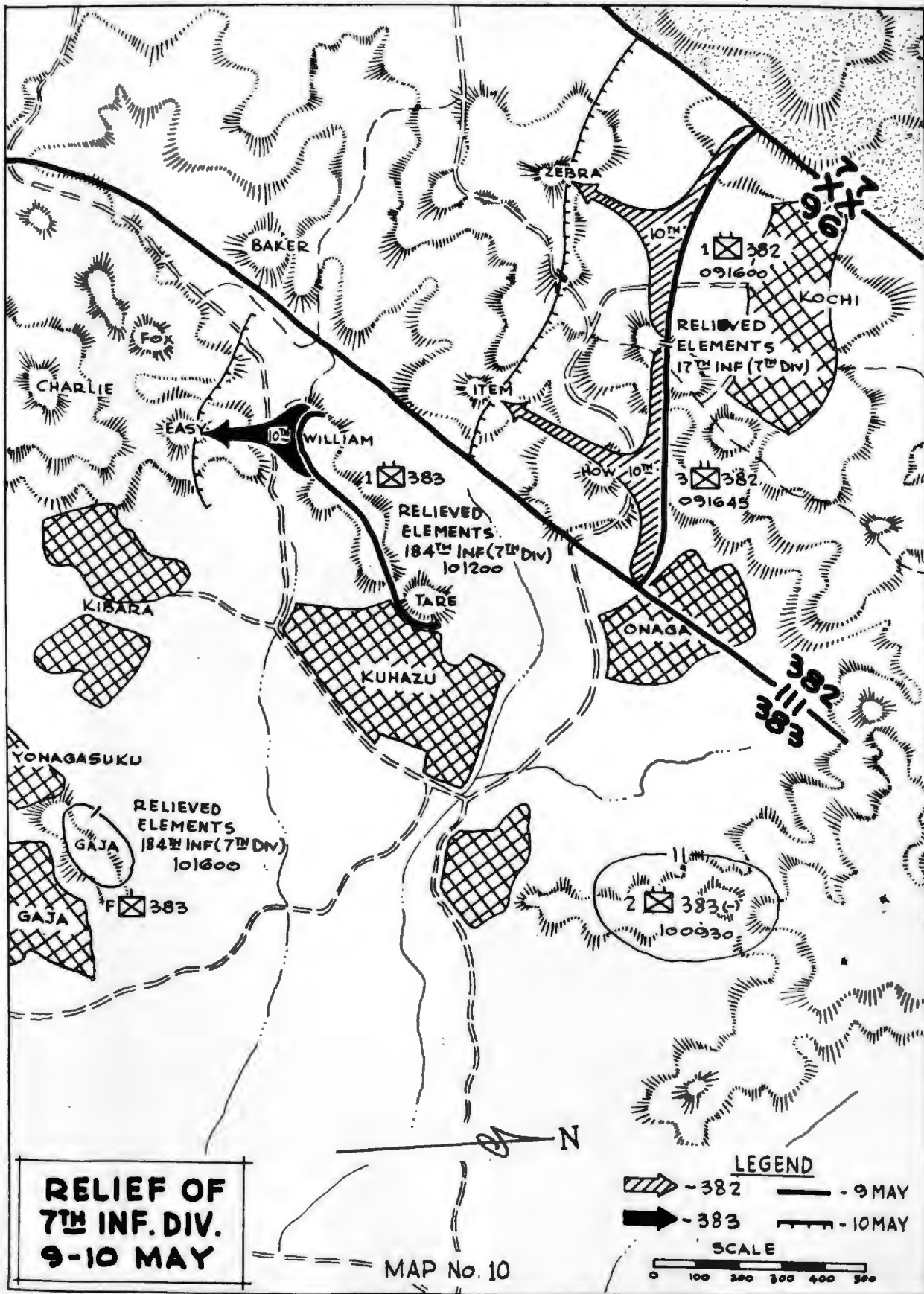
On 10 May, Lt. Col. H. L. Edmondson, Battalion Commander of the 763rd Tank Battalion, was mortally wounded by mortar shell fragments while visiting a forward Command Post. Major A. A. Lancaster assumed command of the Battalion.

The relief of the 7th Division began with the 382d Infantry relieving the 17th Infantry at 1300 on 9 May, in the area just south of and between KOCHI and ONAGA, in the right of the division zone. (See Map No. 16 )

At 1000 on the following day, the 382 Infantry attacked under the control of the 7th Division, initially; control of zone of action being taken over by the 96th Division at 1420 on this day. The regiment was held up by enemy fire from the cut between ZEBRA and ITEM HILLS. At 1500 a coordinated attack was launched on the draw, using tanks, flamethrowers, and pole charges. The strongpoint was reduced, and the two hills were secured, after the regiment had received many casualties.

The 383rd Infantry after relieving the 184th Infantry on the left at 1330 on 10 May, sent out four reconnaissance patrols and had occupied EASY HILL with advance elements by 1700.





The 96th Division was now situated against the east portion of the SHURI LINE which faced the XXIV Corps along its entire front. The enemy main line of resistance was still firmly established at YONABARU, SHURI, and NAHA. In the 96th Division zone the key to these defenses was CONICAL HILL in the eastern sector of the 96th Division zone.

The Division attacked again on 11 May at 0700 toward the high ground east of SHURI. The 1st Battalion, 382d Infantry, on the division right, was engaged in close in fighting with the enemy on the slope of ZEBRA HILL, and was unable to advance over the crest. (See Map No. 17) Artillery was placed on the south slopes of the hill, and elements of the Battalion, supported by tanks of Company "C", 763rd Tank Battalion, moved around the right flank of the hill. This force gained the saddle in the ridge, enabling the remainder of the battalion to advance down the south slope of ZEBRA HILL, and continue to push forward as far as DICK HILL, against intense enemy fire. This advanced position had to be relinquished, however, as the ammunition supply and evacuation of the wounded became critical. The seriously wounded were placed in the tanks which evacuated them across the valley floor as the battalion withdrew to the south slopes of ZEBRA HILL.

The 3rd Battalion on the left of the 382d Infantry encountered numerous caves and pillboxes in its area. Tanks were brought up to aid the infantry, but could not be effectively employed because of the many mine fields, and the swampy terrain. This battalion as

a result made only slight gains to the south slopes of ITEM HILL.

The 383rd Infantry on the division left gained CHARLIE and FOX HILLS on the right battalion zone, after meeting stiff opposition. The 2d Battalion on the left, with little opposition, reached the northern edge of the town of YONAGUSUKU, where they received fire from CONICAL HILL, and the slope of CHARLIE HILL, and the town of KIBARA. This battalion moved to the right and occupied the east slope of KING HILL.

During the morning of 12 May the 382d Infantry used tank-infantry teams to mop up the enemy emplacements on ZEBRA HILL. One company of infantry, supported by tanks, advanced along the southeast slope of the hill, and cleaned out enemy positions in the draws and on the south slope of ITEM HILL. A counterattack against DICK HILL, by the enemy later in the day was without success.

The 383rd Infantry attacked toward CONICAL HILL making only slight gains. Tanks which were moved to the vicinity of GAJA HILL cleaned out many positions in the northern portion of the town of GAJA.

Tanks of Company "B", 763rd Tank Battalion supported the attacks of the 383rd Infantry on CONICAL HILL during the entire period 13 - 15 May, and on 16 May worked over Jap positions on the eastern slope of CONICAL HILL, and advanced down the coastal road to the south as far as YONABARU, on the regiment's left.

In the area of the 382d Infantry, attacks continued against the enemy positions in adverse terrain. The tanks of Company "C", 763rd Tank Battalion were used to neutralize and destroy enemy emplacements, and were utilized on 14 May to supply ammunition to the front line units. On 15 May, the 382d Infantry, using all available supporting weapons, gained the top of DICK HILL.

The night of 15 May found both committed regiments of the division engaged in hand grenade duels with the enemy which were dug in on the south slope of CONICAL and DICK HILLS.

Tank support on 16 May was reduced as a result of rains which made many of the roads in the area impassable. Only small localized gains were made in both regiments. One platoon of Company "B", 763rd Tank Battalion, however, moved forward along the coastal road to the northwest edge of YONABARU, from whence they shelled the town with 75mm fire and utilized machine gun fire. The infantry was prevented from exploiting this success by the intense fire of the enemy covering the southern slope of CONICAL HILL. The tanks, after expending their ammunition, withdrew.<sup>2</sup>

On 17 May, the 381st Infantry was committed on the left of the division, and the 383rd Infantry zone was shifted to the right somewhat. During the day, strong tank-infantry and demolition teams were used throughout the division area in mopping up and patrolling. Advances for the day amounted to only a few hundred



yards, but numerous enemy strongpoints had been eliminated, and much parolling accomplished. On the division left, a small patrol from the 2d Battalion, 381st Infantry had, in the afternoon, moved south along the coastal road to the northern edge of YONABARU, as had the tanks on the previous day. The patrol returned later without receiving enemy fire. (See Map No. /8 )

In the sector of the 382d Infantry on the right boundary, tanks attempted to pass through a road cut between FLATTOP and DICK HILLS. Two of the tanks were disabled by mines, blocking the cut. On the next day the cut was blown open along its entire length by use of seven tons of bangalore torpedoes, to clear the mines. When the tanks then attempted to pass through the cut, one of the first tanks to emerge was knocked out by a 47mm anti-tank gun. This anti-tank gun was then itself destroyed by an assault gun with the American tanks. Other tanks in support of both the 96th and 77th Divisions came up to support those already through the cut, and this conglomerate tank force placed direct fire on the reverse slope of FLATTOP and DICK HILLS for the first time in the campaign. This action was to be decisive in the capture of the two strongpoints. Tanks supporting from the cut aided the infantry of the 77th Division attacking the reverse slopes of FLATTOP and accounted for many of the 250 Japanese killed. Further advances by the infantry on DICK HILL were limited by fire from OBOE and FLATTOP HILLS.<sup>3</sup>



There was no change of the front lines of the 383rd Infantry on this day, but tank-infantry teams operated on the south slopes of CHARLIE HILL and the west slopes of KING HILL, searching out and destroying enemy positions. These patrols received heavy fire from the vicinity of LOVE HILL. This fire was returned by the tanks which are believed to have destroyed several enemy guns.

In the division left, the 381st Infantry made some advances against strong resistance. Tanks of the 763rd which was operating in the area between CONICAL HILL and the coastal road, gave the infantry excellent direct fire support by engaging machine gun positions south of CONICAL HILL.

During the night 18 - 19 May heavy rains came.

On 19 May the 382d Infantry was unable to advance much as a result of the fire from OBOE and PETER HILLS. Tanks, armored flamethrowers, assault guns and demolitions teams were employed by regiment to mop up enemy emplacements. The tanks destroyed many caves and emplacements, despite heavy anti-tank fire. The seizure of the road cut between FLATTOP and DICK HILLS proved to be the turning point in the struggle for DICK HILL as it had been in the struggle for FLATTOP. During 19 - 20 May, tank-infantry teams were able to methodically reduce Japanese positions in the DICK HILL area. In one instance an armored flamethrower flushed about fifty of the enemy from a cave; all were shot down as they fled.

The 383d Infantry continued to use tank-infantry teams in mopping up its area on May 19, causing the destruction of a number of machine gun emplacements, and sealing off many caves.

The 381st Infantry, on the left, resumed their attack against SUGAR HILL at 1100 after heavy fire had been laid down in preparation by six platoons of amphibious tanks, two platoons of medium tanks, artillery fires and fires of infantry support weapons. This heavy preparation destroyed many of the enemy's positions, but the infantry was unable to make much headway.

At 0730, 20 May, the division again attacked against bitter resistance. All units advanced slowly. The 1st Battalion, 383rd Infantry gained the south slope of CHARLIE HILL after an air strike. The 2d Battalion, same regiment, fought its way to the top of KING HILL, supported by tanks of the 763rd Tank Battalion.

On the 21st of May, the 7th Infantry Division was brought into the line on the left of the 96th Division, to exploit the lack of resistance found by the patrols which had gone down the coastal road to YONABARU.

The 96th Division attacked at 0730 on 21st May as intermittent showers continued to fall. It was still possible to employ tanks in some places, however. Enemy resistance on this day varied from intense to light. By the end of the day the 381st Infantry, on the left, had advanced about 800 yards. It had secured SUGAR HILL and cracked the left flank of the mighty SHURI LINE defenses, having come to within a few hundred yards of

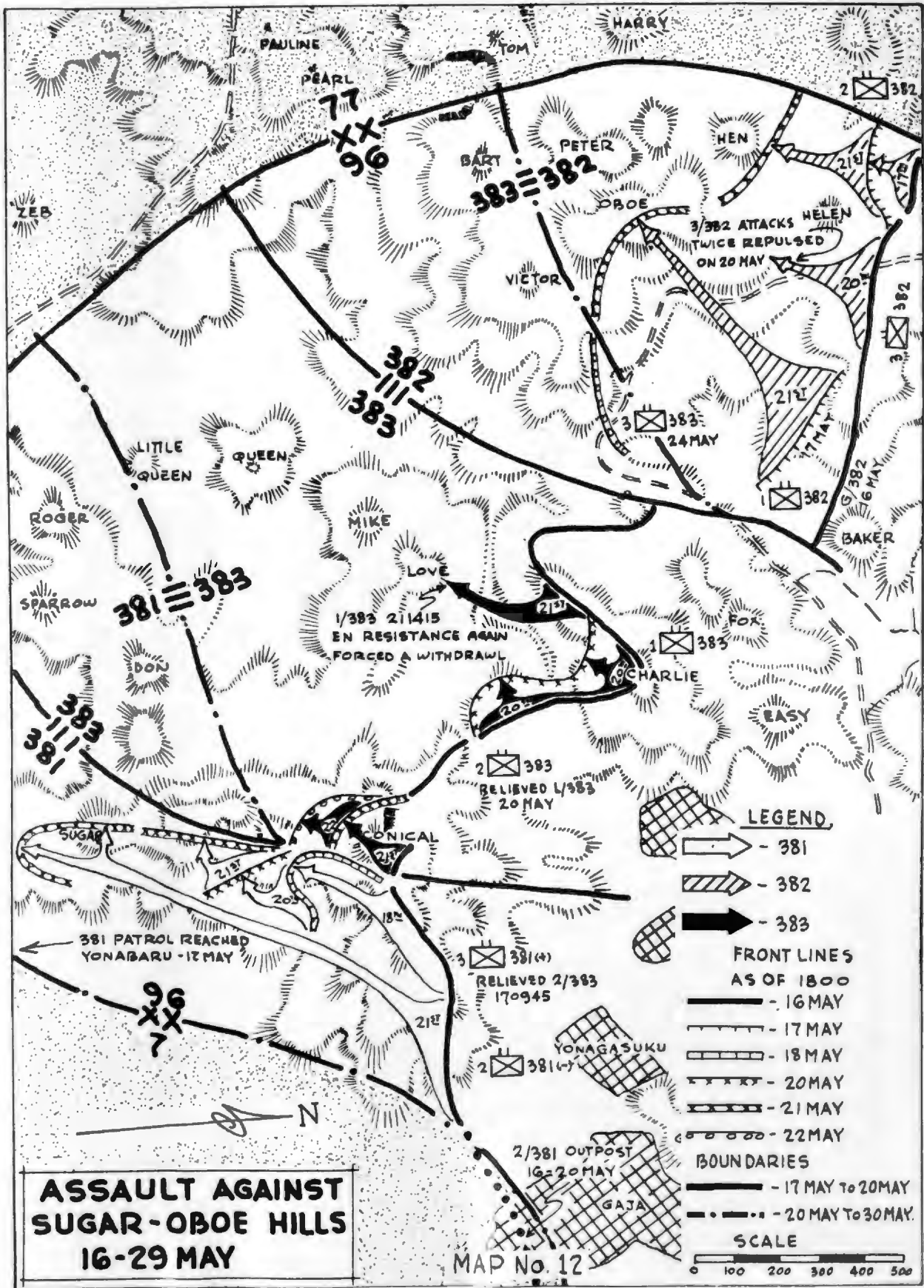
the main YONABARU-SHURI-NAHA road. In accomplishing this, the regiment had participated in some intense hand to hand combat.

The 382d Infantry, on the right gained about 800 yards and secured OBOE HILL.

The 383rd Infantry, in the center, had struggled forward only 100 yards against intense fire from LOVE HILL, CONICAL, and VICTOR HILL.

Advances were halted during the period 22 - 29 May by extremely heavy rains. Only slight local gains were made during the entire period. The main problems encountered were those of evacuation and supply. The main enemy now was weather and terrain. The front line elements had to resort to hand carrying their supplies up the treacherous slopes. The enemy continued his bitter defense and launched numerous counterattacks and made many infiltration attempts. The 96th Division held its ground tenaciously, and all three of its regiments sent strong patrols forward to maintain contact. General mopping up continued throughout the period.

The division launched an attack on 30 May, which succeeded in breaking the SHURI defenses. Resistance varied from relatively light on the left to heavy on the right. About 1200 yards was gained by the division on this day. Most of the area north of the critical YONABARU-SHURI-NAHA road had been cleared out, and the strong enemy resistance on the right had begun to withdraw. (See Map No. 19)



**ASSAULT AGAINST  
SUGAR-OBOE HILLS  
16-29 MAY**

On 31 May the 96th Infantry Division cleared out its zone and gained physical contact on the right with the 5th Marine Regiment south of the town of SHURI. This was the end of the strong and bitterly defended SHURI LINE, with the exception of mopping up the caves and hiding places of the Japs. This mopping up continued until the entire battle for OKINAWA was over.

The After Action Report of the 763rd Tank Battalion summed up the action from 10 to 22 May as follows:

The enemy main line of resistance being firmly established at YONABARU, SHURI and NAHA. The key to his defenses on the east in the 96th Division zone of action was CONICAL HILL and surrounding smaller hills and ridges.

Tanks, Flamethrowers, Assault guns, were used in neutralizing the numerous caves and fortifications. The same type of fierce resistance was encountered. Tanks continuously drew artillery fire whenever they exposed themselves.

The demand for flame throwers always exceeded the supply.

Action during this period was characterized by huge numbers of Japs being destroyed by tanks, after being flushed out of caves by flamethrowers. The tank, flamethrower, assault gun team usually consisted of one platoon of standard tanks with two flamethrowers and two assault guns attached under direct control of the tank platoon leader. Assault guns and flamers would be kept behind the standard tanks until suitable targets were located. Enemy defenses finally crumbled under combined air, artillery, tank, and infantry assaults.

Anti-tank guns, mines and satchel charges were responsible for fourteen (14) tank casualties during this period.<sup>4</sup>

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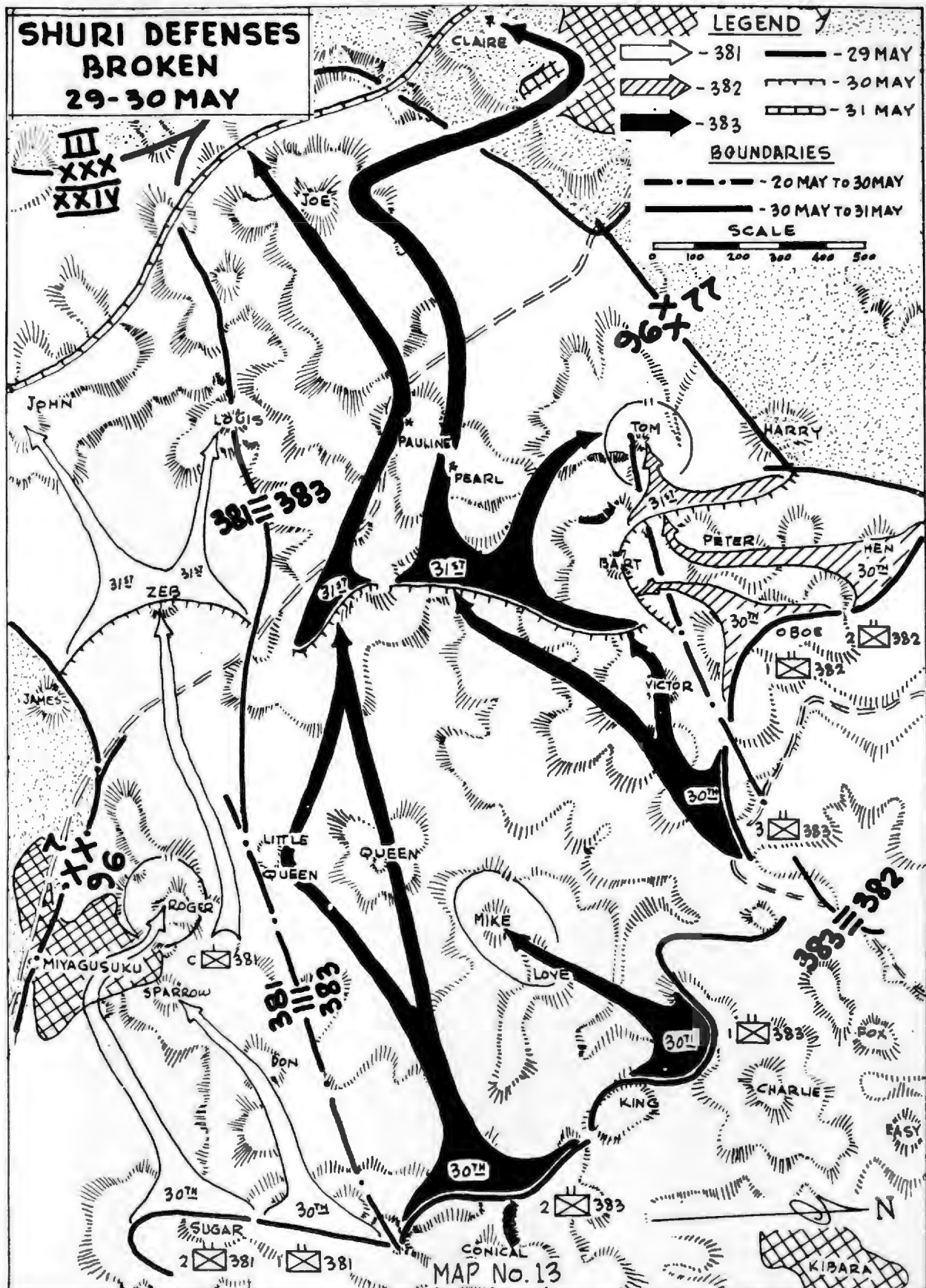
#### NOTES FOR CHAPTER IX

<sup>1</sup>Action Report, RYUKYU Campaign, 96th Infantry Division, July 1945, Part II, p. 27.

<sup>2</sup>Ibid, Part II, p. 36.

<sup>3</sup>Okinawa, The Last Battle, pp. 348-349.

<sup>4</sup>RYUKYUS Operation Report Against OKINAWA, 763rd Tank Battalion, July 1945, p. 8.



## CHAPTER X

### THE MOP UP PHASE (21 May - 30 June)

Prior to discussing the actual "mop up" phase of the Okinawan campaign, we shall look back on some of the typical piece-meal mop up operations by various units. As the previous chapters have shown, mopping up was an almost continuous task in both front and rear areas, as a result of the dug in Jap's reluctance to surrender. Many of the methods used in the actual "mop up" phase in the south are based on lessons learned in the aforementioned piece-meal operations.

All elements remaining under the control of the 20th Armored Group, including Group Headquarters Company, were employed as infantry, from time to time, in performing mop up missions assigned by XXIV Corps. In extensive beach defenses, the amphibious battalions patrolled throughout their areas of responsibility, in rear of the divisions, daily, mopping up Jap stragglers, and searching out and sealing caves and other hiding places.

One such instance occurred on 23 - 26 April. The Commanding General XXIV Corps, Major General Hodge, verbally ordered the Commanding Officer of the 20th Armored Group, Colonel Jensen, to have TSUGEN JIMA reconnoitered by troops on foot. A task force was formed consisting of the Command Section, Group Headquarters; 150 men of Company "B", 728th Amphibious Tractor Battalion, 17 LVTs from the same unit, and several amphibious tanks from Company "B", 708th Amphibious Tank Battalion.

On 23rd April, the amphibious tanks provided the initial assault wave and fires. Amphibious tractors followed the tanks and carried the troops. When no opposition was encountered initially all vehicles moved down the island until a tank ditch midway down the island was encountered, where all troops dismounted and continued on foot. A Jap position located at the small village of TSUGEN was reduced. Three machine guns and a grenade launcher were captured. Patrols covered the rest of the island. No enemy force of any size was uncovered but one 75mm field piece, two serviceable 5" guns, caves containing huge quantities of mines, grenades, 75mm. and 5" ammunition and assorted pioneer supplies were destroyed. A total of 366 civilians were rounded up and taken to OKINAWA where they were turned over to Military Government at KOZA.

A return trip was made to TSUGEN JIMA on 26 April by a detachment of 10 men from Group Headquarters under Major Westervelt. This detachment killed one Jap, captured another, destroyed more ammunition and small quantities of stores and sealed those caves still open. They returned to OKINAWA with additional civilians.

In the operation on TSUGEN, only 51 Japs were reported killed but an investigation of destroyed caves by Navy construction parties in June reported finding 382 dead Japs giving an estimated total of 433 enemy killed in the two operations.<sup>1</sup>



Another typical example of Armored units mopping up activities is the instance when the 780th Amphibious Tank Battalion was assigned, dismounted, to the defense of supply installations located at MINATOGA. In one area a detachment of the battalion (200 men and officers) established a perimeter defense, maintained a blocking line along the beach and patrolled the beaches to the south daily in an effort to intercept Jap stragglers. During the period 14 - 25 June, the detachment made daily contact with the bypassed Japs, killing 258, capturing 216, and collecting 422 civilians who were turned over to Military Government. Of special interest was the action on 19 June when the detachment reported the killing of 148 Japs and the capture of the previously unprecedented number of 153 Japs.

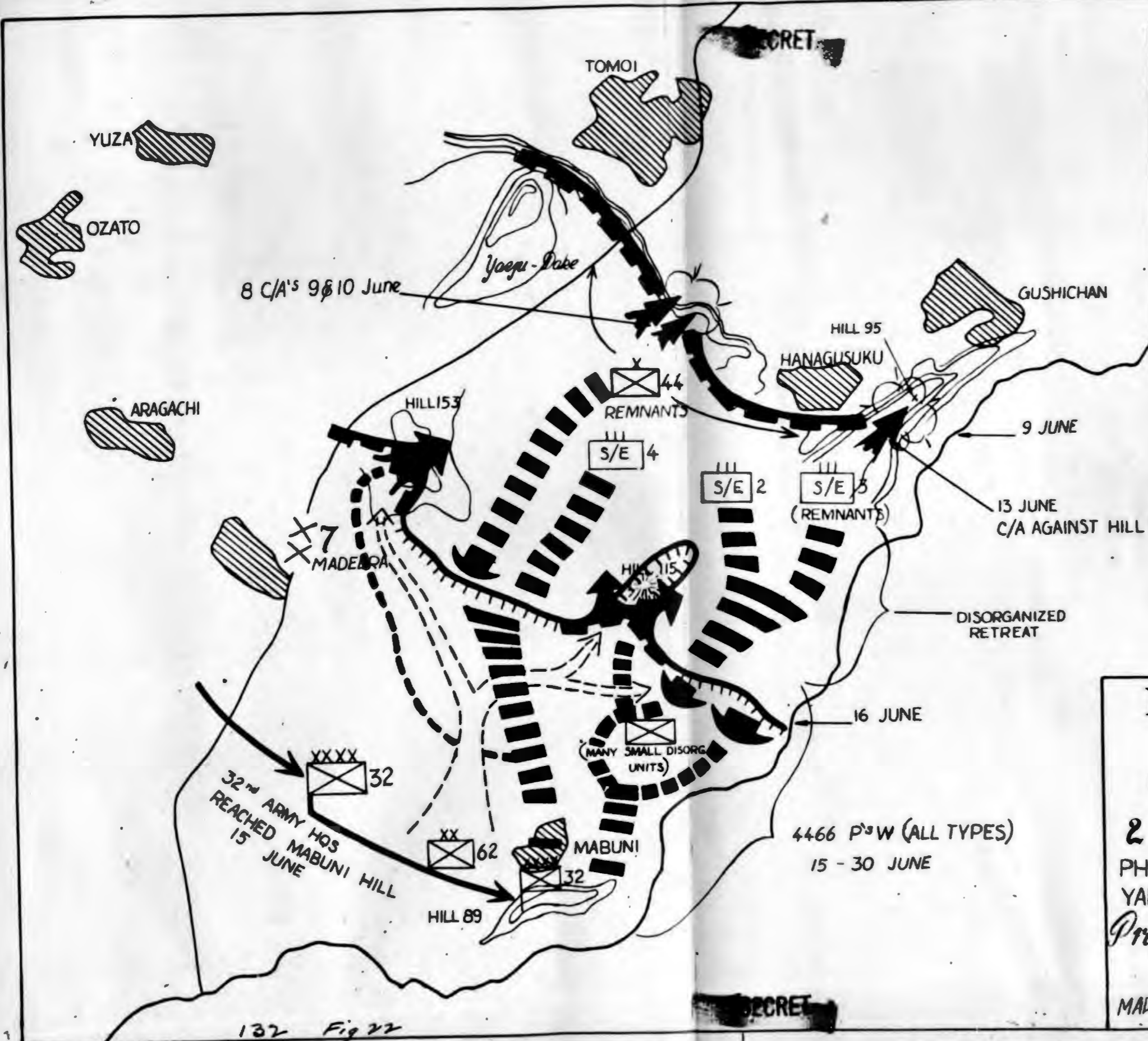
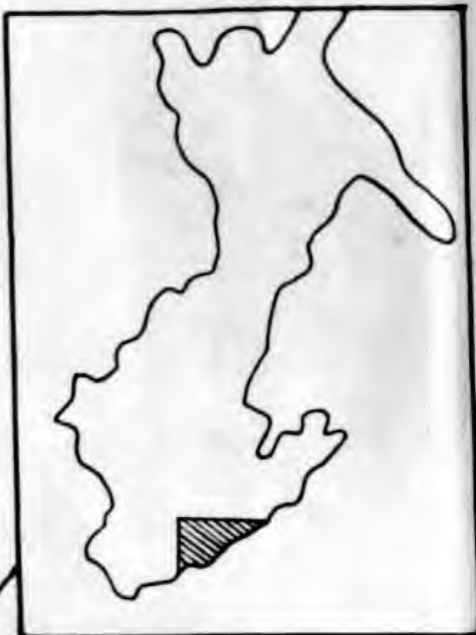
As the last phase of the operation got under way, about 21 May, tank action was limited to one company, Company "C" and one platoon of "A" Company. This was due to heavy rains and swampy terrain.<sup>2</sup>

On the 30th of May, the weather finally cleared and entire Battalion moved to YONABARU. However, rain again became a greater hindrance than the Japs and the 711th actions were extremely limited until the rainy season ended 6 June. (See Map No. 70)

At this time, troops of XXIV Corps occupied a solid line across 6000 yards of soft clay. Supply was critical and partially dependent on air drops. Tanks could not operate and to the front



SECRET



Legend

- DISORGANIZED RETREAT
- ATTACK
- MOVEMENT INTO POSITION FOR COMBAT

**MAP SHOWING ENEMY OPERATIONS**  
**2 JUNE To 30 JUNE**  
 PHASE 5: DEFENSE OF THE YAEJU DAKE ESCARPMENT  
*Prepared by CAC of J. G-2*  
 7<sup>th</sup> Inf. Div.  
 MAD: OKINAWA SHIMA, SCALE 1/25,000.

SECRET

stood the hill masses YAEJU-DAKE and YUZA-DAKE which with HILL 95 on the east coast formed a great wall across the entire Corps front. On the seaward side of HILL 95, there was a 300 foot drop to the water. On the side next to HANAGUSUKU VILLAGE there was another sheer drop of 170 feet to the valley floor. Thus the only break in the 4 mile long wall was the narrow valley pointed south through NAKAZA. This approach to the high table land beyond the escarpment was subject to fire and observation from both sides.<sup>3</sup> (See Map No. 2/ )

General Ushijima's army reached this new defensive area several days ahead of the Americans and by 3 or 4 June, was deployed in the caves in and behind the escarpment wall. (See Enemy Operations Map, 2 - 30 June) Thus with a heterogenous army, General Ushijima waited for the final battle. The fact that his headquarters took only a 20 day supply of rations when it moved from SHURI is an indication of his own appraisal of his army's ability.<sup>4</sup>

From 6 June until 10 June, supplies were built up making ready for the final push. The entire 711th Tank Battalion with "C" Company of the 713th Armored Flamethrower Battalion closed in an area just south of MINATOGA prepared to support the 7th Infantry Division in its attack on HILL 95.

Company "B", commanded by Captain B. R. Stogsdill, was in support of the 17th Infantry Regiment with the 3rd Battalion under Lt. Col. Lee Wallace, whose mission was to take the southern

end of YAEJU-DAKE. Company "C", commanded by Captain J. E. Gallagher was in support of the 32d Infantry Regiment with the task of reducing HILL 95 and the coral ridge that lay in front of its 1st Battalion commanded by Lt. Col. R. C. Foulston.

The tanks had the mission of neutralization and covering the flamethrowers as they flushed the Japs out of the caves and crevices and into the open. Movement was slow and the heaviest artillery fire since CONICAL HILL was received during the day.

From this point, 10 June on, the character of warfare on OKINAWA changed. Freer and more aggressive use of tanks was made, mainly because of more favorable weather and terrain, and flame tanks became the solution to the caves. Interference from enemy artillery became less but more important, through experience, the infantrymen and tankers developed a team that neared perfection.

On 10 June, when the 32d Infantry was held up by Jap positions in two rocky knobs at the northeast end of HILL 95, the Regimental Commander, Col. Finn, recommended the use of flame. Captain Washnok of Company "C", 32d Infantry, held his infantrymen in place and Captain Tony Niemeyer, Commanding Officer, Company "C", 713th Armored Flamethrower Battalion, attached a 200 foot hose to a tank and with Sgt. Paul Schrum, the tank commander, and S/Sgt. Joseph Frydrych, the infantry platoon leader, dragged the hose onto the high rock and sprayed napalm over the two strongpoints forcing out 35 or 40 enemy.<sup>5</sup>

When the evening of 11 June fell, one battalion from each of the 7th Division's two attacking regiments, held a small corner of the enemy's main line on southern OKINAWA.

Fifteen hours after the 32d Infantry had burned its way to the top of HILL 95, the 17th Infantry siezed its portion of the YAEJU-DAKE in a night attack. By 0800 of 12 June, the situation was settled and Company "B", 711th, with flame tanks attached, supported the 2d Battalion, 17th Infantry, in the continuation of the attack.

On the 13th of June, Company "A", commanded by Captain D. W. Neill, relieved Company "C" with the 32d, and with the splendid cooperation of the 13th Engineers widened the pass between HILLS 95 and 115 so as to allow the tanks to move up the escarpment on 14 June.

"We have passed the speculative phase of the campaign and are down to the final kill"--this was General Buckner's appraisal of the battle for OKINAWA on June 15.<sup>6</sup>

Within the 7th Division zone were HILLS 153 and 115, jagged protuberances of coral which became General Ushijima's last hope of defending the eastern end of his line after the fall of HILL 95 and YAEJU-DAKE. (See Map No. 7/ )

The 5 day battle for these two hills and the fields of coral outcroppings on the surrounding plateau, lasting from 13 to 17 June, was as much like hunting as fighting. It was a battle of tanks operating ahead of the usual infantry support, blasting the coral rocks with shell bursts and almost constance machine gun fire.



136

AMERICAN TANKS MOVE IN ON THE  
SLOPE OF MOUNTAIN 22 JUNE 1945

47-11

11



Company "A", a platoon of light tanks from Company "D", and a platoon of flamethrowers from Company "C", the 713th, were in direct support of the 32d Infantry on the left. Company "B", a platoon of lights, the Headquarters Company assault gun platoon, and a platoon of flamethrowers were in support of the 17th Infantry with Company "C", the remaining platoon of lights from Company "D", 711th Tank Battalion, and the remaining platoon of flamethrowers from Company "C", 713th, were used as the division's armored reserve.

Targets were taken under fire as they were designated from Regimental OPs by the Company Commanders and from Battalion OPs by tank liaison teams operating with the Infantry Battalion Commanders. Caves were sealed by tank gun fire.

The battlefield was perfect for the armored flamethrowers, which poured flame into caves, clusters of rocky crags, wooded areas and towns, either killing the Japs or forcing them into the open to be destroyed by 75mm., 37mm., and machine gun fires. Some heavy weapons were encountered but only slight damage was inflicted on the tanks before they were knocked out. Company "C" had one tank knocked out by anti-tank fire which was covering a mine field. As the tanks neutralized the hills, towns, and crags, with 105, 75, and 37mm. and flame gun fire, the infantry moved in and consolidated the positions.



50 209295

Tanks attempting to dodge Jap  
75 mm. shells during attack  
MADTW 22 June 1945

137



As the last strongpoint, HILL 89, was reached, enemy resistance was once again strong. (See Map No. 7/ ) The tanks of Companies "A" and "B", with their attachments, attempted numerous times to climb the escarpment but the terrain proved too treacherous and the escarpment too steep. Again through tank-engineer cooperation, an approach was dozed and the tanks gained the height. The flame tanks used nearly 5,000 gallons of gasoline before the entire top was clear that night.

As the tanks and flamethrowers worked their way across HILL 89, burning and blasting their way over treacherous terrain, the Japs started to surrender in large groups. At this point, tank mounted public address systems were put into use by the Division Language Teams. On 20 June, 977 prisoners were taken, an unprecedented accomplishment in the Pacific War.

Meanwhile, Company "C", with its attachments, had fought with the 184th Infantry to the end of the island, in their mopping-up operations. Mass surrender of the Japs did not begin however until Tenth Army crowded them to the waters edge. Even among such destitute and discouraged soldiers, less than a third of them chose to surrender than die. Many of them would hold grenades against their stomachs and blow themselves to pieces-- a kind of poor mans hara-kari. At least 16 separate explosions were counted when an armored flamethrower threatened a troublesome machine gun position which was holding up a portion of the 184th during this mopping-up.<sup>7</sup>

As the mop-up went into the final phase, the tanks reverted to battalion control and were furnished the regiments on call. The final maneuver was for the attacking forces to swing back north and clean out any remaining Japs until they reached the NAHA-YONABARU VALLEY. A blocking force had established a line along the NAHA-YONABARU across island road to prevent any of the enemy from escaping to the northern part of the island.

From the fall of SHURI until front lines disappeared, Tenth Army lost 1555 men killed in action.<sup>8</sup>

Among those killed was General Buckner. Early in the afternoon of 18 June, General Buckner stopped at a forward observation post of the 8th Marine Regiment, 2d Marine Division, near the southwest tip of OKINAWA. While General Buckner watched the progress of the fighting, a shell from a Jap dual purpose gun exploded directly above the observation post. A coral fragment, broken off by the explosion, struck the General in the chest, he collapsed and died within 10 minutes. Major General Roy S. Geiger, senior commander on OKINAWA, assumed command until 23 June when General Joseph W. Stillwell arrived and took command.

This final phase of the OKINAWA campaign emphasized the value of using armor in mass. Ranging far out in front of the supporting infantry, the effect of tanks in mass, their fire power, shock effect, particularly the armored flamethrowers, were utilized to the utmost. As compared to the piece-meal commitment heretofore necessitated by terrain and weather, the

mass tank actions of this phase can be said to have been a field day for the tankers.

Disorganization of the enemy forces did not lessen the need for aggressive action as American troops occupied the last of their defensive positions. In spite of adversities and broken fortunes, the Japanese Army had maintained discipline astonishingly well. This, for the most part, can be accounted for by the fanaticism of the Japanese soldier in his devotion to the Emperor.

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#### NOTES FOR CHAPTER X

<sup>1</sup>Ltr, Hq. 20th Armored Group to Commandant, The Armored School.

<sup>2</sup>RYUKUS Campaign, 20th Armored Group After Action Report.

<sup>3</sup>OKINAWA: The Last Battle, p. 434.

<sup>4</sup>7th Division History, pp. 376-377.

<sup>5</sup>OKINAWA: The Last Battle, p. 441.

<sup>6</sup>Staff Meeting Tenth Army Headquarters, Colonel Steven's Diary, 15 June.

<sup>7</sup>7th Division History, p. 448.

<sup>8</sup>Casualty Reports Tenth Army G-3 Journal, from period 22 May - 21 June.

## CHAPTER XI

### SUMMARY

In evaluating the contribution of armor in the capture of OKINAWA, the assault phase is passed over rapidly because of only slight opposition which met the initial landings. However, the success of the amphibious tractors in landing large numbers of troops on L-Day and their employment in resupply across the beaches thereafter has not been overlooked. The amphibian tanks and standard tanks, some with T-6 floatation devices, were not subjected to opposed landings. Therefore their action offered no opportunity for an evaluation of their use under combat conditions.

A major portion of this report is focused on the 711th Tank Battalion supporting the 7th Infantry Division. This battalion participated in the battle, from the initial landings to the final mopping-up, except for a ten day period in May. During this short interval the sector of the 7th Infantry Division was taken over by the 96th Infantry Division and the operation of its supporting armor, the 763rd Tank Battalion, fills the gap and gives continuity to the armored action. The action of these two battalions is typical and a study of their successes and failures is adequate basis for deriving conclusions on the employment of armor in this type of campaign. Additional occasional reference has been made to the action of the 706th Tank Battalion which was committed when the strong resistance of the MACHINATO LINE was

encountered. The 193rd Tank Battalion, which was broken up after a short period of operation to be used as replacements for the other tank units, has been mentioned only slightly. Considerable attention has been devoted to the work of the 713th Armored Flamethrower Battalion. Flamethrower tanks were used in this campaign on a large scale for the first time.

The account of the action of armored and amphibious battalions, which supported the infantry divisions in the assault landings; breaching of strong defenses; and the final mopping-up on OKINAWA, proved the indispensability of armored support for infantry in offensive operations over rough terrain against a determined enemy. Employed in a manner which violated armored doctrine, and justified only by unusual circumstances, armor proved its effectiveness even when conditions were extremely unfavorable. However, the penalty for operating under very unfavorable conditions must be balanced against the benefits derived therefrom.

On OKINAWA in the less than three months during which the tank battalions were actively engaged, 57% (211 tanks) were casualties. Enemy mines destroyed or damaged 64 tanks and enemy gunfire claimed an additional 111. Such mishaps as thrown tracks or bogging down accounted for the other 36, of which 25 were subsequently destroyed or damaged by enemy action. The obvious conclusion is that when tanks are employed in small tank-infantry teams in unfavorable terrain, excessive casualties must be expected



because the greatest effectiveness of armor presupposes freedom of maneuver to utilize the shock action gained from armor's flexibility and mobility.

\\ The OKINAWA terrain and weather handicapped armor from the beginning. Cross-country movement was hazardous at best; the road net was very poor and existing bridges were weak. Observation everywhere favored the Japanese, who had been able to establish well sited defense lines on dominant terrain. As a result, tank movement was restricted throughout the campaign. The use of armor in heavy rains was impossible. The heavy rains which began in mid-May caused a complete breakdown of the road system in southern OKINAWA. Notwithstanding, tanks did operate effectively in spite of the many obstacles presented by the terrain itself.

Japanese anti-tank doctrine on OKINAWA contemplated destruction of the tank-infantry team as the first requisite for the success of their defense. This doctrine was tactically sound and coincides with our own practices. The Japanese successfully separated the tanks and the infantry on many occasions by bringing down heavy artillery fire. Thereafter, their defense fell down because anti-tank weapons were not numerous enough to withstand repeated armored thrusts. The 47mm anti-tank guns, while an excellent and deadly weapon, were too few to be decisively effective.

The enemy failed to use mines to their best advantage. Protection for their mine fields was insufficient and the mine fields lacked depth. However, a lack of effective mine detecting by our troops resulted in the loss of many tanks in the early phases of the operation. Fortunately, there was an absence of anti-personnel mines, among the anti-tank mines, to seriously interfere with tank recovery. The Japanese "close attack squads" were more of a nuisance than a formidable threat, but they forced the tankers to be constantly alert.

On OKINAWA there was no real Japanese armor. The few tanks which were there were used offensively only once; in the enemy counteroffensive of 4 - 5 May. These tanks were so inferior that our artillery and tank fire quickly eliminated them as an offensive threat and thereafter they were used as pillboxes.

U. S. Troops invaded OKINAWA expecting to use close tank-infantry teamwork. When difficult terrain and Japanese artillery began to split these teams, there was a period of breakdown in mutual support. As the campaign progressed, troops learned techniques of coordination which had been neglected during the too short period of combined training prior to invasion. The lesson was learned early, that when tanks overran an objective, infantry must reach the position rapidly if it is to be consolidated. Separate routes of advance on an objective proved effective. Enemy attention and fire was focused on the tanks allowing the foot troops to approach the position without excessive casualties.

Supporting artillery time fire over tanks was effectively used on several occasions. It was not used habitually because the enemy positions were dug-in thereby minimizing the casualty producing effect of air bursts.

The flamethrower tank, a new weapon, was indispensable in rooting the enemy from the ground. Due to the untried nature of this weapon, tactics for successful employment had to be developed during the campaign. The problem was further complicated because two types of flamethrowers were used and two schools of thought on their employment existed. One concept was the the flame throwing apparatus should be merely auxiliary to the tank cannon while the opposing belief maintained that the flame thrower was a special weapon and the addition of a tank cannon detracted from its primary role. The results of the use of both types of flamethrowers indicate the soundness of the latter concept. But armored flamethrowers should not be made from salvaged tanks since they encounter the same operating conditions and the same enemy fire as any other tank. They should look no different from standard tanks so that they will not be singled out for destruction.

The poor coordination between tank and infantry troops can be accounted for in large measure to inadequate communications. The methods employed on OKINAWA were indirect and complicated. The ANVRC 3 in the tanks were used only to monitor infantry transmissions on the SCR 300, and reception on these sets was poor.

A better means of direct communication between the tank crews and their supporting infantry would have decreased the numerous times when tanks went beyond their infantry security elements and suffered heavy casualties. This deficiency may be overcome when armored personnel carriers, with tank-type radios, allow the infantry to move in closer in support of the tanks and maintain dependable radio contact.

The OKINAWA operation highlighted significant shortcomings in effecting tank-infantry mutual support in small team actions. Initially, a lack of understanding and appreciation of the limitations of tanks caused infantry elements to fall back out of supporting distance. Close coordination and cooperation developed with experience but unnecessarily high casualties resulted before this experience was gained. The indicated remedy appears to be the inclusion of more tank-infantry exercises in unit training in order to afford small unit infantry commanders an opportunity to become familiar with tank capabilities and limitations, and with the communications afforded for supporting infantry. The employment of armor in the capture of OKINAWA emphasizes tank-infantry teamwork and the success or failure of individual actions can be attributed almost directly to the degree of cooperation and coordination effected.

Viewed in the light of present armored doctrine, it is apparent that armor on OKINAWA could not be employed to exploit characteristics of high mobility and great fire-power. The

mobility of the tanks during all but the brief final mop-up was limited by the unfavorable terrain and weather to the rate of movement of infantry. The absence of personnel carriers for infantry required tanks to move at the speed of foot troops. In utilizing great fire power, it is presupposed that armor will be used in mass. This was not possible because of the dispersion of tank units into small tank-infantry teams. The Japanese were not subjected to the shock or psychological effect which comes to troops on the receiving end of a massed armor assault. Scattered small armored units were never able to produce this effect. Even during the mopping-up phase when somewhat greater freedom of action was allowed armor, massing of tank formations as large as a company was exceptional.

The principle that armor is a weapon which should be thrust quickly through enemy opposition on a narrow front while retaining great depth is not one which can be said to be characteristic of any armored action on OKINAWA. No deep column formations were possible when armor was dissipated in support of small infantry formations. The doctrine which visualizes an armored combat command or armored division in column punching through enemy resistance to break out and cause havoc in rear areas, is a principle which was not tested on OKINAWA.

The employment of armor on OKINAWA violated most of the principles of present doctrine of mass, mobility, and great fire power with its resulting shock action. However, it cannot be

denied that in this campaign, where infantry required the support of a mobile, armor protected direct fire weapon in order to advance in the face of well organized defenses, the use of tanks in an unorthodox manner was justified. This campaign serves to emphasize the importance of having tanks available within the infantry division where factors of terrain and weather preclude the employment of armor as a weapon of mass and mobility. Tanks did not win the battle for OKINAWA but in their supporting role they assisted materially the infantry divisions in their steady advance which shattered a determined defense and wrested this important island from the Japanese.

APPENDIX A

AMERICAN ORDER OF BATTLE

TABLE 1

Organization of the Tenth Army (U.S.)

XXIV Corps, USA . . . . .	<u>88,415</u>
7th Div . . . . .	21,929
27th Div. . . . .	16,143
77th Div. . . . .	20,981
96th Div. . . . .	22,330
Corps Troops. . . . .	7,032
III Amphibious Corps, USMC . . . . .	<u>85,247</u>
1st Div . . . . .	26,274
2d Div. . . . .	22,195
6th Div . . . . .	24,356
Corps Troops. . . . .	12,422
Tactical Air Force . . . . .	3,172
Tenth Army Troops. . . . .	5,417
Miscellaneous Units. . . . .	570
 Total, Tenth Army . . . . .	 <u>182,821</u>

Source: Commander Task Force 51, Commander Amphibious Forces U. S. Pacific Fleet, Report on OKINAWA Gunto Operation from 17 February to 17 May 1945, Pt V, Sec. 1.



APPENDIX B

JAPANESE ORDER OF BATTLE

TABLE 1

## Organization of the 32d Army (Japanese)

	Estimated Strength
32d Army Hq. . . . .	1,070
<b>Infantry . . . . .</b>	
24th Div . . . . .	14,360
62d Div. . . . .	11,723
44th Ind Mixed Brig. . . . .	4,485
1st, 3rd, 26th, and 29th Ind. Bns. . . . .	6,242
223rd, 224th, and 225th Spec Gar Cos . . . . .	600
3rd and 4th Commando Units . . . . .	900
<b>Total Infantry . . . . .</b>	<u>38,310</u>
<b>Armored</b>	
27th Tank Regt . . . . .	750
<b>Artillery and Automatic Weapons</b>	
5th Arty Command . . . . .	147
1st Med. Arty Regt (2d Bn) . . . . .	856
23rd Med. Arty Regt. . . . .	1,143
7th Hvy. Arty Regt (3 Btrys) . . . . .	526
100th Hvy. Arty Bn . . . . .	565
1st Ind Arty Mortar Regt . . . . .	613
1st Lt. Mortar Bn. . . . .	633
2d Lt. Mortar Bn . . . . .	615
3d, 7th, and 22d Ind Antitank Bns. . . . .	1,015
18th, 22d, 23rd, and 32d Ind Antitank Cos. . . . .	569
27th Ind AA Arty . . . . .	505
21st AA Hq . . . . .	71
79th, 80th, and 81st Ind AA Arty Bns . . . . .	1,544
103d, 104th, and 105th Machine Cannon Cos. . . . .	1,011
3d, 4th, 14th and 23d Ind Machine Gun Bns. . . . .	1,663
<b>Total Arty and Automatic Wpns. . . . .</b>	<u>11,476</u>
<b>Total Air Force (Ground) . . . . .</b>	6,936
<b>Total Line of Communications Troops. . . . .</b>	7,333
<b>Naval Units . . . . .</b>	3,500
<b>Total Miscellaneous Units. . . . .</b>	<u>3,359</u>
<b>Total Strength . . . . .</b>	<u>77,199</u>

Source: Tenth Army G-2 Intelligence Monograph, RYUKYUS Campaign, Pt. 1, Sec. B, Order of Battle, p. 3.

APPENDIX C

STATISTICS OF OKINAWAN CAMPAIGN

TABLE 1

Personnel Loaded for Assault and for First Echelon Garrison in  
RYUKYUS Campaign, by Point of Embarkation.

Point of Embarkation	Ships	Troops	Supplies (Measurement--tons)
TOTAL	458	193,852	824,567
Leyte . . . . .	186	71,163	320,148
Guadalcanal-Espirutu-Russells	159	74,970	285,279
Saipan-Tinian-Guam. . . . .	61	31,771	119,673
Oahu. . . . .	39	12,837	69,423
San Francisco-Seattle . . . . .	13	3,111	30,044

Source: Office of the Chief of Naval Operations, Amphibious  
Operations--Capture of OKINAWA, Chap. VII, "Logistics," p. 7-24.

TABLE 2

Casualties Sustained by Tenth Army, 1 April to 30 June 1945.

UNIT	TOTAL	BATTLE CASUALTIES			Non-battle CASUALTIES
		Killed	Wounded	Missing	
All Units	65,631	7,374	31,807	239	26,211
XXIV Corps	34,736	4,412	17,689	81	12,554
7th Div	10,893	1,122	4,943	3	4,825
27th Div	5,224	711	2,520	24	1,969
77th Div	7,126	1,018	3,968	40	2,100
96th Div	10,247	1,506	5,912	12	2,817
Corps Troops	1,246	55	346	2	843
III Amphib Corps (Marine)	26,724	2,779	13,609	119	10,217
1st Div	19,002	1,115	6,745	41	5,101
2d Div	95	7	26	61	1
6th Div	12,815	1,622	6,689	15	4,489
Corps Troops	812	35	149	2	626
Tac Air Force	520	13	99	27	381
Army Garrison	2,636	110	261	12	2,253
Army Troops	1,015	60	149		806

Source: U. S. Tenth Army Action Report, RYUKYUS, Vol. 1, Chapt 11.

Casualties Sustained by Japanese in RYUKYUS Campaign, 1 April to 30 June 1945

UNIT	TOTAL	BATTLE CASUALTIES	
		Killed	Captured
All Units	117,471	110,071	7,830

Source: U. S. Tenth Army Action Report, RYUKYUS, App. C. p. 489.

TABLE 3

Ammunition Expended by the U. S. Navy in the RYUKYUS Campaign,  
March - June 1945

(Number of Rounds Fired)

TYPE	TOTAL	PRIOR	AFTER	
		1 APRIL	1 APRIL	1 APRIL
All Types	600,018	41,543	44,825	513,650
Star, 5 inch. . . . .	66,653	500	1,500	64,653
HC, 5 inch. . . . .	432,008	27,750	36,250	368,008
HC, 6 inch. . . . .	46,020	4,200	3,000	38,820
HC, 8 inch. . . . .	32,180	3,700	2,100	26,380
HC, 12 inch . . . . .	2,700	575	175	1,950
HC, 14 inch . . . . .	16,046	3,275	1,325	11,446
HC, 16 inch . . . . .	4,411	1,543	475	2,393

Source: Tenth Army Action Report, RYUKYUS, Vol. 1, Chap. 11.

APPENDIX D

AMPHIBIOUS VEHICLES AND LANDING CRAFT



Figure 12. AMPHIBIOUS TANK (LVT-A)

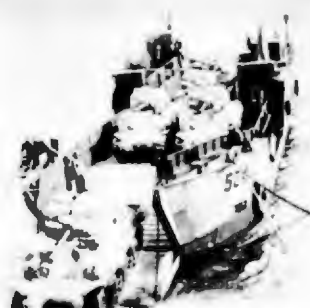


Figure 13. AMPHIBIOUS TRACTOR (LVT)





LSV



LCT. 6



LVT. 4



LSM



LCMs ON LSD.



LST. Launching LVT



LCVP.



LCM

ASSAULT LANDING EQUIP.

Fig. —

APPENDIX E

GLOSSARY OF AMPHIBIOUS TERMS

## A P P E N D I X <sup>6</sup>

### Glossary of Terms Used In Amphibious Warfare

(Amphibious Warfare Instructions, U. S. Fleets, USF 6,  
Navy Department, Office of the Chief of Naval Operations, 1946)

- AKA The navy symbol for a "cargo ship, attack."
- APA The navy symbol for a "transport, attack."
- BLT Battalion Landing Team. In an amphibious operation, an infantry battalion specially reinforced by necessary combat and service elements; the basic unit for planning an assault landing. A battalion landing team is normally embarked aboard one attack transport or several LST.  
Abbrev: BLT
- AK A cargo ship primarily designed to carry freight; it may carry a limited number of personnel.
- Control Officer - A naval officer, designated by the Attack Force, charged with over-all supervision of the ship to shore movement.
- DUKW A 2½ Ton Amphibian Truck, capable of transporting personnel and cargo on water or land.
- LCP (L) Landing craft personnel (large); capacity 30-36 troops or 6,700 lbs. cargo.
- LCP (R) Landing craft personnel (ramp); capacity 29 troops or 6,700 lbs. cargo.
- LCV Landing craft vehicle; capacity 36 troops or 10,000 lbs cargo or 1/4 4 x 4 truck.
- LCUP Landing craft vehicle (personnel); capacity 38 troops or 8,100 lbs. cargo or 1/4 4 x 4 truck.
- LCM (3) Landing craft mechanized mark III; capacity 1 medium tank and 30 troops or 60,000 lbs cargo or 77 troops.
- LCT (5) Landing craft tank; capacity: 3-50 T heavy tanks or 5-30 T medium tanks.
- LVT (2) Landing vehicle tracked; capacity - 6,500 lbs cargo or 25 troops; does not have a ramp.

- LD Line of Departure
- LVT (4) Landing vehicle tracked; capacity 6,500 lb cargo or 25 troops; has a seven foot wide ramp.
- LSD Landing ship, Dock; capacity 3 LCT (5)s, (6)s with 5 medium tanks, or 2 LCT (3)s (4)s with 12 medium tanks, or 14 LCM (3)s each with 1 medium tank or 1500 long tons cargo, or 41 LUTs or 47 DUKWs. Troops: 22 officers; 218 men.
- LSM Landing ship, medium; capacity - 5 medium or 3 heavy tanks (150 tons maximum payload, beaching) or 6 LUTs or 9 DUKWs Troops: 54.
- LSV Landing ship, vehicles; capacity: 19-21 LUTs (AP 106, 107, none), 29-44 DUKWs, 800 troops.
- LST Landing ship, tank; capacity 2100 tons.
- RCT Regimental combat team; a reinforced infantry regiment, operating as a balance fighting unit of essential arms. The normal ground force ratio is one regiment of Infantry, 1 Battalion of Artillery, 1 Company of Engineers. The organization is not fixed and may be varied to meet the demands of the tactical situation. Abbreviation RCT.
- TCS Team Control Station, Radio.

APPENDIX F

BIBLIOGRAPHY

## BIBLIOGRAPHY

The source materials for this report were personal interviews, Action Reports, historical accounts and monograph.

Certain portions were derived from interviews of the following individuals, who saw action with the units following their names, during the RYUKYUS Campaign.

Major Milton B. Pulver, 193rd Tank Battalion  
Lt. Col. John Collier - 776th Amphibious Tank Battalion  
Capt. A. E. Ferguson - 7th Infantry Division  
Capt. C. E. Hazel - 534th Amphibious Tractor Bn  
Capt. A. A. Todd - 711th Tank Battalion

The Action Reports of the below listed units were used:

Tenth Army - 26 March to 30 June 1945  
XXIV Corps - 26 March to 30 June 1945  
7th Infantry Division - March through June 1945  
96th Infantry Division - March through June 1945  
20th Armored Group - April through June 1945  
713th Armored Flamethrower Battalion, 10 November 1944  
through 30 June 1945  
193rd Tank Battalion - January through June 1945  
706th Tank Battalion - April through June 1945  
711th Tank Battalion - April through June 1945  
763rd Tank Battalion - April through June 1945  
708th Amphibious Tank Battalion - April through June 1945  
780th Amphibious Tank Battalion - April through June 1945  
536th Amphibious Tractor Battalion - January through  
30th June 1945  
715th Amphibious Tractor Battalion - April through June 1945  
718th Amphibious Tractor Battalion - April through June 1945  
728th Amphibious Tractor Battalion - April through June 1945  
788th Amphibious Tractor Battalion - April through June 1945

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