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THE TANK COMPANY WITH THE REGIMENTAL COMBAT TEAM IN AN AMPHIBIOUS OPERATION

INTRODUCTION

The tank battalion is an organic part of a marine division and it soon is to be organic in the infantry division of the United States Army. Tank battalions, when employed with infantry are broken down and companies attached to regimental combat teams. It is the intention of the writer to show the many things which must be considered in preparation for employment of the tank company in small island amphibious warfare, duties and responsibilities of tank officers, and initial missions ashore.

Alerting of a tank battalion for a specific amphibious operation will be done by the division commander upon receipt of orders from higher headquarters. Upon the alerting of a tank battalion the battalion commander will attend a series of conferences with the division staff, commanding officers of infantry regiments, and selected separate battalion commanders. At this series of conferences a rough plan for specific training, preparation for embarkation, lifting by assault shipping, and tentative plans for the landing of the division, based on directives from higher headquarters, will be formulated. Normally four to eight weeks prior to embarkation, tank company commanders and tank battalion staff officers will be read into the operation as planned at this time.

When the tank company commander is alerted by his battalion commander he will be told the target and its geographical location, the troops involved in the particular operation, the division mission, the composition of regimental combat teams, the training to be accomplished prior to embarkation, and the date by which this training must be completed. He will be given the logistical plans pertaining to shipping to include, type of shipping and tentative vehicular loading plans. The battalion commander must explain to his staff and company commanders, the landing areas, landing plan, attachments and detachments upon

landing, and plans for initial combat ashore.

Immediately upon receiving this information the tank company commander must establish command liaison with the regimental commander who will command his particular combat team. This liaison being established the tank company commander embarks upon a program of joint planning with the regimental combat team, its battalions, and his parent battalion. He must also supervise the training of his company pointing toward the terrain, and special situations peculiar to the forthcoming operation without divulging the nature of the operation or its geographic location and importance to any of his subordinates.

During this joint planning the question will inevitably arise regarding the area or areas for the landing of tanks, the order of landing and the time of attachment to the combat teams. It has been determined through experience gained by various tank battalions in the southwest and central pacific areas that all tanks should be landed on the same beach by companies in rapid succession. It was found that tank companies landing on beaches assigned to the various combat teams, or tank platoons landing on beaches assigned to infantry battalions where reefs, sand bars, strong currents, underwater obstacles or mines were present, would suffer severe tank losses because of these conditions, and the lack of control. The order of landing by companies should be determined by the tank battalion commander after careful consideration of the landing area and its proximity to the combat team zones. The tank company assigned to a combat team with an exposed flank, or initially weak in anti-tank defense, quite naturally should be given first priority by the battalion commander for his landing plan, irregardless of the location of the tank landing area.

A question frequently arising at this time is that of the landing of tank recovery vehicles. Tank recovery vehicles have been landed with success as the last tracked vehicle of the company to which it belongs. They have also been landed successfully grouped under control of the battalion maintenance officer, in the rear of the last company of the tank battalion. It is evident that in an operation of this nature immediate salvage of vehicles lost in shallow water and on the beaches is imperative as no replacements may be expected for some time. Because of this, if prior reconnaissance by underwater demolition teams and tank battalion personnel is possible, the former plan for the landing of recovery vehicles is preferable. However, this is a command decision that must be made prior to completion of vehicular loading plans and embarkation, unless small landing craft are used allowing for flexibality.

The time of attachment to combat teams poses a problem best settled by the understanding by division and combat team commanders, of the peculiarities of waterproofing and the subsequent removal of waterproofing from a tank.

Here to we are faced with one of two alternatives. First, attachment upon landing. Attachment upon landing means that as each company lands it proceeds immediately to an assembly area within the zone of its combat team and removes waterproofing while the company commander reports to the combat team commander. However, the preferable plan is to have a tank battalion assembly area predesignated by the division commander, based upon recommendations of the tank battalion commander, thereby eliminating separate assembly areas for each company and the danger of becoming engaged in a fire fight enroute to the various assembly areas before removable of waterproofing. Waterproofing removed and stacked in a common assembly area is readily guarded by the S-4 section of the tank battalion and is available for further operation if necessary.

This plan is particularly strong if reconnaissance parties from the tank battalion are landed with the assault infantry not later than the 3rd wave to check for underwater obstacles and beach mines on or near the proposed landing beach, egresses from the beach, the proposed assembly area and routes thereto.

Entering into all of the decisions made up to this point in the planning will be the type of shipping available to carry tanks. In a particular area it may be impossible, due to commitments by the navy to other units, to secure the type of shipping desired by the division commander. Normally, a division commander after consulting the tank battalion commander will request a specific type of shipping. If available, and if the naval commander feels that hydrographic conditions will permit the use of the desired shipping to transport and land the tanks, the request will be approved. Experience with the present day medium tank has shown that assault transports, due to low-capacity booms and small hatches and possible high seas are not practical. The same is applicable to assault cargo ships. Landing Ship Tanks are desirable where reefs, sand bars, underwater obstacles, hazardous hydrographic conditions or stubborn enemy opposition to the landing is anticipated. The landing ship tank is capable of transporting the medium tank company but is not recommended to be used on an amphibious operation where the early landing of tanks is anticipated as they are difficult to beach properly and retract quickly. Shipping space will always be at a premium and it is not practicable to land tanks from a landing ship tank, retract, and return that same LST later to unload wheeled vehicles, equipment or cargo loaded on the top deck. It is hazardous to attempt to land precious pre-loaded wheeled vehicles, engineer equipment, or various classes of supplies on a beach as soon after the initial assault as the infantry tanks must be landed.

The Landing Ship Medium (the baby sister to the LST) was used first by the 6th Army in October 1944 in the landings on Leyte, in the Philippine Islands, and was used with outstanding success by the 4th and 5th Tank Battalions of the 4th and 5th Marine Divisions in the assault on Iwo Jima. LSM's were used in all phases of the Philippine Island campaign. They were used successfully in the Okinawa operation and in the occupation of the Japanese empire by various Army and Marine Corps Units.

The landing craft tank in its latest version is a shallow-draft craft capable of transporting tanks for a relatively short distance. They are not capable of a sustained sea voyage because of their limited troop billeting and messing facilities, their small size, inability to ride out sustained high seas, and thenecessity of frequent refueling. They may be transported on the top deck of LST's or in the well of LSD's and launched in the target area for ship to shore movement of wheeled vehicles, equipment and cargo. If the distance from the staging area to the target area is relatively short, tanks may be transported by LCT's. A combat example of this was the use of an LCT to move a tank platoon from Okinawa to Iheya Shima, 45 miles northwest, to support an infantry regiment.

The Landing Ship Dock is now considered the primary means of transporting tanks for a landing in which adverse hydrographic conditions are present. It is capable of carrying a company of M4 series medium tanks loaded in LCM's or tanks loaded into three LCT's. The LSD is capable of maintaining speed and station with APA and AKA convoys.

In planning for employment with the regimental combat team the tank company commander must give careful study and consideration to aerial photographs of the objective, both vertical and oblique, taken from as low altitude as possible paying particular emphasis to that area which lies within the force beachhead line. He must not overlook the flanks and avenues of approach by

enemy armor. Detailed reports from pilots and crews resulting from land based or carrier aircraft raids are often available and prove invaluable to those concerned with planning the regimental attack.

Submarine reconnaissance and photography have often been available to tank and infantry commanders in order that they may fully study the hydrographic conditions, landing area, and terrain confronting them immediately upon landing. Much information was gained by submarine reconnaissance during the planning phase of the Gilbert and Marianies campaigns. In early 1944 an amphibious operation in the vicinity of Kavieng, New Ireland, was planned. A staff officer was sent by submarine to this area to make a reconnaissance to ascertain the feasibility of landing medium tanks and to recommend plans for the landing of tanks and their initial employment ashore.

It is imperative that the tank company commanders make a thorough study with the S-2 and S-3 of the infantry regiment of all beaches, reefs, other hydrographic obstacles, the wind and tides utilizing photographs, reports, and charts available. This is particularly important because the infantry must anticipate fighting for the beaches and the tank company commander must work out with them detailed plans for the employment of his unit in the support of infantry fighting for control of the beaches. The tank company commander must be thoroughly familiar with these conditions and plans in order to present them to his battalion commander for approval and coordination with the remainder of the battalion.

Careful preparation and coordination of the initial movement of tanks ashore must be made with each infantry regiment and its supporting naval gunfire and air liaison officers. The tank company commander must know where naval gunfire will be placed and where, when, and what kind of air strikes

are preplanned. The commander must make certain that naval gunfire and air liaison teams are familiar with his plans and can identify his tanks. If the landing is to be made over a table reef with a seaward fringe similar to those found throughout the Gilbert, Marshall and Mariana Island groups, the tanks will in all probability be forced to ford from the edge of the reef to the beach. A thorough study of aerial photographs will reveal the depth of the water at various tides and holes in the reef which are dangerous to tanks. Some tank losses must be expected because of unknown holes and faulty waterproofing. Tanks at Saipan traveled in excess of nine hundred yards from the reef to the beach and it was later said by Brig. Gen. Merrit Edson, USMC, that water was over five feet deep and that only the 75mm gun and the tops of the turrets were visible. Tank losses due to unknown holes in a coral reef may best be averted by the use of guide teams and guide amphibian tractors.

Arrangements should be made to permit certain first-wave amphibian tractors to return to the edge of the reef or bar and guide the tanks ashore. The leading tanks should follow these amphibian tractors by a few yards, watching to see that they are water-borne. In running over a reef an amphibian tractor will become water-borne when it crosses a hole too deep to be traversed by tanks. Guide teams may be employed where scarcity of amphibian tractors will not permit their use. One combat example of this took place on red beach one, Betio Island, Tarawa Atoll, when a twelve-man team with yellow floats, each with a 3-lb. anchor, debarked from 2 LCVP's at the edge of the reef and waded ashore, marking a safe passage lane for tanks. No tanks were lost on this beach due to unknown holes in the reef.

One of the most important plans to be formulated is the tank battalion and company liaison plan. This plan should have the approval of the division

commander and should be standard operating procedure. One plan which worked successfully on numerous occasions is as follows: Each tank company embarked one officer and a minimum of four enlisted men equipped with a SCR-509 radio with the regimental commander aboard the regimental command ship. The tank battalion liaison officer with a minimum of three enlisted men and one SCR-509 radio was embarked on the command ship of the regiment over whose beaches the landing of tanks was planned. It was the responsibility of the two assault infantry regimental commanders to land their tank company liaison teams not later than the third wave. The assault regimental commander having the tank battalion liaison party aboard his ship was responsible for the landing of this party not later than the third wave. This plan permitted the tank battalion commander, his staff and the tank company commanders to be thoroughly familiar at all times with the operation of each infantry regiment. During the assault phase it provided for adequate beach reconnaissance prior to the landing of tanks, reconnaissance of the proposed assembly area, route reconnaissance and permitted more rapid employment of tanks after landing. When ashore the tank company liaison teams remained with the regimental combat teams throughout the operation. The battalion liaison team joined the battalion commander. Upon his landing of the division commander the battalion team remained at the division command post.

Liaison officers were habitually assigned to one regiment and remaining with that regiment throughout an operation rapidly gaining the confidence and the respect of the infantry regimental commander, his staff, and the infantry battalion and company commanders.

Concurrent with this planning, training will progress at a steadily increasing rate. Training will point toward specific missions, the terrain, the nature of enemy resistance, the climatic conditions, and any peculiarities

which may be characteristic of the forthcoming operation. Considerable tank and infantry training must be accomplished. Tank unit training will concentrate primarily on security and defensive measures, review of fundamental principles, and refresher firing of basic weapons. However, identification of expected enemy armor, limited amphibious training, and training in waterproofing of vehicles must not be overlooked.

The tank infantry training will consist of familiarization of tank personnel with infantry units and infantry personnel with tank units. Principles and techniques of employment of the tank infantry team must be reviewed, and problems worked out and presented on all levels from the individual tank and infantry fire team and squad to the tank battalion and infantry battalion. Tank platoon leaders and company commanders should be called upon to lecture at officer and noncommissioned officer schools within the infantry regiments and selected infantry officers should lecture at tank officer and noncommissioned officer schools. Do not overlook the training of noncommissioned officers.

Familiarity should not stop upon learning each other's equipment, techniques, capabilities and limitations, but should continue to include individual commanders. During the recent war it was the policy in one marine division for the tank battalion to invite, over a period of time, all infantry commanders and staff officer to include company commanders to dinner. By the infantry reciprocating, friendships were established which proved invaluable during combat.

Normally a rehearsal of the landing phase will be held after embarkation of the division.

Training must be completed by a date set by higher echelons of command, but planning will continue up to and including the actual ship to shore movement on the day of the initial landing. For a tank company the cessation of training, contrary to popular opinion of other units, means increased work. Preparation for embarkation must commence immediately. Provisions must be made for stowage of excess or low priority equipment which cannot be carried in the assault shipping. The company commander must personally supervise the crating and marking of all supplies and equipment of his unit. He must supervise the maintenance of all vehicles, and weapons, and the preparation for waterproofing. He must keep a constant check on the health, welfare, and morale of each man. Individual clothing, equipment, and arms must be properly marked, inspected, reinspected, and packed or stowed. When the company commander is informed of the date of arrival of his ship or ships he must appoint a company transport quartermaster to work with the tank battalion and infantry regimental transport quartermasters on the loading plans for his company. These plans must include proper storage aboard various ships for expeditious unloading according to established priorities for all tanks, maintenance vehicles, half-tracks, trucks, jeeps, engineer equipment, crated cargo, baggage, ammunition, rations, water and fuel which his company may be required to carry. Normally tank companies will load on LSD's or LSM's only combat vehicles preloaded with fuel, ammunition, rations and water, and such additional items, to include post exchange supplies, as may be needed for the rehearsal, the movement to the target area, and the initial landing. If the tank company is loaded on a LST it is normal to load shore party equipment on the upper deck. The responsibility for this loading will usually fall with the tank company commander. This responsibility is by virtue of the tank company being the major unit embarking and the company commander

being the senior officer present from that unit. If LSM's are used it will normally require three to five to transport an entire tank company. The tank company commander is responsible for the loading of all vessels with the senior tank platoon leader to be embarked on each vessel responsible for the loading of the individual vessel.

If the tank company is embarked on a LSD it will carry with it only such supplies and preservatives as may be necessary for the rehearsal, the trip to the target area, and the initial landing. However, most LSD's are equipped with a spar deck built over the well deck and it is normal for amphibian tractors or light observation aircraft to be carried on this deck. The loading and lashing of these vehicles or aircraft is the responsibility of the tank company commander embarked on this vessel. While the company commander is completing his plans for embarkation, supervising the maintenance, and the preparation of his troops for embarkation, he must formulate plans for the movement of his company to the docks or loading area. Seldom if ever will a tank battalion move to its embarkation point en masse. Normally assault shipping will be assigned to transport divisions with each transport division assigned to lift a regimental combat team. The ships within a transport division will load simultaneously, some from beaches, some from docks, while others will stand in the stream to load. Therefore the division must load as combat teams necessitating tank companies to load in succession rather than simultaneously. If the movement to the docks is far, as was frequently the case in the pacific area during the past war, tank companies must move individually to their assigned loading points often over poor terrain, on poor roads, with distances varying from a few miles to many. Often times it will necessitate moving 48 hours in advance in order that first and second echelon maintenance may be performed, ammunition stowed,

vehicles fueled and waterproofed after the march has been completed. It is not necessary to completely waterproof tanks at this time. However, because of crowded conditions aboard ships and landing craft the hulls should be waterproofed and suspension systems rendered with preservatives. The lower portion of the exhaust fording stack should be emplaced and enough waterproofing material given to each tank for completion at least 24 hours prior to landing.

The company commander must also make arrangements for the moving of his headquarters, mess and maintenance personnel to the loading point and complete arrangements must be made for the messing and billeting of all personnel. Company spare parts, crated cargo and baggage which cannot be pre-loaded in organic transportation will be turned over to the regimental S-4 or transport quartermaster to be shipped along with the regimental cargo and equipment. The tank company's wheeled vehicles will normally be pre-loaded with fuel, ammunition, lubricants, cleaning materials, and a limited amount of water and rations, spare parts not carried in the maintenance vehicles and such other items for which space is available. These trucks are transported by the regimental combat team in its shipping and classified as "hot cargo", or given a high unloading priority. Jeeps necessary for liaison and communication may be deck loaded on assault transports, assault cargo vessels and LSD's with high priority for landing. The location of these vehicles by ships and organizations will be published in a division unloading plan, listing their priority and delegating responsibility for their rapid unloading and landing.

Navy regulations require that the commander of the major unit embarked on any vessel be designated as the commanding officer of troops embarked on that vessel. The commanding officer of troops is responsible to the ship's

captain for the discipline, health and welfare of all troops embarked as well as the policing of troop compartments, heads, mess halls, and decks used by the embarked troops. He is also responsible for the recreation, orientation and briefing of troops. One administrative detail which frequently confuses junior officers designated as commanding officer of troops on small vessels is the preparation and distribution of embarkation rosters. Embarkation rosters are provided for in Navy regulations and in landing force doctrine in order that rear echelon and higher administrative units will have records showing what personnel were embarked on each vessel. This is essential for proper casualty reporting in the event a ship is damaged or sunk. During the training and planning phase, school will be held for S-1's and other selected officers and key non-commissioned officers in the preparation of embarkation rosters. It is the duty of the commanding officer of troops to complete his embarkation roster immediately upon embarkation and to mail them to the proper distribution list prior to sailing. Division administrative orders generally state that embarkation rosters will be stenciled and run after embarkation, placed in envelopes, and addressed for mailing to designated officers and organizations. Division administrative orders further state that embarkation rosters will not be mailed more than one hour prior to sailing. This is done in order to avoid mailing the rosters and then leaving men behind because of last minute illness or transfer on orders from higher commands, which would render the embarkation rosters incorrect. If a tank company commander has troops embarked on more than one ship, and he more often than not will have as his vehicles will almost always be carried by the regiments, it is his responsibility to see that each individual is carried on the embarkation roster for the ship he is aboard.

A rehearsal is normally held either in an area in the close proximity to the embarkation point or in an area on the route to the target area which is held by our forces, and is suitable for rehearsal with a minimum of vehicular, and personnel casualties. Contrary to popular belief, the rehearsal is not primarily to test the feasibility of the landing plan for the assault troops or to test the plan for employment of troops ashore. A rehearsal of an amphibious landing is designed to familiarize or review debarkation procedure of the landing troops, to test ship to shore communications, and lateral troop communications, to check distances and intervals between rendezvous areas, line of departure, guide boats, control vessels, and landing elements, and to acquaint the various navy and landing force personalities who will be working together in the actual landing with one another. This is accomplished by issuing an operation order exactly the same as that issued for the actual assault landing except for the difference in geographic location. The size of the landing area, the disposition of troops and the communication and supply plan is exactly the same. Naval gunfire is simulated in accordance with the naval gunfire plan for the actual landing and supporting aircraft is present to dry-run all pre-planned air strikes.

A tank company will participate in the rehearsal by being embarked and following its actual landing plan except that the landing craft carrying tanks will turn away a few hundred yards short of the beach rather than risk losing them in landing or ruining their waterproofing. The tank liaison parties with the infantry regiments will be landed and will carry out the mission assigned to them for the actual landing. They must test communications with their companies and with the tank battalion. The battalion liaison party will

also test its communications and mission. The rehearsal is of no value to the tank company other than that benefit which is derived by the liaison party and the company commander. It gives the company commander time to become familiar with the communications and his functions of command liaison with the naval forces responsible for landing his company.

The infantry will carry on limited operations ashore usually advancing inland only as far as the force beachhead line is to be in the actual operation. Only enough supplies will be landed to test the shore party plan and its feasibility for rapid unloading of ships, movement of cargo ashore, and movement to dumps. However, it must be pointed out that in some instances where heavy initial opposition is anticipated and large numbers of troops with armor and engineer equipment are to be landed in a small area all troops and equipment to include tanks may be landed to test the feasibility of the landing plan.

Another type of rehearsal is the "walk-through". A rehearsal of this kind was conducted by the 2nd and 4th Marine Divisions in the Hawaiian area prior to their embarkation for movement to the Marianas for the assault on Saipan. Each division conducted its rehearsal separately within its division training area to determine the feasibility of concentrating the entire division in its assigned zone and still retaining its maneuverability. In these rehearsals roads were designated as the beaches and troops simulated landing by boat teams walking across the roads and deploying as planned for the operation. Tanks were simulated by tank crews carrying signs with company designations and numbers. This rehearsal was followed by a two-division amphibious rehearsal on the island of Maui after embarkation.

Staging or mounting of an amphibious operation is done in an area held by friendly forces with sufficient anchorages to accommodate large numbers

of ships and must have adequate facilities for refueling and reprovisioning of these ships. The staging or mounting area may be the same area as the rehearsal area or may be an area on a direct route to the target. In the invasion of Normandy the ports of England were the staging areas. In the Pacific theater in the past it was frequently necessary to have more than one staging area for a specific operation. An example of this is the landing at Okinawa where some units were staged from Ulithi, some from Leyte, and others from the Mariannas. The staging area is the last opportunity that the tank company commander will have to attend conferences with members of the infantry regiment and with tank officers embarked on other vessels. It is the last area where emergency spare parts and items of special equipment may be drawn.

Irregardless of how the tank company is embarked the tank company commander will always be faced with the problem of billeting and messing his troops. During time of war, naval transports, cargo vessels, and assault landing ships are always crowded. This is caused by an increase in the number of naval personnel assigned as ships company to a particular vessel. Prior to embarkation the company commander will be informed of the number of men and officers he may place on each ship. It has been found that seldom if ever will this be a reliable figure. Upon arrival of ships for loading there are almost invariably more men aboard as ships company than those figures which were given in advance. This immediately cuts into the number of troop billets available. It is often necessary because of overcrowded troop compartments for men to sleep on deck. This is easily arranged as tarpaulins, shelter halves, and ponchos may be utilized for shelter and additional cots may be drawn and placed aboard. Staff non-commissioned officers may be billeted

in chief petty officers' country and will usually eat in the chief petty officers' mess.

It is not advisable to billet troops in the same compartments with members of the ships crew. Experience has shown that while this is often necessary it is to be avoided because of theft, barter, of equipment and outright selling of pistols, combat knives, shoulder holsters, submachine guns, jungle boots and various other items of issue to the naval personnel. The troop commander is always responsible for the continuous policing of compartments occupied, and heads, and decks used by the troops embarked.

Messing of troops aboard ship is a problem only insofar as the cooks and messmen of the troops must be placed in the troop or ships galley to break out stores, cook and serve food. Naval regulations require all cooks of the troops be utilized and that one messman for every twenty troops embarked be furnished. Hours for troop meals must be fitted into the daily routine of troops and ships company without conflicting with the ship crews meals, ships watch routines, and the security of the ship during hours of darkness.

Officers will be billeted by rank and aboard most ships will be assigned seats in the wardroom for all meals by rank and sittings.

Immediately upon embarking a daily routine will commence at reveille and end with taps. It will include such things as hours for meals, time and place of muster, time of reports, ships guard established by troops, no smoking guards established in prohibited areas, black-out guards during hours of darkness, guards for classified documents and material, hours and locations of troop schools to include orientation and briefing, shower and washroom hours, ships service hours, hours for religeous worship, library hours and movie hours. It is essential that troops embarked be informed of the daily routine and copies of the order establishing daily routines should be posted in all

troop compartments, heads, and mess halls. Hours for the use of washrooms and showers must be worked out with the idea in mind of turning the water on during periods when fresh water is most needed by the troops. Troops should be told of the status of fresh water aboard the ship. It is advisable to remind the troops that if water conservation is practiced in the early parts of the voyage more fresh water will be available to them just prior to their entrance into combat with the enemy.

Troop schools should commence immediately after embarkation and should first take up the daily routine and general shake-down for the voyage. Upon leaving the staging area troop schools will consist primarily of orientation and briefing for the forthcoming operation. One of the outstanding examples of the past war of orientation and briefing of troops was conducted by units of the 10th Army prior to the landing on Okinawa. For this operation each ship had placed upon it 10th Army orientation and indoctrination kits complete with bulletins covering geography and history of Okinawa, strength and composition of enemy forces to include enemy capabilities of counter-attack by air and amphibious forces, strength and composition of our own forces to include ground, air and naval units, and the identity of commanders of expeditionary force elements, general plan of attack for the first phase, surface and air support for amphibious assault, and the mission of the unit being oriented. In addition, orientation material included military government, it's history, purpose, organization and plan; war information center kits; current world events; general background material on the causes of the war; and the importance of Allied victory. Warnings regarding trigger-happiness, indiscriminate anti-aircraft firing, pilfering, disposition of captured property and equipment, countersigns, daily maintenance and care of equipment, and priority on roads were included. One of the most useful pieces of

orientation material was a transcription of a talk by Lt. General Buckner, commanding general of the Tenth Army, placed on each ship and broadcast over the ships public address system prior to the first briefing and orientation period.

Briefing must be thorough. It must start at the highest level and proceed down to every individual private in each unit involved. The tank company commander must be cognizant of this fact and keep it uppermost in his mind at all times. A recommended method for briefing is for the company commander to brief his officers before briefing the entire unit in order that they may assist him. The entire unit should be briefed as a body by the company commander or the senior officer aboard. After a general briefing by the company commander, platoon leaders, maintenance officers and section leaders within the company headquarters should brief the men under their control as thoroughly as possible. It has been found that men are particularly anxious to gain all information possible from these briefings. Competitive test on plans and orders will provide lively interest for all hands.

Briefing should be continued throughout the entire voyage and should be coordinated with daily periods of maintenance, shipboard drills, weapons inspection, classes in first aid and field sanitation, identification of enemy armors and aircraft, and items of intelligence information which may be received from time to time.

Enroute to the target area the tank company commander will have questions arise in his mind, and quite a few questions will be brought forth from the briefing of troops. While radio silence is observed, he is not out of communication with his battalion commander of the infantry regiment. Naval communication channels are always available and should be utilized to the fullest. A word of caution. Only short important messages should be sent.

Routine administrative matters should be left until after landing.

Naval intelligence will furnish much information to the troops during the voyage. Radio interception, captured enemy personnel and documents having bearing on the forthcoming landing and operations ashore will be sent through naval intelligence channels to command ships and passed to all vessels within each transportation division. Destroyers frequently will pass from ship to ship carrying changes and annexes to existing plans. Late aerial photographs taken by long range land-based aircraft or by carrier aircraft operating in the target area are frequently dropped to command ships where they are reproduced and distributed to all interested units.

Post exchange supplies should always be loaded with each unit. Most ships do not carry sufficient quantities of the necessary items in stock in their ships service stores to sell to troops. These post exchange supplies should be placed aboard each ship by the division quartermaster prior to sailing. The troop commander is responsible for timely and adequate distribution throughout the voyage with sufficient reserve to be issued just prior to landing.

One of the busiest platoons or sections aboard any ship will be maintenance. When embarked on LSM's and LSD's, maintenance is increased because of the exposed position of the tanks and their susceptibility to salt air and spray. Maintenance personnel must daily supervise the warming up and checking of all tanks to include auxiliary generators, power traverse and gyro-stabilizers. If possible, heavy dunnage should be placed in front and rear of tanks and the tanks shifted slightly to compress volute springs and move all parts of the suspension system. The day or two just prior to landing will see the completion of all waterproofing and a personal check of each tank by platoon leaders, the maintenance officer and the company commander.

It is not the intention here to go into the details of waterproofing.

Various action reports have emphasized the necessity of waterproofing tanks in an amphibious operation. It cannot be emphasized too strongly that despite excellent hydrographic information that tanks seldom are landed without fording through varying depths of water for distances which in some instance have exceeded one thousand yards. There is no assurance that a tank unit will not have to ford to get ashore. The electrical system of a tank must be thoroughly and completely waterproofed. Of the fourteen medium tanks which attempted to land on Betio Island, Tarawa Atoll, all tanks were either lost in holes in the reef, or salt water rendered inoperative the communication systems, gyro-stabilizers, and power traverses. In the landings in the Marshall Islands, forty per cet of the tank casualties were due to improper waterproofing. At Saipan, of two Marine tank battalions landing simultaneously under similar hydrographic conditions, one battalion lost no tanks due to poor waterproofing and was able to salvage two-thirds of its tanks lost in holes in the reef, because of proper waterproofing. The other battalion landing over the same and adjacent reef areas and beaches lost five tanks initially as a result of poor waterproofing, and nine tanks of this battalion later became casualties because of wet electrical systems.

While waterproofing must be thorough, it must not be permitted to impair the fighting efficiency of any tank. Gun shields must be waterproofed by means of a bellows made from heavy cloth and pitch compounds. Periscopes must be covered with suitable material to keep them dry without obstructing the vision of the crew. Gun muzzles should be taped with a light tape in order that water will not enter.

Arrival of the landing force at the target area is preceded by the arrival of naval gunfire support ships, and underwater demolition teams. Naval gunfire support ships usually consist of old battleships and cruisers, escorted by sufficient destroyers, destroyer escorts, mine sweepers and control vessels to

screen the larger ships and to sweep the transport area, and all approaches thereto for floating mines and other obstacles hazardous to navigation. Either simultaneously with the arrival of this force or shortly thereafter, fast destroyers converted to auxiliary transports will arrive and launch underwater demolition teams with explosives and other special equipment to remove obstacles close off shore of the landing beaches and the approaches thereto, and to gain such items of hydrographic information that may be necessary for a successful landing. Normally, under-water demolition personnel are divided into teams composed of various services, especially trained for this work.

A combat example of a successful underwater demolition mission which was of value to a tank company was that carried out on green beaches one and two, on D minus one and D minus two for the landings on Saipan in June 1944. The underwater demolition teams were directed, in addition to their normal mission of underwater reconnaissance and destruction of obstacles, to determine the advisability of using a channel which extended through a hole in the reef approximately six hundred yards to a Japanese pier jutting out 150 yards from shore. This pier was located near a large sugar mill and was complete with narrow-guage railway tracks and small booms for handling cargo. The channel was used by shallow-draft boats, usually twenty feet long and six to eight feet wide to transport sacks of raw sugar from the pier through the reef to ships lying off shore. It was contemplated utilizing this channel to land tanks loaded in LCM 5's in order to avoid deep water fording. Underwater demolition personnel were to reconnoiter this channel from the edge of the reef to as close inshore as enemy fire would permit, to determine its width, depth, and presence or absence of mines or other obstacles. UDT's were requested to mark the channel with red and yellow buoys with small red and

yellow flags on top. A simultaneous mission was to check the distance and depth of water at various tide stages, to chart the reef and the lagoon showing unloading spots for LCM's, coral heads, pot holes, mines, obstacles, and anything they might observe which would aid or hinder landing of tanks. This information was to be delivered to both tank battalion commanders, whose battalions were to make the assault, not later than H minus 3 hours on D-day with sketches. This was done, and based on this information, and information that the heaviest enemy fire drawn by the underwater demolition teams was concentrated on the channel, the decision was reached by the battalion commander having priority for use of the channel, to relinquish that priority and to attempt a landing onto the reef and through the lagoon by means of deep water fording. It was further decided by this commander, in conference with his company commanders, that the beach of the right flank battalion in the division zone would be utilized for landing of the entire tank battalion. The distance was greater than at other points and the water deeper but the lack of pot holes and coral heads and a firm bottom influenced this decision. A request was immediately made to the naval forces involved that underwater demolition lay, following the landing of the first wave of infantry, a lane of floats.

It was decided that considerable difficulty might be encountered by the tanks in moving inland after landing. It was realized that this could be rapidly overcome by the attachment to each tank company an engineer bulldozer, as the tankdozers were loaded in shipping not readily available for unloading. It was determined that the beach selected for the attempted landing of tanks was one of the heaviest defended in the area, being full of fire trenches, communication trenches, and beach emplacements dug into deep, loose sand. Naval gunfire was requested to concentrate on this area prior to the landing of assault

infantry. This is merely one of many aids and influences which underwater demolition teams may have on the landing of tanks.

The landing force will normally arrive in its transport areas two or three hours prior to sunrise of the day of landing. With the approach into the transport area, enemy activity and the activities of our own surface forces will become increasingly obvious. This may well be a critical point in the operation. During this arrival the assault troops may expect concentrated aerial, underwater, and even surface attacks, as well as fire from enemy coastal guns.

The tank company may be in any one of several positions in the transport area. If loaded in LSM's or LST's they will usually be in the LST area inboard of the main transport area, and at least one thousand yards outside the line of departure. However, this is not a hard and fast rule of landing force doctrine. In order to reduce the possibility of damage or personnel casualties from enemy gunfire they may be outboard or in the rear of the main transport area, on call to pass through the transport area and to the line of departure for a final run to the beach or beaching site when the decision is made to land the tanks and other equipment aboard. If tanks are loaded in LSD's they may be within or outside the transport area, depending upon ground swells, surf, and other conditions of the sea which will affect the stability of the ship while ballasting down and unloading the LCM's or LCT's carrying tanks. The plan for landing of tanks from an LSD in the Saipan operation called for the LSD to go through the fringing reef into the lagoon if the sea was high and rough. Fortunately the sea was quite calm and due to fire from naval shore batteries the LSD was placed outboard of the transport area. Several vessels entering the lagoon to sweep for mines in the event the LSD was ordered in, were damaged by enemy shore batteries.

As has been pointed out consistently the landing of tanks will be dependent to a great extent upon the type of shipping or craft available for transportation and for the landing. It seems advisable to point out at this time that despite theplanning by the division and by the tank battalion on the landing of tanks, that it is the responsibility of the commander of the ships transporting the tanks to, where possible, land tanks on the beach itself. Where it is impossible he must put the tanks at the most advantageous point for a successful fording. This should not be construed as meaning that the company or battalion commander has no voice in the matter whatsoever. In planning for the actual landing the tank commander will point out to the naval commander the desired point of landing, and will state their reasons for this or these particular locations. It is often possible that certain craft cannot be beached at the points desired by the tank commanders and a compromise must be made. It is the mission of the naval commander to land tanks, equipment, or whatever he may be carrying wherever the plan decided on calls for, but he is not permitted to overlook the security of his vessel. As frequently happens, inexperienced naval officers commanding small vessels with tanks embarked will be reluctant to beach their vessels or send their LCM's carrying tanks into a certain position desired by the tank commander. The tank commanders are responsible that their equipment is not debarked in a hazardous location. An example of this took place at Okinawa when an LST carrying M4A3 medium tanks equipped with T-6 floatation devices (13 floats fastened to the tank) with orders to unload these tanks two thousand yards offshore, unloaded them over ten thousand yards from shore, thereby causing the loss of over half. The naval officer was at fault for not locating his vessel at the prescribed distance from shore and the tank commander was at fault for permitting his tanks to debark at an excessive distance in a running sea.

Irregardless of the type of vessel carrying tanks or the hydrographic conditions encountered, tanks should never be landed without prior reconnaissance as has been mentioned heretofore and must not be landed on an unsecured beach. In the initial landing there is great need for heavy direct-fire weapon to take the place of the close-in artillery support which is not available. Tanks are the ideal weapon for this role due to their mobility, accuracy of fire, and their heavy armored protection. At Tarawa, leading tanks were ordered to land in the fifth wave. The four leading waves being amphibian tractors or small boats carrying infantry. When the enemy resistance proved to be so stubborn and some infantry troops were forced to wade ashore with casualties becoming great, tanks were ordered to land as the 4th wave. In two of the three areas in which tanks were landed, they landed on unsecured beaches. A high percentage of tanks became casualities of enemy anti-tank measures which would have not been present if these areas had been secured by assault infantry.

In the later phases of the Pacific war, it became standard operating procedure for the tank reconnaissance and liaison teams with the infantry regiments, to make continuous reports of the situation ashore. They reported the enemy opposition, rapidity of advance inland, and their reconnaissance to determine egresses from possible landing beaches and the feasibility of using proposed assembly areas for the removal of waterproofing or such changes as became necessary. The time of landing tanks will depend upon orders from the division commander. However, an experienced division commander will land his tanks only upon recommendations from the tank battalion commander and on advice of the regimental commanders involved ashore. The tank battalion commander gets his information from his reconnaissance and liaison teams ashore. They also are the vital link between the company commander and the infantry regiments with which he must operate.

It is not to be construed that tanks are not readily available for landing at any time. Tanks should be at the line of departure ready to land at H-hour, and must be landed as quickly as possible after the landing of the assault infantry. This should not be too soon for initial enemy anti-tank obstacles and weapons to be removed and proper reconnaissance made. Tanks will constitute an on-call wave or group rather than a numbered wave. When the tanks are ordered to land the craft carrying them must proceed as rapidly as possible to the point of debarkation being prepared to immediately debark tanks upon arrival. However, the craft must be properly grounded and must be able to see that there is nothing immediately in front of it which will disable or obstruct the passage of the tank or tanks being debarked. If tanks must ford through water of varying depths and distances, the lane heretofore discussed as possibly being marked by underwater demolition personnel should be utilized, Or tank preceeded by an amphibian tractor or guides from the reconnaissance parties or infantry elements.

Tanks landing on beaches without wetting a track or tanks reaching beaches after fording should avoid sharp turns as tracks are frequently thrown in deep sand usually encountered on beaches. Tanks should land with all weapons loaded and prepared to fire, but unless fired upon by a weapon that they can see, and know to be enemy, must not fire without orders from the senior officer present. Tanks have fired into the rear of friendly infantry units ashore. The situation ashore will be confused, units will be isolated, lateral contact will often be nonexistent, and the danger of firing into friendly troops is great. Upon reaching shore tanks should be met by personnel from the reconnaissance and liaison teams and either led or given instructions concerning routes to the assembly area, for the removal of waterproofing and the preparation for employment.

Wherever possible this waterproofing must be removed. A tank should not be waterproofed in such a manner as to hinder its fighting capabilities, but the fighting efficiency of the crew will undoubtedly be handicapped by the sealing of vents and ports. Waterproofing compounds are placed over cloth or tape to form seals, and constitute fire hazards. Tank crews must not be instilled with the idea that they cannot fight until this waterproofing is removed. Actual combat on the beaches by tanks is often a necessity and while it is to be avoided where possible, it may readily happen in any operation.

A good reconnaissance and liaison officer with the regimental combat team will have missions for his company as soon as they land. He should meet the company commander and guide him to the regimental command post while the company commander's tank goes to the assembly area for the removal of the waterproofing materials. The company commander must report to the regimental commander if available, or to the S-3. It is an absolute necessity that he know the number of tanks which have successfully reached shore, not only in his own company but in the remainder of the tank battalion. The initial missions which he will receive in all probability will be neutralization of enemy automatic weapons and possibly anti-tank positions firing from the front, to attach a platoon to each infantry battalion for the consolidation of positions, the security of flanks or neutralization or removal of enemy strong points.

Using a personal experience, I would like to give the initial mission of Company A, Second Tank Battalion, Second Marine Division, the Eighth Combat Team. After fording almost one thousand yards of water varying from one to over five feet, we landed on green beach one and found that what we thought was the left battalion was actually the right battalion of the regiment. The entire division had been landed nine hundred yards further north than planned. It was

also learned from the liaison officer ashore that the assemble area proposed was not secure and was unsatisfactory. It was exposed to enemy observation and would have subjected the tank crews to heavy mortar and artillery fire while removing the waterproofing materials. As a result, tanks were halted on the sandy beach and waterproofing was removed while I reported to the regimental commander. Upon landing two tanks of one platoon threw their tracks, rendering them inoperative for initial missions. I was ordered to attach one platoon to the left flank battalion to be used in contacting the regiment on the left flank and to close a gap of approximately one thousand yards which existed. With the remainder of the company, I was to assist the right flank battalion in securing the beach over which they should have been landed, and assist this battalion in contacting the division on the regiments right 2500 yards south.

These missions were attempted but enemy opposition, poor stand for tanks and isolation of companies and platoons prevented the accomplishment of either mission that day. Just prior to darkness I received an attachment of one platoon of tanks from the battalion reserve.

Just prior/To darkness I was ordered to defend both flanks of the regiment, the right being the division flank, from attack by enemy armor, to be prepared to defend the beach against enemy counter landing, and to protect the regimental command post.

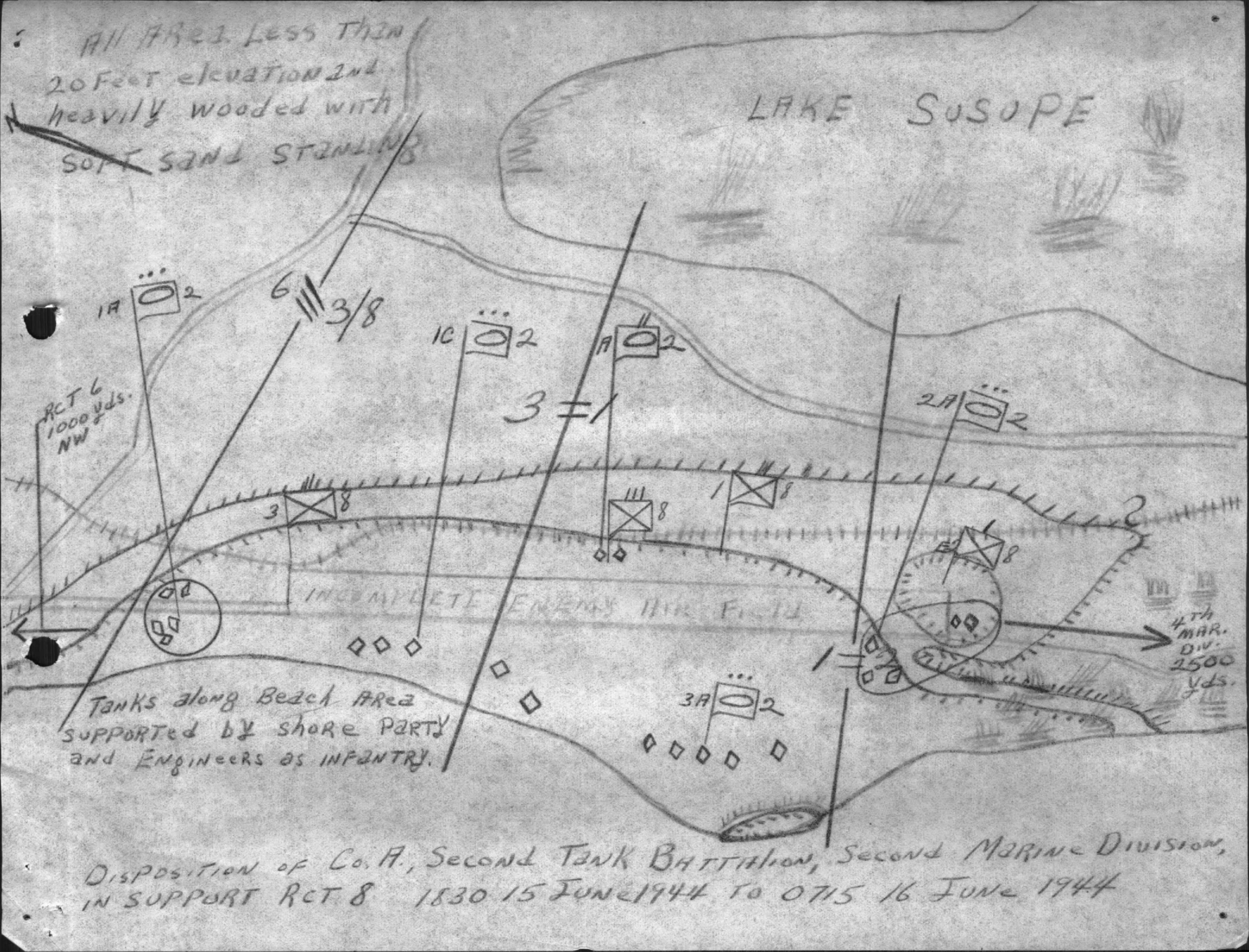
By this time the regimental reserve was in the line. The combat team was holding a front 2700 yards long and varying from fifty to 800 yards in depth.

The disposition for the night was as shown on the attached sketch.

On the morning of D/1 the companies mission was the same as the preceeding days. Platoons were attached to infantry battalions and I went with the third and the attached platoon to the right flank to tie in with the other division.

The situation became/~~non~~ more stabilised by placing tank sections with infantry companies to take successive objectives and the contacts on both flanks were made.

This example may be considered typical where enemy opposition is fierce. After the fighting becomes more stabilised and under b~~i~~e/tter/gained control missions become the same as in any other operation.



Disposition of Co. A, Second Tank Battalion, Second Marine Division,
in support RCT 8 1830 15 June 1944 to 0715 16 June 1944

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