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TITLE: AMPHIBIAN TANK BATTALION ON SAIPAN

SCOPE: An historical example of the first amphibian tank battalion in its first operation as a unit, and in which it operated in its primary role, this treatise strives to show the principles of employment of amtanks as illustrated in the landings on Saipan, and some of the problems in bringing an amtank battalion from complete ignorance of its primary weapon to an effective fighting unit.

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AMPHIBIAN TANK BATTALION ON SAIPAN

The first Army amphibian tank battalion was employed as a unit in its primary mission first in Operation Forager, the seizure of the Mariannas Islands. It is true that amphibian tanks and tractors were used prior to the invasion of Saipan, in fact, this same battalion was attached to the 7th Infantry Division and elements of the 27th Infantry Division in the seizure of the Marshall Islands. In the assault of Makin in the Gilberts, personnel of the headquarters company of a tank battalion had been pressed into service as operators of fifty (50) amphibian tractors in support of an infantry unit. In addition, Marine units, who pioneered in the development and employment of these vehicles, had made use of both amtanks and amtracs in their landings in the Middle Pacific. Since this concerns the technique of employment of an amtank battalion, and since the first use of the first Army amtank battalion was in the Marshall Islands, where about two-thirds of its strength operated amtracs, operations prior to June 15, 1944, will be considered only in the light of their effect on Operation Forager.

The 708th Amphibian Tank Battalion was designated as such while at Fort Ord, California, in October, 1943. Movement to this station had just been completed, the battalion having been a separate tank battalion created out of the reorganization of the 6th Armored Division. There had been no intimation of such a change in basic mission, and the type of vehicle with which the organization would

now operate was an unknown quantity to its prospective users. There was an additional bit of interesting information, received at this time, that the unit must be prepared to move to a port for overseas shipment on or about 1 December 1943, approximately seven weeks later.

The problems which were immediately apparent were well-defined, but not simple of solution in every case. All personnel on hand were ex-tankers; however, the new table of organization authorized an increase in strength and the fillers must be trained to use full-track vehicles. Offering the greatest difficulty was the matter of training all the men in the operation of a vehicle on water and in moving from water to land, especially since none of the officers were qualified by previous experience or training. Problems of tactics, control, communications and maintenance were complicated by a lack of basic equipment.

Naturally, all were deeply curious concerning this new and different vehicle. The amphibian tank, or as it will be referred to herein, the LVT (A) 1 or LVT (A)4 and 'amtank', is officially designated as the Landing Vehicle, Tracked, Armored. It is a vehicle possessing, to a limited extent, all the characteristics of a standard tank, and, in addition, will operate on both land and water, and move from one to the other with no change in operational procedures. In order to get the proper displacement factor to make it float, a compromise in the matter of armor protection had to be made. As a

consequence, the hull of the LVT (A)1 was constructed of armorplate of one-quarter inch thickness, except that the front slope plate and the bow have one-half inch armor; also, the turret is made of one-half inch armor. Of course, this offers little protection to the crew except from small arms and shrapnel; however, it may be noted that while in water, most of the hull is below the waterline and could not be hit. On land, there is no such protection, and the vehicle is extremely vulnerable to all large caliber projectiles.

The power train of the LVT is similar to that found in earlier models of light tanks, and the turret of the LVT (A)1 is the same as that on the Light Tank, M5. The tracks, although based on the same principles as other full-tracked vehicles, differ in that they are equipped with spade-like grousers which propel the vehicle while in water. Steering in water is accomplished in the conventional manner common to most full-track equipment by the application of a brake to one track and power to the other track through a control differential. For firepower, there are three cal. .30 machine guns and a 37mm gun on the LVT (A)1.

As suggested above, the outstanding characteristic of the LVT is its ability to move on land or water, and from one to the other, without change in operational characteristics and procedures. Its weapons may be fired accurately while afloat, inasmuch as the 37mm gun is gyro-stabilized. Its limitations and weaknesses are many, some being low speed and limited maneuverability, particularly while

afloat, a huge silhouette when on land, lack of armor protection, a high rate of fuel consumption, and unusually high incidence of mechanical failure.

The situation of the battalion in the fulfillment of its mission was not so hopeless as it might seem. Fortunately, all key personnel were experienced in handling tanks, and, basically, operation on land was mastered quickly; but mastery of the vehicle while waterborne presented a real problem, especially since there were four battalions (one amtank and three amtrac) attempting to train by using the same vehicles. Of those which were present, most were of the tractor type, and it was necessary to shift the amtanks available between companies on a day to day basis. Such a vehicle situation was not healthy, and one of its more serious results was not apparent until some time later when it became obvious that crew members were not imbued with an understanding of the need to care for their fighting equipment.

At the end of about six weeks of training, alert orders were received and overseas movement preparation began in earnest. Movement to a staging area and embarkation followed soon thereafter. Even at this time, the commander was confident that additional time for training with organic equipment would be scheduled at the overseas destination, in Hawaii. Contrary to this idea, however, an officer met the ship upon arrival in Honolulu with the news that the unit was alerted and attached to an infantry unit for employment almost

immediately. Later information revealed that proposed commitment would be one month later and about two thousand miles west.

Since there was only one amphibian battalion (Army) in the Middle Pacific, and since there were not enough amtanks available to equip the entire battalion, an organization was improvised in which one company was equipped with amtanks to function in its basic role, and the rest of the unit would form provisional companies to furnish amphibian tractor support. It is obvious that the basic mission was being compromised here due to the situation, therefore the entire action will be passed over with only brief comment concerning matters which affected the battalion in the Saipan landing. The operation was successful despite the handicap of insufficient time to conduct extensive joint training with the infantry, and of inadequate equipment. Casualties from enemy action, both in personnel and vehicles were light; however, it was learned soon that vehicle losses from lack of proper preventive maintenance would be of considerable proportions. This latter factor may be attributed directly to the equipment situation discussed previously in which crews felt that the vehicles they were using did not belong to them, but represented a temporary expediency.

Other lessons learned were the need for a better system of control, closer liaison with supported units, better communications including a means of sending messages at sea when radios fail, extensive and detailed joint training with infantry units, greater armor

protection for the vehicle, some kind of protection from small arms and shrapnel for the scarf-gunners, and a heavier gun to replace the 37mm cannon.

Upon return to Hawaii, the battalion commander decided to initiate plans immediately to insure complete preparation for the next operation. A training period to include all phases of individual and small unit training was scheduled, the objective being maximum combat efficiency at all levels. An intensive program of vehicle rehabilitation together with the importance of the crew member in preventive maintenance to insure continuous use of the vehicle received a large share of attention. Proper action was taken to procure and install armor plate to protect pontons from small arms fire, since puncture of these compartments would cause the vehicle to sink upon reentrance into the water. Additional armor for the bow and shields for the scarf-gunners had been found desirable, and necessary authority and materials were requested to make these modifications.

It was mid-April, 1944, when the CO received information regarding the next anticipated employment of his unit. Orders were published attaching the battalion to the Fifth Amphibious Corps, and further, within the Corps, to the 4th Marine Division, for Operation Forager, the plan to assault and seize the strategic Mariannas Islands. With definite news of commitment, plans and activities to prepare were intensified. Liaison was established with the 4th

Division, located on the Island of Maui, about 100 miles from Oahu, where we were stationed. Although it was highly desirable that joint training be conducted, the distance separating the units made such impracticable, and consequently, it was limited to a command post exercise and a rehearsal of the actual landing plans. Meanwhile, it was the responsibility of the unit to be ready in all respects by time of the rehearsal.

After receipt of attachment orders, word was received of the possibility of replacing some of the LVT (A)1 models with a new model LVT (A)4, the advantage of this new model being that it carried a 75mm howitzer as its primary weapon. The turret is identical to that mounted on the M8 Assault Gun Carriage. In the absence of any of these vehicles, but in anticipation of at least a few, instruction was initiated to train key personnel in indirect fire procedure for possible employment to supplement artillery. To effect this basic training, some men who had formerly been a part of the assault gun section of a medium tank battalion were used as instructors. It may be well to point out here that sixteen LVT (A)4s were received about five days prior to loading aboard ship to participate in a rehearsal of the operation.

Rehearsal was carried out according to plan and the entire task force was loaded aboard ship to await sailing time. All LVT units were returned to Pearl Harbor where last minute rehabilitation of vehicles and maintenance procedures were performed. Tactical

loading of the battalion was spread out over sixteen LSTs to conform to the landing plan to be discussed below. Since the unit was expected to return to Hawaii after completion of the assault phase, administrative equipment was limited to four LVTs (two for maintenance and two for medical evacuation), five trucks, 2½ ton, with trailers (for supply) and four trucks, ¼ ton (for administration and liaison). One maintenance LVT and one medical LVT were placed in support of each regiment being supported by the battalion. The wheeled vehicles were loaded aboard the top deck of an LST assigned for that purpose, which assignment was secured only after much difficulty.

While the LSTs which were designated to transport the amphibian units and the battalion landing teams to which they were attached were tied up at anchorages in Pearl Harbor, an accident happened aboard one of these ships, and an explosion and fire of major proportions ensued. All of the ships had been loaded with emergency supplies of gasoline and ammunition, and before the fire was brought under control, a great deal of the supplies and equipment intended for use in the coming operation was rendered useless or non-existent. Fortunately, all of the combat vehicles of the battalion were on shore for final maintenance check at the time of the first explosion, and no losses were experienced in that respect; however, the ship on which the administrative equipment was loaded was one of the first to be destroyed. Although some men were still aboard ship at the

time of the accident, there was only one fatality. Other units were much less fortunate.

Obviously, sailing time, which had been scheduled for the following day, had to be postponed. Personnel replacements, vehicle replacements and resupply of basic loads had to be accomplished, not just for one unit, but for several. Only by literally working around the clock, and through the whole-hearted and complete cooperation of all service elements concerned was it possible to get the job done in time to sail after a delay of less than forty-eight hours.

The overall plan for the seizure of the Mariannas Islands, which consisted primarily of Saipan, Tinian, Guam and Rota, contemplated the seizure of Saipan at all costs, even at the expense or delay of the rest of the plan.[1] This was necessary to secure a base for bomber operations against the Japanese homeland. The plan, therefore, was to make a landing on Saipan on D-Day, to be followed three days later with a landing on Guam, providing the Saipan fighting was proceeding according to plan. After Saipan had been secured, Tinian was to be seized.

Major elements of the joint expedition, in addition to Navy and Air units, included the 2nd, 3rd, and 4th Marine Divisions, the First Provisional Marine Brigade, the 27th and 77th Infantry divisions,

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1. Lt. Col. John Iemp (Special War Department Observer), "Observer Report on the Mariannas Operation (Forager) (11 July 1944) to Commanding General, Army Ground Forces, Army War College, Washington, D. C., p. 2.

and attached troops of Army and Marine (including four Army amphibian battalions). Assault troops were organized as follows: Northern Landing Force, consisting of the 2nd and 4th Marine Divisions; Southern Landing Force, with the 3rd Marine Division and the First Provisional Marine Brigade; and Corps reserve, furnished by the 27th Infantry Division for both phases initially (Note: the 77th Infantry Division was alerted in Hawaii for movement on or after D+20). All major units were reinforced with supporting troops.

Tactical plans of the Northern Landing Force placed two divisions abreast, the 2nd Marine Division on the north, over Beaches Red and Green, and the 4th Marine Division on the south, using Beaches Blue and Yellow (see Annex A, Sketch of Landing Beaches). Following the plan of the higher commander, the 4th Division Commander decided to place two regimental combat teams on line, with one RCT in reserve. The 708th Amphibian Tank Battalion, which was attached to the division, was attached (minus two companies) to the 23rd RCT, with Companies C and D attached to the 25th RCT. Each RCT had organized in the conventional manner of two up and one back, consequently there was an amphibian tank company in support of each battalion landing team, this being the theory of organization of an amtank battalion with four line companies.

In the execution of its mission to assault and seize that portion of the objective of the Landing Force within its zone, and be prepared to continue the attack on order, the Division Commander,

in his order, specified that the first three waves of assaulting troops (one amtank and two amtrac) would hit the beach on schedule (see Annex B, Schematic Landing Diagram) and proceed inland to the high ground approximately 1500-2000 yards from the beach, the initial objective of the Force Commander, and designated as the O-1 line, where Marines were to dismount from the LVTs, and with the amtanks organize a defense to protect subsequent landings and the beach area. In order to reach the initial objective in the shortest possible time and with maximum troops, each of these three waves were instructed to bypass centers of strong resistance. Troops from succeeding waves of LVTs were given the mission of cleaning out any enemy between the beach and the O-1 line. This was a normal mission for amtank units and utilized their capabilities to the greatest advantage.

Plans for the continuation of the attack upon receipt of orders were based on certain assumptions of possible conditions expected to exist at that time. Each of them contemplated the use of the amtanks to support an assault on Aslito Airfield, located on the southeastern part of the island. One plan, based on the assumption of seizure and organization of the O-1 line with a minimum of casualties and loss of time, stipulated that Marines would reload in LVTs and, supported by amtanks and medium tanks if available, would assault the airfield in a mechanized attack. This plan, too, is a valid use of amtanks, provided, of course, that land tanks

are not available in sufficient quantity to execute the mission. Any commander of troops having such an attachment as a self-propelled assault gun will certainly make use of it to help insure the success of his attack.

As stated in a preceding paragraph, the battalion was attached in such a manner that it would form the first wave of the assault in front of each battalion landing team of the division. In such an organization, there was little the battalion commander could do to influence the actions of his unit in the early stages of the assault. As a result, he decided to concentrate on coordination with the supported units. Leaving the Executive Officer in charge of battalion headquarters, the CO and S-3 were attached to Division Headquarters for liaison and special staff functions. To each of the assault RCTs a staff officer was attached for liaison, and each company furnished a liaison officer to the BLT which it was supporting. Each Liaison officer was furnished a radio for communication between the appropriate headquarters and the amtank companies, as well as with battalion headquarters. Although in some cases ranges were too great for the SCR 510s used, this system of control proved satisfactory.

Naval units carrying assault troops arrived off Saipan early on 15 June 1944, D-Day, to find that a large task force of warships of all sizes was already there softening up enemy emplacements. This force, as well as air units, had been engaged in such activity for several days prior to this one. Well in advance of H-hour, origin-

ally set at 0830, later postponed ten minutes, troops loaded in amtracs and naval small boats for execution of the plans which had been rehearsed in detail about a month before. At the proper time, the amtanks, guided to the Line of Departure by control boats headed for the beach, followed by amtracs loaded with troops of the assaulting battalions. In order to reach the beach, it was necessary to cross a coral reef varying in width from about 500 to 700 yards and covered with enemy fire from mortars and artillery.

To cover the activities of D-Day properly, events affecting each company should be treated separately. Company B, landing on Beach Blue 1, was required to pass through the town of Charon-Kanoa, largely destroyed by naval fire and bombing, and cross what had appeared to be a small lake or swamp in order to reach the O-1 line. Passage through the town was no obstacle, but the 'lake' was, in fact, a rice paddy which was impassable to amtanks. As a result, the company commander was forced to send his company in a column down a one-way road which could have been dominated by one antitank gun emplaced properly. Obviously, the Japs had been surprised in the direction of the attack, for during the day there were no losses due to enemy action. Most of the unit reached the O-1 line and remained there until relieved to resupply.

Company A, landing on the right of the 23rd RCT, across Beach Blue 2, experienced considerable difficulty in crossing the reef and the rice paddy behind the beach. The mission was accomplished, how-

ever, when about half the vehicles of the company reached the objective and remained there until ordered to the rear to reload with ammunition and fuel.

Companies C and D, landing in front of the 25th RCT, across Beaches Yellow 2 and 1, respectively, encountered relatively heavy fire while crossing the reef, the opposition increasing as the vehicles moved inland. At least two antitank guns were destroyed near the beach and three more in the vicinity of the O-1 line. These enemy guns had produced casualties, however, in the approaching troops. At least three amtanks were destroyed, including that of one platoon leader who was fatally wounded, and of another platoon leader who had to be evacuated. The units pushed through to the objective, except for one platoon which was diverted to another mission that was cancelled in favor of an air strike and naval fire to destroy enemy gun emplacements. At this part of the island, as well as at some others, there was evidence of feverish activity of the Japs to reinforce their defenses.

To summarize the actions of the amtanks in the initial phase of Operation Forager, the assigned mission of reaching the O-1 line and of assisting in setting up a defense in that area was accomplished; at about 1000, at least forty (40) amtanks were in defilade positions on the high ground dominating the beaches in the zone of the 4th Division. Unfortunately, not all of the troops which were assigned the same mission were able to reach the objective, and more

important, those elements which were engaged in cleaning up behind the first three waves found themselves pinned down by heavy mortar and artillery fire. This situation continued during most of the day, making an adjustment of plans for continuation of the attack necessary.

Near the close of day, when most of the battalion was authorized to withdraw to the rear for resupply of fuel and ammunition (it was necessary to return to the LSTs), casualties in personnel had reached about 100, and in vehicles, about 40. Most of the vehicular losses were returned to action later with minor repairs. Here it may be pointed out that a large percentage of vehicle failure in LVTs is due to broken grousers from travel over rocks or other similar substances, and to malfunction of the steering bands which receive/wear considerable/wear while the vehicle is waterborne. Most of the personnel casualties on this first day were of a minor nature, and the men were returned to duty in a few days; some, however, were serious, of which at least three were company officers. Since there was no replacement plan for personnel or vehicles, a loss meant a corresponding reduction in effective strength for the duration of the operation; redoubled effort, therefore, was made to insure that casualties in vehicles, at least, were returned to the line with/out delay. Of course, maintenance action was impossible until the situation was stabilized, and an organization set up.

After nightfall of the first day, the Japs launched a counter-

attack which succeeded in reaching the beach in one point near the north boundary of the division. These were driven back later, except for a few snipers left in the vicinity of a ruined sugar mill, who were eliminated but not before they caused some embarrassment to members of the headquarters set up near by.

Action by the battalion on D+1 and D+2 followed the same pattern as that of the first day insofar as attachment was concerned, the battalion commander still not in control of the elements of his unit. Tactical use of the amtank companies was to supply close support of attacking infantry in infantry-tank teams such as land tanks would have been used. Since the armor plate of the amtanks offer little protection, even from small arms with armor-piercing ammunition, casualties from enemy action were heavier than on the first day. Company A, at the close of D+2, had lost all of its company officers, the company commander fatally, and all but five of its vehicles. As mentioned previously, this type of use must be anticipated as normal until medium tanks are available, and no criticism of employment is intended. Amtanks should not be used, however, in the manner implied in the fragmentary order of one battalion commander when it was stated that the attack would jump off with the amtanks leading, supported by medium tanks.

Near the close of the third day, 18 June, it was possible to bring ashore the administrative and maintenance echelon of the battalion, and all elements were returned to the control of the

parent organization. An assembly area was set up, and the task of rehabilitating vehicles was begun in earnest. Due to the severe losses sustained, a reorganization was necessary to provide maximum strength for commitment. Each day, until D+11, one or two companies ~~was~~ were dispatched to assist in supporting the attack, sometimes by leading, sometimes by supporting with fire either from the sea or from land. In order to keep the maximum number of vehicles operating from day to day, a tremendous burden of work was imposed on the maintenance section. All vehicles possible to repair were towed to the assembly area; others were cannibalized for such parts as were needed. In many cases, work which would have been the responsibility of Ordnance units was done by this small section. In at least one instance, a modification to the steering mechanism was improvised by a technical sergeant, and by this bit of ingenuity, several vehicles considered non-repairable were returned to the line. Of course, grousers which seem to be always in short supply, were stripped from any vehicle disabled beyond local repair.

On the thirteenth day, 28 June, the battalion was released from further employment and given the mission of reorganization and rehabilitation in preparation for the assault of Tinian. A few days later, however, a company was used on each of several days to assist in cleaning out caves along the coastline. The island was declared secure on 9 July.

Although the battalion was part of the force which assaulted

Tinian on 24 July, it was not used in the landing phase but was brought ashore later to function again as land tanks in support of infantry and medium tanks. After about three days of such use, the battalion was relieved and loaded aboard ship for the return to Oahu.

During the part of the Operation Forager in which the 708th Amphibian Tank Battalion was employed, all or parts of the unit had been used to form the first wave of an assault landing, to continue the attack inland to the nearest high ground, to assist in organization of a defensive line to protect subsequent landings, to lead foot troops as land tanks, to assault caves from the sea by fire, to support medium tanks, and to assist in the capture of an airfield. Although not used as such, the unit was trained to supplement artillery in indirect fire. Weapons were used effectively against tanks, artillery, infantry, and supply dumps. Total casualties in personnel were about 200. Of the 68 LVT (A)s carried along, sixteen were destroyed completely, fourteen partially disabled and returned to Ordnance, while thirty-eight in serviceable condition were brought back to Hawaii with the battalion.

Numerous lessons were learned, many of which have been incorporated in current doctrine and equipment lists. Amtank units must realize that, until land tanks are available, amtanks will be used in any role which will further the mission of the command. The matter of augmenting artillery is an important capability of the

75mm Howitzer and should be exploited, but the same results as obtained from standard artillery cannot be expected. It is imperative that a careful analysis of the terrain be made with a view to determining requirements of spare grousers, and that the supply be ample. Additional maintenance support and equipment should be provided. Each amtank battalion should be allotted sufficient shipping space to carry its administrative equipment. All personnel should be trained in naval flag signals and semaphore. Augmentation of headquarters for liaison with supported units is highly desirable, and would prevent the necessity of using staff members who have other duties. Of course, the need for more armor and armament is always present.

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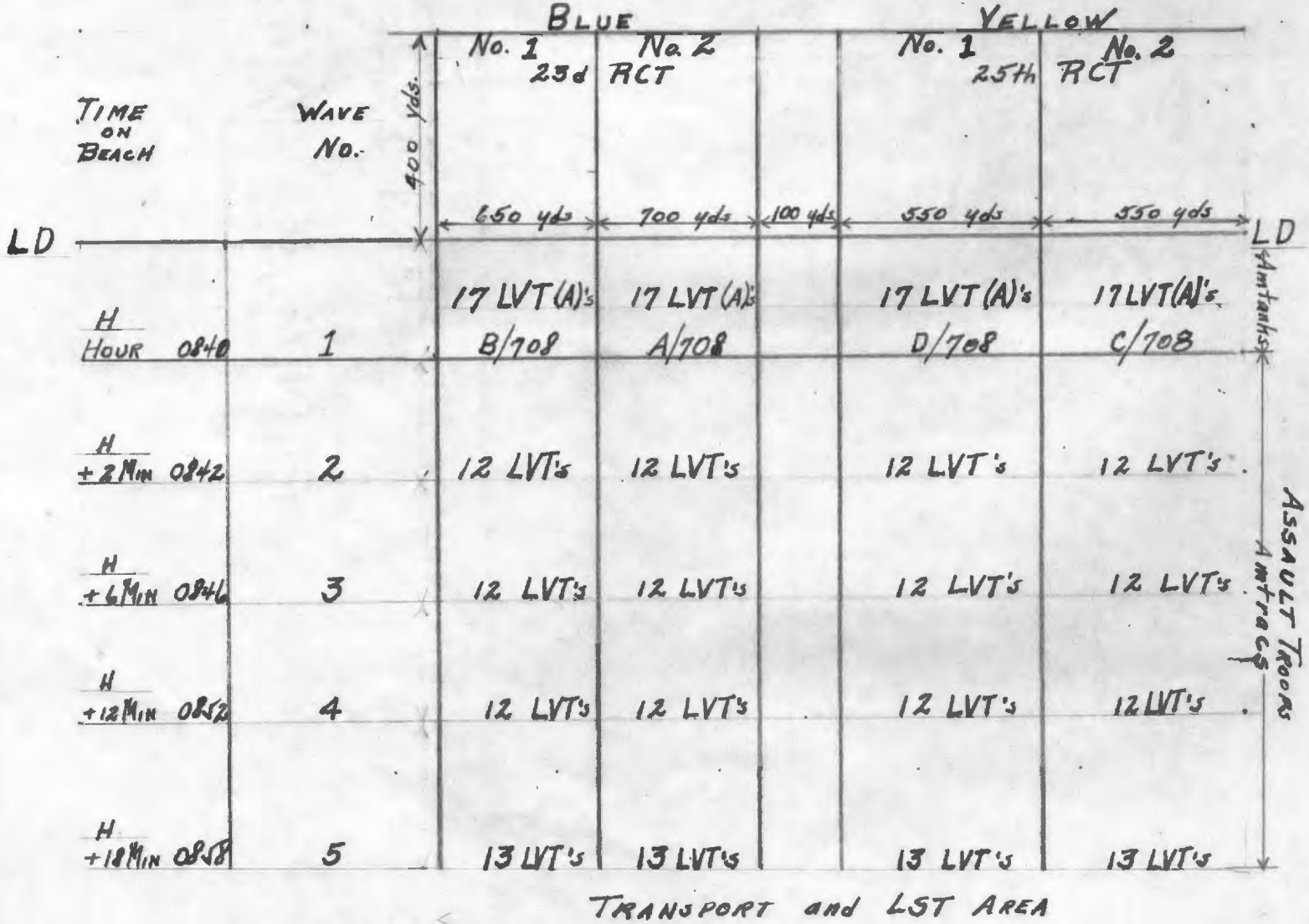
BEACHES



ANNEX B - SAIPAN LANDING DIAGRAM (Schematic)

ANNEX A: SKETCH OF LANDING PLAN - SAIPAN