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TITLE: Armor In Jungle Operations

SCOPE: To show the training and planned use of an armored battalion to operate in New Guinea, and by the description of a small armored-infantry team action to show the actual use and some of the difficulties encountered.

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ARMOR IN JUNGLE OPERATIONS

During the past two years the U. S. Army has been perfecting equipment and techniques for desert and cold weather operations. However, to the best of my knowledge, little has been developed for operations in low, heavily-wooded country--jungle country. Since large areas of South America, Australia, New Guinea, Africa, and Southeast Asia are this type terrain, and since modern weapons tend to make modern warfare global in nature, the possibility of our modern mechanized and armored armies operating on such terrain seems likely.

By the spring of 1943, after the operations of BUNA and GUADACANAL, infantry tactics had been revised to fit jungle operations in the Southwest Pacific area. However, armor had been very little used, and those who did the long range planning had felt that armor had little or no place in such operations due to the close country and the limited ranges of fire normally encountered. At BUNA, the infantry had encountered heavily constructed pill boxes and machine gun emplacements, and in the summer of 1943 two divisional Tank Destroyer Battalions (Light) equipped with towed 37 mm guns were re-equipped with M-10 Tank Destroyers to neutralize such emplacements.

The 632nd Tank Destroyer Battalion arrived in Australia in the early spring of 1942 as a part of the 32nd Infantry Division. By July of the same year they were established in a semi-permanent

camp south of Brisbane, Australia. Six months of training with the towed 37 mm gun followed. They were then equipped with the M-10 Tank Destroyer, and a training cycle began again. As the Battalion's thirty-five officers were either infantry or artillery officers, this for many weeks was an experimental process.

The Division had assigned the Battalion three roles: first, reinforcing the Division's light artillery; second, direct-fire missions against fortifications; third, beach defense, in that priority. It is interesting to note that two of these assigned roles—that of direct-fire missions against fortifications, and the tank as a defensive weapon—are the primary missions of the tank units which are now organic to the new infantry divisions.

Training for the role of reinforcing artillery was supervised by Division Artillery Headquarters. Platoon sergeants were trained in the duties of the battery executive, platoons trained as batteries, company fire direction centers were organized on a limited scale modeled after battalion fire direction centers, and computers were trained in each tank destroyer company, capable of functioning in the operations section of Division Artillery when division control was necessary. Within four weeks' time all gun crews were fairly proficient and by the end of the eight-week training cycle were able to take Corp tests

with division artillery units.

Passing over our second assigned role as direct support of infantry momentarily, our third role was to be beach defense. Training in this role was relatively simple, as this had been a mission assigned the battalion when equipped with 37 mm guns. Additional training, however, was given in position reconnaissance and the placing of vehicles in hull defilade. This phase was completed in a relatively short time.

The assigned role of direct fire in support of infantry against fortifications caused the battalion a great deal of concern. As has been mentioned, all battalion officers were either infantrymen or artillerymen. None had had experience with tanks or tank destroyers. Also, none of the infantry units of the division had ever operated with armored units, nor had their commanders any previous armored experience. It was finally decided after much trial and error that generally the following system would be used: Normally, companies would be assigned to regiments, and platoons to battalions. However, companies would be kept intact as often as the tactical situation permitted. In an attack, tank destroyers would follow 100 to 200 yards behind the leading infantry elements. Company commanders or platoon leaders would be with the supported infantry commander, with communication direct to their executive officer or platoon sergeant, respectively. In the event that a machine gun emplacement

pill box, or bunker was encountered, destroyers could be brought forward immediately and directed in point-blank fire on the emplacement.

Two major faults were found with this system: First, communication with the destroyers; and second, target designation. As the M-10's were equipped with SCR-610 radios, it was extremely awkward for the officer operating on the ground with the infantry to carry this set. This difficulty was overcome by obtaining two SCR-300 radios for each platoon, one to be mounted in the command destroyer of the platoon and the other pack carried. Our second difficulty, that of target designation, was never completely overcome. Because of dense growth, and extreme camouflage measures taken by the Japanese, at times it was impossible to designate targets 50 yards distant by description. To an extent this was controlled by observing tracer fire and by single-round adjustment.

To best illustrate the efficiency of this system of operation, the action of a combat reconnaissance patrol, consisting of an infantry platoon and one section of a tank destroyer platoon, is described.

Prior to this operation, the PERSECUTION TASK FORCE, consisting of the 163d and the 127th Regimental Combat Teams and various service units landed at AITAPE, NEW GUINEA on 22 April 44, with the mission of capturing the TADJI airdromes and such adjacent

areas as necessary to prevent interference by enemy ground forces with construction activities, and to permit uninterrupted operation of aircraft from these airdromes; to prepare the TADJI airdromes quickly to accommodate one fighter group; to consolidate and defend occupied areas. (See Chart No. 1)

The landings at AITAPE and one made simultaneously at HOLLANDIA presented a very difficult situation to the 18th Japanese Army which was moving to the west from the HANSA BAY area. The Japanese force was cut off from any possibility of supply; escape routes were blocked by our forces; air and naval support was nil. Forces available to the Japanese commander were estimated at 46,000, of which 25,000 were combat troops. He had no air force, and naval vessels were limited to a few landing barges. A large amount of supplies were available in the WEWAK area, but these were constantly subject to destruction by our air force, and the possibilities of securing more were non-existent. Three courses of offensive action were open to the Japanese. He could by-pass our forces at AITAPE and HOLLANDIA and join Japanese forces in the western part of NEW GUINEA. He could by-pass AITAPE and stage an all-out attack on HOLLANDIA. He could stage an all-out attack on the AITAPE area. Of these, the AITAPE attack seemed most feasible, considering all elements of movements of troops and supply.

On 27 June 44 Company B of the 632d Tank Destroyer Battalion

closed at AITAPE and was attached to the Eastern Defense Command which held a line generally along the west bank of the DRINIUMOR RIVER (see Chart No. 2). At this time, the Eastern Defense Command consisted of the 32d Infantry Division(-) and the 112th Cavalry Regimental Combat Team. On the DRINIUMOR RIVER line, running from the beach inland, was the First Battalion, 128th Infantry Regiment; Second Battalion, 128th Infantry Regiment; Third Battalion, 127th Infantry Regiment; and the Second Squadron, 112th Cavalry at AFUA. Company B of the 632d Tank Destroyer Battalion was attached to the First Battalion, 128th Infantry, and took position on the beach at the mouth of the DRINIUMOR RIVER. From this time until 20 July 44, the time of the action being reported upon, numerous small scale attacks were made on the positions on the DRINIUMOR RIVER line, mostly by Japanese forces attempting to break out of their entrapment east of the DRINIUMOR. Only one such attack was successful, the night of 10-11 July, when two Japanese regiments hit the line of the Second Battalion, 128th Infantry Regiment, and made a penetration. 1000 Japanese were killed, and 17 prisoners taken, and by 13 July, the DRINIUMOR line had been reestablished.

This was an exceptionally dry season of the year, the average temperature running from 90 degrees to 110 degrees in the shade along the beach area. The beach itself was approximately 200 yards wide, sandy, and gradually sloping. From the

dune line inland, the growth was very heavy, being mostly palm and creeper growth, with occasional mango and nipa swamps. The majority of the rivers that emptied into the ocean were passable at the mouth to track and wheeled vehicles. All rivers from AITAPE southeast to YAKAMUL MISSION were fordable at the mouth by track-laying vehicles. Inland they were impassable to all vehicles.

At 1700 19 July, the First Battalion, 128th Infantry, alerted B Company, 632d Tank Destroyer Battalion, for one platoon to accompany a combat patrol the next morning: platoon leader to report to First Battalion Command Post immediately. The patrol was to consist of an infantry platoon and a tank destroyer platoon (four M-10 destroyers and two half-track command and security vehicles). The mission, in brief, was as follows:

"At 0600 tomorrow you will cross the DRINIUMOR RIVER and proceed along the beach, to the southeast, to the village of YAKAMUL. The patrol is to cover the beach area and 100 yards inland. If contact with a large group of enemy is made, it is to be reported at once by SCR-300 radio, and the patrol is to return. If light resistance is encountered, it is to be destroyed, reported, and the patrol is to continue on its mission. If time permits, you will proceed to YAKAMUL MISSION (approximately two miles farther); however, the patrol will recross

the DRINIUMOR RIVER not later than 1700. The attitude of the enemy is to be determined; prisoners, if possible, are to be taken."

The tank destroyer platoon leader suggested that because the destroyers would be confined to the beach, only a section be taken, two destroyers and the command vehicles to be left behind. This was approved. The two platoon commanders decided that the patrol would operate as follows: The infantry platoon would cover the area from the dune line inland 100 yards. The two destroyers would operate approximately 200 yards behind the infantry and on the beach, under the command of the section sergeant. The tank destroyer platoon leader with three men to carry an SCR-300 radio and act as runners would accompany the infantry platoon leader. A second SCR-300 would be carried in the section sergeant's destroyer. As the infantry platoon was operating from the dune line, visual contact could be kept with the tank destroyer section.

At 0600 the following morning, the patrol jumped off. The patrol proceeded without incident until they reached YAKAMUL at approximately 1000 hours. This was five miles in four hours, as the patrol was proceeding with caution and off the beach the going was very difficult. As the lead scouts entered YAKAMUL, they surprised and killed six Japanese. After a thorough search of the village it was decided that the patrol would move

on to YAKAMUL MISSION, two miles farther, as there was still time. Between YAKAMUL and YAKAMUL MISSION, HARECH CREEK enters the ocean. Although this creek is very shallow at the mouth, it is also quite wide, and the ground is fairly open, with YAKAMUL MISSION about three hundred yards from the southeast bank. From a covered position on the northwest side of HARECH CREEK, the two platoon leaders decided that with four hundred yards of open ground to cross, and since the firing at YAKAMUL could easily have been heard from the MISSION, it would be sound to reconnoiter the village by fire from the tank destroyers before crossing. Also, while crossing to have the tank destroyers cover the patrol from positions on the near bank. This worked quite effectively and the infantry had reached the dunes before any fire was received. In a few minutes, all resistance had been overcome except a light machine gun in an emplacement at the far edge of the village. One M-10 was called forward and by identifying the target with tracer fire destroyed the emplacement in three rounds. As the field of fire of this machine gun was fairly good, it might have been costly to have taken it with infantry alone.

The return of the patrol was uneventful and made by mounting the infantry on the two destroyers.

Although a small action, it clearly demonstrated a definite, though limited, use for armor in jungle operations--one which

later became the primary mission of the battalion. The mission of reinforcing artillery fire was subjugated to secondary importance, although over two hundred missions were fired. The battalion's third assigned mission--that of beach defense--was used only once, during the operation at SAIDOR, NEW GUINEA.

During the operation of the battalion in NEW GUINEA, LEYTE, and LUZON, P.I., many faults were found with our armored equipment. Although many changes were made on the equipment by the battalion and ordnance units, it is obvious that some major changes must be made on armor used in future jungle operations. The three greatest problems were found to be floatation, deterioration, and communication.

The M-10 tank destroyers were equipped with 16 inch tracks, and the old horizontal volute spring "boogie" type suspension. Vines would become so tightly entangled in the boogie wheels that they would lock the wheel and cause it to slide on the track. In deep mud and over uneven terrain, tracks were easily thrown. Also, it is believed that the road wheel type suspension with the center guide track would prove unsatisfactory unless a cutter of some type were employed to keep the road wheels free of creeper-type vines. Ground clearance also should be increased to keep tanks from bellying.

Deterioration was by far the major difficulty encountered. Padding inside the tanks became mildewed, and rotted, and

emitted such an offensive odor that it was necessary to remove it. Electrical cables, radios, voltage control regulators, periscopes, fire control instruments became so filled with fungus as to become unusable. Daily, this equipment was cleaned and dried in the sun; however, fungus still formed and ruined parts that were inaccessible to care. To eliminate some of these difficulties caused by fungus, vehicles were rewired so that one voltage regulator did the work of two. Further, the voltage regulators were moved into the fighting compartment from the engine compartment. Fire control instruments when not in use were left lying continuously in the sun during the daytime, and wrapped heavily in water-proof coverings during the night. Padding inside the tanks and around the driver's and assistant driver's hatches were replaced periodically by home-made padding made from salvage rags. This padding proved extremely unsatisfactory. In future operations all equipment and material affected by water, heat, and fungus should be replaced by new materials.

Communications while in NEW GUINEA were at best extremely poor. In LEYTE and LUZON, P.I., due to the nature of the terrain, they were somewhat improved. The SCR-536 proved useless. It was found that in close country the SCR-536 with new batteries and in proper adjustment, would not communicate at ranges of 25 yards. The SCR-610 and SCR-608, when vehicularly

mounted, operated well over ranges not exceeding five miles; in extremely dense country, palm and nepa growth, this range was sometimes reduced by half. The SCR-245, now obsolete, was the only reliable means of communication, and then only when used on CW. Although thoroughly dried and sealed against moisture, radios became inoperable due to dampness and fungus. Whip-type antennas were constantly subject to damage due to jungle growth. In future operations it is recommended that radios be equipped with a heating element of some type to keep them moisture-free. There is also a need for an antenna that does not extend from the body of the vehicle in such a manner as to become entangled with jungle growth.

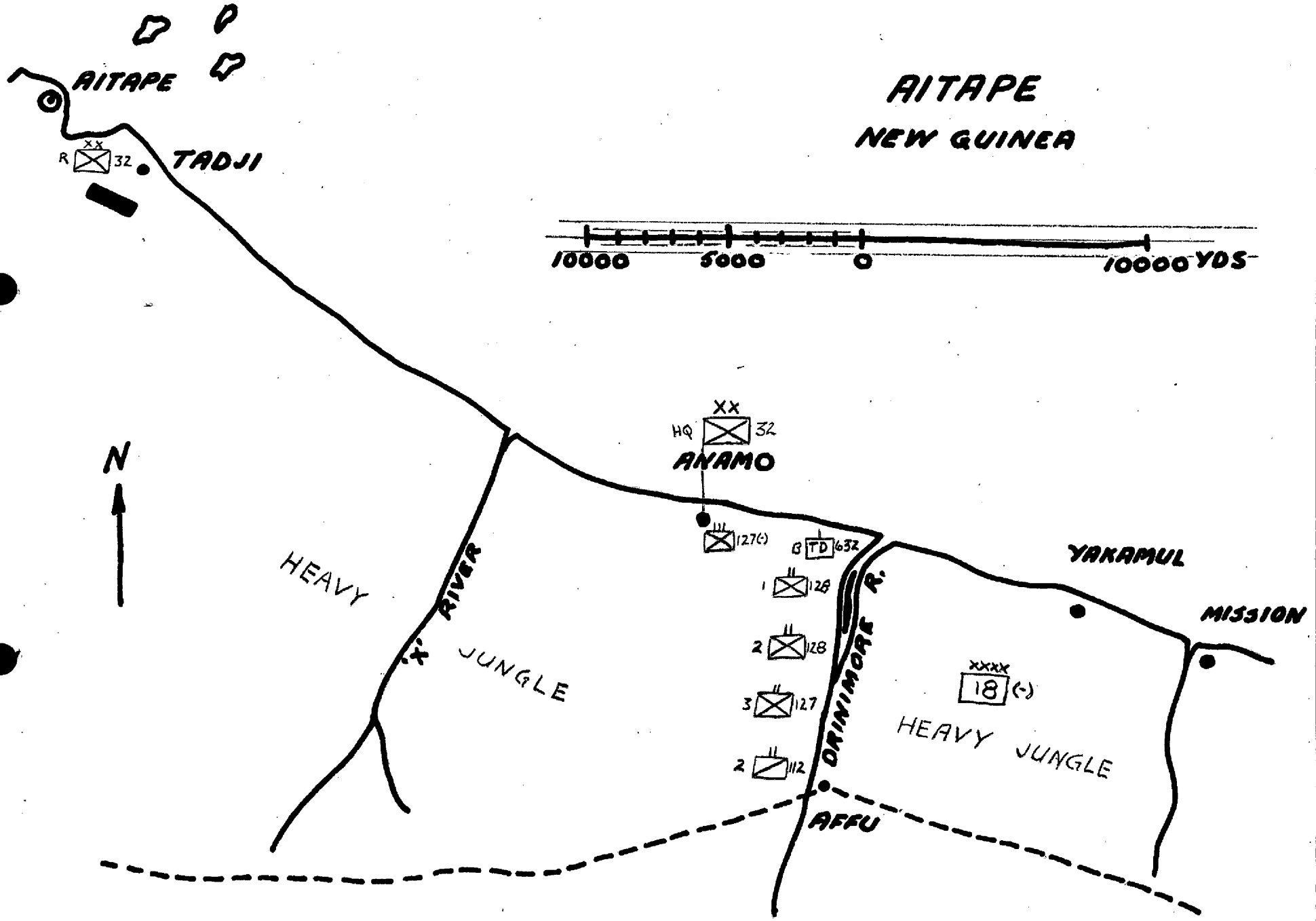
In the new type infantry division, although the contemplated tactical use is thought to be correct, it is felt that some changes should be made for operating in jungle type terrain. As the terrain limits the use of armor in mass, the divisional tank battalion would be unnecessary. Also, it is felt that the infantry tank, the M-26, is too heavily armored for necessity.

It is the writer's opinion that a jungle division, each regiment having a regimental tank company equipped with a tank with great floatation, high ground clearance, light armor, a heavy gun, long-range voice radios, and impervious to water, would be the ideal.

BIBLIOGRAPHY

After Action Report

32nd Infantry Division; Aitape Operation; 4 May 1944 - 25 August 1944


AITAPE
NEW GUINEA
AITAPE
TADJI
XX
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N
HQ XX 32
ANAMO
127(-)
B TD 632
1 128
2 128
3 127
2 112
HEAVY JUNGLE
X RIVER
DRINIMOR R.
AFFU
YAKAMUL
MISSION
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18 (-)
HEAVY JUNGLE

CHART NO. 1