FORAGER OPERATION

27TH DIVISION ARTILLERY

INDEX

ANNEXES

MAP of SAIPAN

SCALE 1:40,000

HEADQUARTERS 27TH DIVISION ARTILLERY

OPERATIONS 17 JUNE TO 9 JULY 1944

INITIAL POSITIONS

1- DIVISION ARTILLERY CP ESTABLISHED IN TA 126 N, 17 JUNE 44.
2- 104 FA BN OCCUPIED POSITIONS IN TA 117 H, 19 JUNE 44.
3- 105 FA BN OCCUPIED POSITIONS IN TA 126 I, 17 JUNE 44.
4- 249 FA BN OCCUPIED POSITIONS IN TA 126 S, 17 JUNE 44.
5- 106 FA BN (LESS BTRY A) OCCUPIED POSITIONS IN TA 126 I, 17 JUNE 44. BTRY A REVERTED TO BN CONTROL 19 JUNE 44 AND OCCUPIED FIRST POSITION, 20 JUNE 44.

RECONNAISSANCE OF TA's 139, 144, 145, 150 & 151 CONDUCTED 22 JUNE 44. BATTALIONS DISPLACED FORWARD IN THE ORDER: 104 & 105 FA BNS ON 23 JUNE 44, 249 & 106 FA BNS 24 JUNE 44, HQ & HQ BTRY DIV ARTY DISPLACED 23 JUNE 44.

SECOND POSITIONS

1- DIVISION ARTILLERY CP ESTABLISHED IN TA 144 X, 23 JUNE 44.
2- 104 FA BN MOVED TO POSITIONS IN TA 145 B AT DAWN 23 JUNE 44 READY TO SUPPORT ATTACK OF 106 INF AT 1100.
3- 105 FA BN DISPLACED TO TA 144 M, R.O. AT DAYBREAK
4- 249 FA BN SUPPORTED 105 INF ON NAFUTAN PT. FROM ITS YELLOW BEACH POSITION, UNTIL 241015 JUNE 44, WHEN IT DISPLACED TO TA 150 Q, COMPLETING MOVE BY 1130.
5- 106 FA BN, IN GENERAL SUPPORT FROM YELLOW BEACH, UNTIL 24 JUNE 44, WHEN IT DISPLACED TO TA 139 K, L CLOSING IN NEW POSITION, 241630 JUNE 44.

RECONNAISSANCE FOR POSITIONS IN TA's 175, 176 BEGAN ON 25 JUNE 44 AND ADVANCE PARTIES STARTED PREPARATION OF NEW AREAS ON 26 JUNE 44.

THIRD POSITIONS

1- DIVISION ARTILLERY CP DISPLACED TO TA 175 Q ON 2 JULY 44.
2- 104 FA BN OCCUPIED NEW POSITIONS IN TA 176 M AT 030900 JULY 44 COMPLETING DISPLACEMENT AND REGISTRATION BY 1500.
3- 105 FA BN DISPLACED TO TA 176 M AT 01200 JULY 44 COMPLETING MOVE BY 1300.
4- 249 FA BN MOVED TO TA 175 K ON 2 JULY 44, COMPLETING REGISTRATION BY 1140.
5- 106 FA BN OCCUPIED NEW POSITIONS IN TA 176 W ON 3 JULY 44, COMPLETING MOVE BY 1400.

RECONNAISSANCE FOR POSITIONS IN TA's 204, 205, 212, 213, 220, 221, CONDUCTED ON 28 JULY 44 AND FORWARD DISPLACEMENT BEGAN 5 JULY 44.

FOURTH POSITIONS

1- DIVISION ARTILLERY CP MOVED FORWARD TO TA 212 T ON 5 JULY 44.
2- 104 FA BN DISPLACED TO TA 213 PQ ON 5 JULY 44, BEGINNING AT 1400, CLOSING AT 1600.
3- 105 FA BN MOVED FORWARD TO POSITIONS IN TA 221 U BEGINNING AT 050730 JULY 44.
4- 249 FA BN DISPLACED TO TA 220 S ON 5 JULY 44.
5- 106 FA BN COMPLETED OCCUPATION OF POSITIONS IN TA 205 E, G ON 5 JULY 44.

RECONNAISSANCE FOR NEW POSITIONS IN TA's 103, 104, 110 & 111, AT EXTREME SOUTHERN TIP OF SAIPAN, BEGUN IN PREPARATION FOR 27 TH DIVISION ARTILLERY SUPPORT OF LANDINGS ON TINIAN.

FIFTH POSITION

1- DIVISION ARTILLERY CP ESTABLISHED IN TA 111 W 15 JULY 44.
2- 104 FA BN OCCUPIED POSITIONS IN TA 103 D, E & 110 L, M 15 JULY 44.
3- 105 FA BN OCCUPIED POSITIONS IN TA 110 M, R, 15 JULY 44.
4- 249 FA BN OCCUPIED POSITIONS IN TA 110 D F 15 JULY 44.
5- 106 FA BN MOVED TO TA 118 G H, 12 JULY 44, REMAINING THERE UNTIL 28 JULY 44, WHEN IT DISPLACED TO TINIAN ONLY C BTRY LANDED ON TINIAN, OCCUPYING POSITIONS IN TA 618 K & 619 F, REMAINDER OF BN PREVENTED FROM LANDING ON TINIAN BECAUSE OF TIDE AND BEACH CONDITIONS, RETURNED TO SAIPAN 31 JULY 44 AND OCCUPIED POSITIONS IN TA 110 F, WHERE BN WAS REASSEMBLED COMPLETELY ON 3 AUGUST 44.

REPRODUCED BY ENGINEER, SOPACBACOM 2104

SECTION I
(1 April to 16 June, 1944)

1. The Mission

a. Flexibility of plan to insure maximum effective employment of the Division Artillery in one or more of several situations was a prime consideration in preparations for the FORAGER OPERATION.

b. Planning necessarily embraced the possibilities that the Division Artillery would:

(1) Land with and render normal support to the 27th Infantry Division.

(2) Be detached from the Division and land as a unit in support of another division.

(3) Have detached from its control one or more battalions, which would operate as part of Regimental Combat Teams on several islands.

c. Actually, the first was the situation to which the Division Artillery was committed, although for the initial two days of combat, one light battalion and a battery of medium artillery were kept afloat as components of a Regimental Combat Team for possible committment elsewhere.

d. The Division Artillery was assigned the additional important mission of planning and coordinating Naval Gunfire for the operation.

2. Plans and Training

a. Valuable experience had been gained by Division Artillery units through participation in previous campaigns: The Gilberts, where the 105th FA Bn had landed on Makin; and the Marshalls, in which the 104th FA Bn had operated on Eniwetok. Officers and enlisted men of other units had been assigned to these battalions for those operations, all phases of which subsequently had been studied carefully by personnel of the Division Artillery. Therefore, when, on 1 April 1944, it was learned that the Division would assist in the conquest of the Marianas all elements of the artillery had combat-seasoned personnel to aid in planning and training for the operation.

b. Consistent with security, battalion commanders and key members of their staffs and that of the Division Artillery, were given necessary intelligence data as soon as it became available, to expedite planning. This necessitated prompt procurement, distribution and carefully supervised study of maps, air photos, and models of principal islands of the Marianas group.

c. The master training program ranged from instruction of the individual soldier, through training for the section, battery, battalion and Division Artillery as a whole; and Regimental Combat Team problems, with constant emphasis on amphibious, jungle warfare in all its aspects. A group of artillery officers attended a Division Transport Quartermaster School to aid them in planning ship loading. Study of artillery loading, launching and landing, using DUKW's, LVT's, LST's and other type of landing craft was included in the Division Artillery training plan.

d. Individual Training

(1) Objectives of the Individual Training Program included qualification of every soldier in swimming, marksmanship, communications procedure, mapwork , medical knowledge and a thorough indoctrination in jungle living and fighting. Artillery firing by all officers and certain non-commissioned officers was stressed.

(2) Swimming School: To expedite qualification in swimming, the Division Artillery established a school at which all personnel were tested for ability to swim fifty yards or more. Those unable to do so were given instruction which qualified five hundred and sixty (560) artillerymen. The value of this training was demonstrated many times in combat.

(3) Marksmanship: Familiarization of all personnel with individual arms and crew-served weapons, and qualification in the artilleryman's assigned weapon, were accentuated throughout the training period.

(4) Communications: Telephone and radio voice procedure and message preparation were emphasized to insure rapid, accurate information flow in combat.

(5) Map Work: An intensive course was conducted in map reading and the theory and practice of aerial photograph interpretation.

(6) Medical: Immunization of all personnel against small-pox, typhus, tetanus and yellow fever was completed prior to embarkation. Thorough instruction in First Aid included administration of plasma to wounded.

(7) Jungle School: Artillery personnel completed the unit jungle training course of individual hardening, hand-to-hand fighting, scouting and patrolling and combat under fire.

(8) Artillery Firing: Thorough instruction in the technique of firing and attack of targets was accomplished for all officers and selected non-commissioned officers, especially those assigned to liaison and forward observer parties.

e. Group Training

(1) Concurrently with the refresher course in individual qualification a program of integrated training was conducted for groups within the artillery, culminating in exercises in which the entire Division Artillery participated, and in which the fires of all battalions were massed on single targets.

(2) Section: Howitzer, signal, instrument, liaison and forward observer sections were trained thoroughly as teams within the battery.

(3) Battery: Operation as a unit, as well as an element of a battalion, was emphasized.

(4) Battalion: Problems throughout the training period were conducted under simulated combat conditions and included service practice by day and night, and thorough instruction in perimeter and close-in defense. Air Liaison was used extensively.

(5) Division Artillery: Situations were prepared requiring full participation of all elements of the artillery. Massing of fire on single targets was accomplished under varied weather conditions by day and night.

(6) Combined Training: Operation of infantry and artillery as battalion and regimental combat teams was accented throughout the training. In addition to firing over the heads of advancing infantry with normal and high angle fire, artillery was adjusted 100-200 yards in front of entrenched infantry. All methods of conducting fire were employed, with stress on Forward Observation. Forward Observer Parties were trained to make necessary displacements rapidly and deliver required fires with speed and accuracy,,using all types of communication.

(7) Naval Gunfire: After thorough land training, including communications exercises with fire support ships at Pearl Harbor, Naval Gunfire personnel engaged in two-amphibious operations under simulated combat conditions.

f. Special Training

(1) Availability of specialized amphibious material necessitated a comprehensive program of instruction in employment and maintenance. This was accomplished through Division Artillery schools on operation and care of the DUKW, LVT-4, and the R-4 angledozer. Instruction included loading howitzers and other equipment into DUKW'S by means of the "A"-frame, and rapid unloading of material in simulated combat situations. Angledozers and 1/4 ton trucks were loaded into LVT-4's in similar exercises, although the "Alligator's" ramp obviated the necessity of "A"-frames.

(2) Ship-shore movement of DUKW's was conducted for practice in launching, water operation and landing in surfs of various types. Amphibious "dry run" exercises were held for personnel assigned to AP's and AK's. No LST's were available for such practice cruises for the bulk of artillery personnel.

(3) As limited cargo space made it impossible to carry all organic vehicles to the objective, the minimum transportation required by the tactical situation was used as a basis for loading plans and for the conduct of training.

(4) Transport Quartermaster instruction was accomplished by attendance of selected personnel at the Division TQM School and Division Artillery conferences for these and additional personnel at which problems peculiar to artillery loading were discussed.

(5) Shipboard conferences and orientation of all artillery personnel concerning the campaign began soon after the ships sailed for the objective.

3. S-1 Operations.

a. Personnel: Artillery units were almost at full strength when announcement of the mission was made. Three vacancies for air liaison pilot officers were filled just prior to embarkation. Total personnel embarked included 140 officers, five warrant officers and 1,941 enlisted men. Left in the rear echelon at Fort Kamehameha, Oahu, T.H., were eight officers, four warrant officers and 188 enlisted men. Rear echelon complement included personnel sections, left behind by order of higher headquarters; men on furlough, in hospitals and in Replacement Depots. In the group also were personnel, well-trained in supply, maintenance and shipping, required to move the rear echelon

to the rehabilitation area and additional men needed for general duties who could best be spared during the campaign.

b. Records: Council books and current records not required for the campaign were placed in keeping of the Commanding Officer, Division Artillery Rear Echelon. Other records were stored, with organizational property left in Fort Kam. Sailing lists and other data required for the combat operation were prepared as soon as practicable.

4. Supply, Transportation and Loading

a. Inspection of all property, individual, and organizational, was accomplished early in April and all unserviceable items were replaced. Frequent check of equipment up to the time of embarkation insured that battalions sailed with all that was considered necessary for the task.

b. Howitzers were overhauled and modified with improved shields and trail reinforcements. All fire control equipment was inspected and repaired or exchanged.

c. Light battalions carried seven days' rations, three of "C" and two each of "K" and "D"; five gallons of water per man; thirty-days' supply of medical, signal, engineer, and ordnance items and cleaning and preserving materials; and five days' supply of fuel and lubricants for all vehicles, including LVT's assigned to the artillery. The medium battalion carried similar supplies except that its rations were two days of "K", and it was to draw water and fuel from Division dumps after landing.

d. Ammunition: Light battalions each carried two units of fire for small arms and five units of artillery ammunition (12,000 rounds), in the proportion: Shell, HE, M1, w/fz M48A1, 60%, shell, HE, M1, w/fz M54, 30%; and shell, WP, M60, w/fz M57, 10%. Each type was of a single lot number and each battalion's lot numbers were different from those of the other two organizations'. The medium battalion's initial supply was two units of small arms and, for the howitzers, 12,320 rounds (280 less than seven units), consisting of 680 rounds of shell, HC, M116, w/fz M54 and propelling charge M4; and 11,680 rounds of shell, HE, M107, w/fz PD M51A3. Of the total M107, 680 rounds had propelling charge M3, 3,120 rounds had powder M4, and 7,880 rounds had powder M4A1. An additional 2,476 charges of powder M3; 1,200 fuzes M55A1, and 167 fuzes M67 also were carried.

e. Transportation:

(1) Because of limited space and the nature of the operation, vehicles were kept to the minimum required and included:

TYPE	Hq Btry	Lt. Bn (ea)	Med. Bn
Truck, 1/4 ton, lt. Recon.	9	21	17
Truck, 3/4 ton C/R (radio)	1		
Truck, 3/4 ton W/C	3	4	7
Truck, 2½ ton, cargo			1
Truck, 2½ ton, DUKW		15	
Tractor, M5		6	12
Tractor, R4		6	
Tractor, LVT-4		4	
Trailer, 1/4 ton	2	12	5
Trailer, 1 ton		1	

TYPE	Hq Btry	Lt. Bn (a)	Med.Bn
Trailer, M-10	15	6 75	42

Note: All LVT's and twenty-four (24) of the forty-five (45) DUKW's were relinquished to Division early in the operation, upon completion of LST unloading. Subsequently, six more of the remaining twenty-one (21) DUKW's were given up, leaving fifteen (15) for artillery use.

(2) Waterproofing: No action was required for LVT's, but all DUKW's were sprayed with rust-preventive compound. Other vehicles were painted, sprayed with rust-preventive compound, and waterproofed with the Standard Ordnance WV-6 kit. For waterproofing M5 and R4 tractors, the WV-7 kit, with certain additional materials, proved adequate. All waterproofing was accomplished by artillery personnel.

(3) Modifications: All DUKW's were modified to accomodate 105mm howitzers by flaring hull combing, relocating pumps to deepen wells midship, and reinforcing combing aft to support howitzer trail. All R4's were fitted with rear pintles to make these tractors adaptable as howitzer prime movers.

f. Combat loading:

(1) Light battalions were carried to the objective in LST's. The medium battalion, Division Artillery Headquarters Battery and light battalion personnel who could not be accomodated on LST's, travelled in AK's and AP's.

(2) To conserve space, LST cargo was not palletized. On the tank deck aft, were stowed rations, water, signal, engineer and ordnance supplies, small arms and organization equipment for the light battalions. Emergency supplies for Engineers, Infantry and Tank elements of the Division and artillery ammunition were loaded almost the length of the deck and covered with flooring. Atop this load were placed eight (8) combat-loaded 1/4 ton trucks abreast, aft; and three (3) files of five (5) DUKW's each. The leading DUKW of each file was equipped with an "A"frame and carried a 1/4 ton truck with signal, instrument and other equipment for the Battery Commander's party. Each of the other twelve (12) DUKW's carried a howitzer with section equipment and twelve (12) rounds of ammunition. Forward, two abreast, were four LVT's, one carrying an R4 tractor and three (3) bearing 1/4 ton trucks for the Battalion Commander's party. On the LST ramp, a DUKW of the Quartermaster Company was loaded. Vehicle fuel and lubricants were loaded forward on the weather deck and protected with sandbags.

(3) Supplies and organization equipment of the medium battalion and Division Artillery Headquarters Battery had to be palletized or crated to facilitate handling on AK's. All medium artillery ammunition was palletized, twenty complete rounds to a sled. Propelling charge M3, when palletized with shell, was packed 42 charges to a sled, and when loaded by itself, 96 charges to a pallet. Fuzes M55A1 were packed 400 to a sled.

(4) Because of limited troop accomodations on LST's, berthing for the bulk of artillery personnel was accomplished by setting up cots on the weather deck under the LCT, and in the LCT itself, over which paulins had been stretched for protection from sun and rain. The LST assigned to one battalion did not carry an LCT and the lack of this additional deck space for quartering troops resulted in uncomfortable crowding.

5. Embarkation and Movement to Objective.

a. Troops of the light battalions boarded LST's the morning of 25 May and sailed the following day. These three vessels arrived at Eniwetok on 7 June and remained there for two days, resuming their journey on 9 June and reaching Saipan the night of D-1 Day, 14 June.

b. The AP's and AK's carrying other elements of the Division Artillery moved out of Pearl Harbor in two groups, the first leaving the afternoon of 30 May and the remainder sailing 1 June. These ships arrived at Kwajalein on 9 June and after an overnight halt, proceeded to the Marianas; some arriving 16 June and the rest the following day. The evening of 16 June the Artillery was ordered to land. A night reconnaissance was accomplished by the Executive Officer, Division Artillery, and Battalion Commanders and their staffs. Personnel of Division Artillery Headquarters landed during the night and established the CP. At dawn the battalions moved to shore and occupied initial positions for the Battle of Saipan.

c. In unloading LST's, DUKW's and LVT's moved ashore immediately upon being launched. By means of the "A" frames 1/4 ton vehicles were removed from leading DUKW's. The balance of the DUKW's carried the howitzers to initial positions where "A" frames were used to lift them out. All amphibious vehicles then shuttled between ship and shore, carrying ammunition and other supplies and equipment. Unloading was hampered by necessary dispersal of LST's to sea during enemy air action and unfavorable reef and tide conditions.

d. The medium battalion and Headquarters Battery, Division Artillery, which had shipped in AK's and AP's had a less satisfactory debarkation experience. Factors which contributed to the delay in unloading these elements included non-availability of landing boats and unfavorable tide and beach conditions which resulted in the scattering of equipment on various landing points. The medium battalion loaded each complete section, including 155mm howitzer, M5 tractor, twenty-four (24) rounds of ammunition and necessary personnel, in an LCM for its movement to shore. Despite efforts to speed ammunition unloading, the task was not completed until 27 June, ten days after it was begun, causing inconvenience to the battalion in the execution of its mission.

SECTION II
(16 June to 6 August 1944)

6. Day-by-day account of operations from 16 June to 6 August 1944, includes a paragraph for such day, subdivided into: a. Enemy Situation and, b. Own Operations.

7. 161600 to 171600 June, 1944

a. Enemy Situation

Strong resistance in Southeastern end of Island, with Aslito Airfield as focal point. Continued resistance from these areas anticipated. No identification of opposing enemy units.

b. Own Operations

(1) Executive Officer, Division Artillery, landed on Blue Beach 1 at 162130 June with part of staff to establish headquarters and begin reconnaissance for positions. Battalion Commanders and parties reported at 170200 June and were instructed to begin reconnaissance of battalion areas assigned and land their batteries immediately. Reconnaissance completed during hours of darkness, but adverse tides prevented debarkation of battalions until dawn.

(2) Headquarters, Division Artillery: Moved ashore by groups and established CP at 126 N.

(3) 104th FA Bn: Afloat and detached from 27th Division Artillery.

(4) 105th FA Bn: Moved ashore from LST 483, landing at Blue Beach 1 at 0515, and proceeded to positions in TA 126 I. Opened fire in support of 165th Infantry at 1055, firing nine missions.

(5) 249th FA Bn: Debarked from LST 272 at dawn, landing on Blue Beach 1 at 0800 and proceeded immediately to area in TA 126 S. Began firing at 1048, completing three registrations and three missions in general support during period.

(6) 106th FA Bn: Less Battery "A" moved ashore from AKA's and began occupation of position in TA 126 I at 1000. Following registration, fired several missions in general support.

8. 171600 to 181600 June, 1944

a. Enemy Situation

(1) Organized enemy positions encircling Aslito Airfield included reinforced concrete blockhouses and large underground dugouts. High ground extending Southwest contained strong positions.

(2) No identification of enemy units in contact.

(3) At 171800 June, enemy had been driven to a line 300 yards West of airfield, on high ground running Southwest. During night, enemy counter-attacked from this high ground, driving our right flank back some 1,200 yards. At dawn, our forces resumed offensive, driving enemy from Aslito Field by 1015 and reoccupying high ground at noon. Enemy then began organized withdrawal, abandoning large quantities of supplies and ammunition.

(4) Possession of high ground to the North gave enemy excellent observation of our activities.

b. Own Operations

(1) Hq Btry, Division Artillery: Commanding General's Aide wounded by sniper and evacuated.

(2) 104th FA Bn: Still afloat and detached from 27th Division Artillery.

(3) 105th FA Bn: Fired 26 missions in direct support of 165th Infantry, assisting in breaking enemy resistance in Aslito Airfield area.

(4) 249th FA Bn: Beginning at noon, completed nine missions in direct support of 105th Infantry, which took place in the line at 1000. Second Battalion, 105th Infantry, attached to 4th Marine Division and held in reserve.

(5) 106th FA Bn: (Less Battery "A") Fired five missions, including two counter-battery missions in TA 109 L, and three concentrations on enemy counterattack in TA 110 T.

9. 181600 to 191600 June, 1944

a. Enemy Situation

(1) Large groups of enemy cut off and driven to cover of mangrove trees and caves on Magicienno Bay, from TA 124 E to 140 W, and to Nafutan, Southwest of line TA 124 A, 123 S, 114 R and 106 D. Many pillboxes encountered.

(2) Bulk of enemy continued gradual withdrawal to high ground North of Nafutan.

(3) During enemy air strike at 181930 June, one Jap plane crash landed on Aslito Field and pilot was captured.

b. Own Operations

(1) 104th FA Bn: Returned to control of 27th Division Artillery and began debarkation during afternoon of 19 June.

(2) 105th FA Bn: Fired thirteen missions in direct support of 165th Infantry to break resistance in enemy prepared positions.

(3) 249th FA Bn: Completed fifteen missions in direct support of 105th Infantry. One enlisted man, member of Forward Observer party, killed at OP.

(4) 106th FA Bn: Established bi-lateral Op and fired six missions in general support, including three counter-battery missions in TA 108 G, 124 K

and P, and 108 M. Battery "A" reverted to control of Battalion and prepared to debark.

10. 191600 to 201600 June, 1944

a. Enemy Situation

(1) Defensive system was based on strong points held with assistance of artillery and mortar fires from Nafutan plateau. Advance of 3d Battalion, 105th Infantry, along South shore, delayed by necessity of cleaning out, one by one, large pillboxes, caves and other strong points. Division's zones of advance contains many caves and holes in hills, harboring Jap soldiers and civilians.

(2) Some enemy troops identified as part of 55th Guard Unit. Elements of Aslito air force personnel are among enemy troops fighting on Division front.

(3) Several 70mm howitzers fired on our infantry from concealed positions on ridge. Other artillery pieces were wheeled out of caves in TA 165 M and fired at our troops. Artillery hidden in caves on Purple Beach fired on the rear of our infantry. Ten 20mm guns were found on Aslito Field, with quantities of ammunition, including 400 rounds of 4.7.

(4) At 192000 June, a group of seventy-five (75) Japs made a disorganized and unsuccessful counter-attack on the right flank of the 165th Infantry. Our troops jumped off at 201200 and advanced rapidly. Many Jap soldiers committed suicide when their capture appeared imminent.

(5) The terrain on the Division front is extremely rugged, covered with coral rock and dense smoke. Caves in cliffs overlooking the sector afford enemy good positions for firing on our troops.

b. Own Operations

(1) 104th FA Bn: Registered at 1746 and delivered harassing fires in general support throughout the night of 19-20 June. Forward observers, liaison parties and balance of battalion began landing on Yellow Beach 3 during afternoon of 20 June.

(2) 105th FA Bn: Thirteen missions fired in direct support of 165th Infantry contributed materially to repelling counter-attack and in supporting the Infantry's advance. Harassing missions fired during night.

(3) 249th FA Bn: Fired ten battalion and seventeen battery missions in direct support of 105th Infantry, including concentration on enemy counter-attack and preparation for our attack at 1200. Harassing fires during darkness.

(4) 106th FA Bn: Battery Commander landed with first section of Battery "A" at 0930. Battalion fired eleven missions in general support, destroying underground dump at TA 116 T and four enemy gun positions in TA 108 L, 124 E, 115 Q, 116 T. Other missions fired aided in repelling counter-attack.

11. 201600 to 211600 June, 1944

a. Enemy Situation

(1) Enemy continued fighting from caves and holes housing machine guns, mortars and artillery pieces. Artillery fired from concealed cave with steel doors in TA 108 G.

(2) No reserves available to enemy in Nafutan Point area. Minor counter-attacks at 2000 and 2200 20 June, repulsed.

b. Own Operations

(1) 104th FA Bn: Fired thirteen missions in general support and harassing fires during darkness. From 0914 to 0950, assisted in firing preparation to support attack of 165th Infantry on Nafutan Point. Battalion's LST 169 now 95% unloaded.

(2) 105th FA Bn: Fired eight missions in direct support of 165th Infantry, harassing fires during darkness and preparation in support of attack. Completed unloading LST 483 at 1550.

(3) 249th FA Bn: Twenty-five missions fired in support of 105th Infantry's advance. Harassing fires during night. Completed unloading LST 282 at 0730..

(4) 106th FA Bn: Established three new OP's and fired twelve missions in general support. Battery "A" in position at 1200. Unloading of cargo continued.

12. 211600 to 221600 June, 1944

a. Enemy Situation

Enemy contained in Nafutan Point area continued defensive fighting in caves and holes, using artillery, mortars and machine guns. Air strike at 220200 June was ineffective.

b. Own Operations:

(1) Control of 27th Division Artillery passed to Commanding General, XXIV Corps Artillery, at 211700, to revert to Division control some time after 220600 June. Commanding General, XXIV Corps Artillery, approved request that 249th FA Battalion revert to Division control at 220600.

(2) 104th FA Bn: Battery "B" moved into direct fire position at 211605 to assist Company "G", 105th Infantry, in escaping from pocket in which they had been pinned down during the day. Battery returned to original position at 212030 June. Battalion fired preparation in general support from 220550 to 220600 June, prior to attack of 4th Marine Division at 0600.

(3) 105th FA Bn: Fired nine missions in general support of 4th Marine Division, of which 165th Infantry is reserve regiment, since its withdrawal from Southeastern sector. Harassing fires during the night.

(4) 249th FA Bn: Fired fourteen missions, of which two were for XXIV Corps Artillery and twelve in direct support of 105th Infantry. Harassing fires during night. One enlisted man wounded in action.

(5) 106th FA Bn: Fired seven missions including preparation for XXIV Corps Artillery, prior to attack of 4th Marine Division in direction East of Mt Tapotchau. Fire placed on on enemy troop concentration in TA 214 S and supply area at TA 204 S with good results. Manned two captured Japanese 4.5 inch guns at 131 N for direct fire against enemy on Purple beaches. Unloading of 155mm ammunition proceeding slowly.

13. 221600 to 231600 June, 1944

a. Enemy Situation

(1) Enemy utilized mountainous terrain to good advantage, firing machine guns, mortars and small arms from caves and cliffs. Reserves reported near Chacha.

(2) Line of departure assigned to 27th Division found to be in enemy hands when Division relieve 4th Marine Division in its zone of advance. Strong points in TA 184 W blocked advance of 106th Infantry. Second Battalion, 105th Infantry, in Nafutan area, detached from Division and assigned to control of Northern Troops and Landing Force.

(3) Enemy artillery active. Liaison plane of Division Artillery drew antiaircraft fire. Twelve rounds of Jap light artillery, including several duds, fell in Division CP area in TA 129 K, at dawn.

b. Own Operations

(1) Control of Division Artillery reverted to 27th Division at 221700 June. Reconnaissance of TA 144 and 145 conducted in preparation for displacement there to facilitate effective, aggressive support of our advancing Infantry.

(2) 104th FA Bn: Continued in direct support of 106th Infantry, displacing from Agingan Point to new positions in TA 145 B at 230545 June. Registered by air observation and was in readiness to fire preparation for 106th Infantry attack scheduled for 1100. Infantry did not attack.

(3) 105th FA Bn: In direct support of 165th Infantry, displaced from TA 126 I and N at 230545, and arrived in forward area in TA 144 MRO. Fired two missions after registration by air observation.

(4) 249th FA Bn: Remained in Yellow Beach position to continue direct support of 2d Battalion, 105th Infantry, in Nafutan Point area. Completed six registrations for night fires before dark and fired harassing and defensive missions during the night to repel counter-attack. One enlisted man of a liaison section wounded in action.

(5) 106th FA Bn: Continued in general support, reinforcing fires of 104th FA Bn. Fired five missions, effecting the destruction of an ammunition dump at 213 U and neutralization of anti-aircraft gun at 196 V and field piece at 206 G. Battery "C" AKA completely unloaded and unloading of Battery "A" ship proceeded at faster pace.

14. 231600 to 241600 June, 1944

a. Enemy Situation

Enemy dug in on hillsides, allowed our troops to enter gullies and then took them under fire. Artillery and infantry weapons destroyed several Jap tanks, artillery using both air and ground observers for these missions. Enemy anti-aircraft fired on artillery liaison plane during the afternoon while it was flying over TA 204, 205. Anti-aircraft piece silenced by our Artillery.

b. Own Operations

(1) Hq & Hq Btry: Displaced from Yellow Beach to new position in TA 144 X. Executive Officer killed in action while seeking to rescue another wounded artillery officer from sniper infested area.

(2) 104th FA Bn: In direct support of 106th Infantry. Delivered interdiction missions and adjusted night defensive fires in front of our infantry before dark. Reinforced by 106th FA Bn, fired preparation for attack by its infantry at 0800. Fired call mission, using smoke, to cover escape of trapped friendly troops and evacuation of their wounded. Battalion destroyed four enemy tanks while firing a call mission. During the afternoon, battalion sent one howitzer to deliver direct fire on snipers in cave and thus aid escape of reconnaissance party of 249th FA Bn, which had been pinned down. Rescue party included howitzer section, machine gun sections and other personnel, led by two Captains and a Lieutenant. Perimeter reinforced during the night by Company K of 105th Infantry, which continued its mop-up mission the next morning.

(3) 105th FA Bn: Continued direct support of 165th Infantry, countering a night attack by enemy tanks and delivering preparation for jump-off at 0800. One enlisted man wounded in action.

(4) 249th FA Bn: Gave direct support to 2d Battalion, 105th Infantry, in its Nafutan mission until 241015 June, firing eleven concentrations. Battalion displaced to new positions in TA 150 Q at 1130, registering with air observation. During reconnaissance for new positions, Communications Officer was killed by snipers while seeking to aid in evacuation of wounded soldiers. One enlisted man wounded in action.

(5) 106th FA Bn: In general support, fired harassing missions during the night. Fired preparation for Infantry's dawn jump-off and twelve other missions during the day. Displaced by echelon to new positions in TA 139, closing in new area by 1630. One enlisted man wounded in action.

15. 241600 to 251600 June, 1944

a. Enemy Situation

Operating from connecting tunnels on hillsides, enemy kept our troops under rifle, machine gun, mortar and occasional artillery fire, taking cover when our troops returned fire. Infantry reported 75mm shells falling on their lines. Air strike at 1930. No damage.

b. Own Operations

(1) Division Artillery continued mission of supporting advance of our infantry toward Northern part of the Island and coordinated preparation from 0715 to 0730. Missions limited by small width of frontages of assault infantry battalions and by maneuvering of friendly troops seeking to by-pass enemy strong points.

(2) 104th FA Bn: In support of 106th Infantry, firing morning preparation in strongly held area our infantry is seeking to by-pass. Dolivered call fires and one screening mission. One officer forward observer wounded in action.

(3) 105th FA Bn: Fired four call and harassing missions in direct support of 165th Infantry. One enlisted man wounded.

(4) 249th FA Bn: Fired morning preparation in general support. At 1300, Battery "B" was released from battalion for direct fire mission on Southeast of Mt. Tapotchau. One battalion, seven battery missions included in day's firing.

(5) 106th FA Bn: Continued in general support, Completed movement to new positions at 241630. Battery "A" moved to TA 175 K for direct fire mission and then returned to organic position. One enlisted man wounded in period.

16. 251600 to 261600 June, 1944

a. Enemy Situation

Enemy staged light, unsuccessful night counter-attack. Japs abandoned large ammunition and explosives dumps in retreat northward. Some enemy observed wearing parts of American uniform, including helmets.

b. Own Operations

(1) Division Artillery: Uncertainty of friendly lines necessitated close check of artillery fires. The 249th and 106th FA Battalion in general support.

(2) 104th FA Bn: Continued in direct support of 106th Infantry. Neutralized enemy weapons hidden in cane by using WP to burn fields.

(3) 105th FA Bn: In direct support of 165th Infantry.

17. 261600 to 271600 June, 1944

a. Enemy Situation

(1) On main offensive line to North, enemy continued defense of corridor through TA 186-195, using artillery from well camouflaged positions on high ground. An estimated 500 Japs broke through lines North of Nafutan Point and infiltrated towards Mt. Tapotchau, attacking ammunition dump of 105th Infantry and positions of the Division Artillery en route.

(2) One POW revealed himself as a member of the Tokyo Division. Some Japs killed wore American uniforms and carried carbines. Enemy reported booby-trapping our dead.

(3) Artillery air bursts reported by our infantry over their positions. Infantry believe fire came from friendly artillery in rear.

b. Own Operations

(1) Division Artillery: At dawn, twelve Japs led by an officer, infiltrated into Headquarters area on way North from Nafutan. In an action lasting three hours, Japs were all destroyed. Battery's casualties included one enlisted man killed, two officers and three enlisted men wounded.

(2) 104th FA Bn: During the night, perimeter guards fired on personnel failing to give countersign and counted four dead Japs at dawn. At 0500, twenty-six enemy, including two officers, were discovered hiding in Battalion area and in a three-hour battle, all Japs were killed. Battalion continued to fire its preparation for 106th Infantry from 0615 to 0[illegible]60 and other missions during the action.

(3) 105th FA Bn: Battalion continued preparation of positions to North against imminent displacement. Troops assisted in repelling infiltrators in adjacent Headquarters area.

(4) 249th FA Bn: One section of Battery "A" assigned direct fire mission with satisfactory results. Three registrations conducted by battalion in preparation for morning attack. One battalion and seven battery missions fired.

(5) 106th FA Bn: Infiltration of large group of snipers prevented firing of morning missions. Total of eight missions fired during day.

18. 271600 to 281600 June, 1944

a. Enemy Situation

(1) Units in contact identified as 118th Infantry's 3d and 6th companies.

Enemy continued dogged resistance from cleverly concealed positions on their withdrawal North.

(2) Increased enemy artillery and air action. Fire from mobile Jap 77mm pieces received by 106th Infantry. Our supply and evacuation hampered by fire on roads leading North of RJ 520. Division CP also shelled. Planes bombed Division Artillery areas and 106th Infantry positions without effect.

b. Own Operations

(1) 104th FA Bn: Continued in direct support of 106th Infantry, firing preparation and fifteen call missions. Casualties included one officer and three enlisted men wounded. Reconnaissance for positions North of Purple Beach conducted.

(2) 105th FA Bn: Three missions fired. Reconnaissance for new area North of Purple Beach completed. Bomb fragments from enemy air strike caused one slight casualty and minor damage to vehicles and shelters.

(3) 249th FA Bn: Fired a total of ten missions, including harassing fires by night and targets of opportunity during the day.

(4) 106th FA Bn: Firing batteries displaced forward to new positions in TA 139 and fired six missions from new area. Battery "B" cargo ship unloaded completely. One and one-half units of fire brought from Oahu have been appropriated by another organization.

19. 281600 to 291600 June, 1944.

a. Enemy Situation

(1) Enemy continued to fight from caves and prepared positions atop cliffs, with strong point at hill in TA 187 A. Enemy tanks, dug in and camouflaged, offered strong resistance to our troops. Identified units include 3rd Company, 136th Infantry, which arrived on Saipan 20 May 1944. Many supply points captured as enemy withdrew.

(2) Red alert sounded at 2050. Soon after, enemy plane was caught by our anti-aircraft and crashed at Kagman Point, after exploding in the air.

b. Own Operations

(1) Division Artillery fired normal preparation, call, defensive and harassing fires in support of our Infantry, which continued drive North against considerable resistance.

(2) 104th FA Bn: Soon after batteries had been adjusted for night defensive fires, enemy tanks appeared and were taken under fire. Two tanks destroyed and the rest dispersed. Fifteen call missions fired and battalion re-registered, using high-angle fire.

(3) 105th FA Bn: Firing included neutralization of enemy OP in TA 220 D, destruction of buildings and firing on troops in open in TA 221 B, and three direct hits on artillery piece in TA 230 Q. One enlisted man killed, another wounded in action.

(4) 249th FA Bn: Night harassing fires, preparation, two battalion and fifteen battery missions.

(5) 106th FA Bn: Preparation and twelve other missions fired. OP established on Mt. Tapotchau. One enlisted man killed by enemy mortars at OP. Three civilians found near perimeter and taken to POW cage.

20. 291600 to 301600 June, 1944

a. Enemy Situation

(1) Enemy established defensive line along low ridge extending East-West across Division sector. The 370th Machurian unit now on Division front. POW reports enemy morale lowering as a result of lack of weapons, food and water.

(2) One artillery piece reported in TA 203 I or J. Most enemy dead found show marks of our artillery fire. Enemy anti-aircraft pieces firing at our planes.

b. Own Operations

(1) 104th FA Bn: Continued in direct support of 106th Infantry. Defensive fires adjusted before dark, not fired during night. Preparation fired to support infantry attack at 0715, but infantry did not attack. Reinforced by 106th FA Bn, battalion delivered preparation from 1215 to 1230, beginning close to front lines and letting infantry advance 600 yards behind a curtain of fire. Thirteen additional missions fired, all with high angle fire.

(2) 105th FA Bn: Eighteen missions fired, including destruction of pillbox in TA 220 X with two direct hits.

(3) 249th FA Bn: In direct support of 1st and 3d Battalions, 105th Infantry. Two battalion and ten battery missions fired in addition to registration and night harassing fires. One liaison pilot officer missing in action after TBF in which he was observing was destroyed by enemy anti-aircraft fire.

(4) 106th FA Bn: Sixteen missions fired, mostly harassing, deep in enemy rear.

21. 301600 June to 011600 July, 1944

a. Enemy Situation

(1) POW of 55th Security Unit reports Japs moving North in small groups. Japs now firing mostly from caves and along tree-lines bordering Division sector. Increase in night infiltration attempts. Some Jap air activity at night, without damage to friendly installations.

(2) One enemy artillery piece, probably dual-purpose gun, reported firing from TA 229 V.

b. Own Operations

(1) 104th FA Bn: Defensive fires adjusted before dark not requested during night. Preparation, in form of rolling barrage, fired from 1354 to 1413 in support of 106th Infantry, which was enabled to advance 500 yards. Ten observed missions.

(2) 105th FA Bn: Displaced forward to TA 176 M between 1200 and 1300. Twenty missions fired.

(3) 249th FA Bn: Registered in zone of 105th FA Bn to take responsibility for its fires during displacement. Preparation between 0655 and 0710. One battalion and eight battery missions fired.

(4) 106th FA Bn: Reinforced fires of 104th FA Bn and delivered harassing fires deep in enemy rear. Twelve missions fired. New positions in TA 176 RS reconnoitered.

22. 011600 to 021600 July, 1944

a. Enemy Situation

(1) Slight resistance offered to our troops in their advance. Five immobilized tanks used as pillboxes, overcome by our troops. Many supply dumps abandoned by Jap on flight north.

(2) Jap field piece reported firing from TA 220 Q. Fragments of Jap 20mm shell fell near artillery positions.

b. Own Operations

(1) Hq and Hq Btry, Division Artillery, moved to new area in TA 175 Q.

(2) 104th FA Bn: Night defensive fires adjusted prior to dark but not requested by Infantry. Six call missions between 0650-0805, eight missions between 0845-1110. Preparation in form of rolling barrage fired from 0822-0840 in support of attack by 106th Infantry, which advanced our lines 800 yards.

(3) 105th FA Bn: Sixteen missions fired.

(4) 249th FA Bn: Night registration, but no harassing fires. Preparation for 25 minutes prior to attack by our Infantry. Moved to new position at 175 K and registered on base point by 1140. Eight battery missions fired.

(5) 106th FA Bn: Night harassing missions. At dawn, group of Japanese found on perimeter were taken to Division Rear. Liaison pilot officer shot down over Jap lines while flying in Navy plane.

23. 021600 to 031600 July, 1944

a. Enemy Situation

(1) Enemy units identified on our front include 31st Army Hq, 136th Infantry, 43d Intendance Unit, Transport Company, 43d Division, 278th Independent Vehicle Company, Yoshino Unit, 16th Shipping Engineer Regiment. Large dumps and underground water point in TA 213 HP and 220 MNO taken, POW states Japs are saving artillery for final effort.

(2) Threat of major air strike from Palau and Yap, according to G-2, Northern Troops and Landing Force.

b. Own Operations

(1) 104th FA Bn: In direct support of 106th Infantry, with two batteries of 106th FA Bn reinforcing night harassing fires in TA 229 QR. Preparation from 0830-0844 assisted 106th Infantry in attaining objective. Battalion began displacement by echelon to TA 175 N, beginning at 1130 and closing at 1500.

(2) 105th FA Bn: Infantry in open dispersed with heavy casualties; and mortars destroyed in the firing of seven missions during period.

(3) 249th FA Bn: No night firing. Battalion registered for counter-attack preparation at 0600. Total firing: six battery, one battalion mission.

(4) 106th BA Bn: Occupation of new position complete at 1400. Battalion OP atop Mt. Tapotchau improved. Eleven concentrations, including harassing missions fired.

24. 031600 to 041600 July, 1944

a. Enemy Situation

(1) Japs driven from beach as far Northeast as Flores Point. Increased infiltration activity near 106th and 165th Infantry Command Posts. Colonel Ogawa, Commanding Officer, 136th Infantry Regiment, and members of his staff, killed by perimeter guards of 165th Headquarters area.

(2) Artillery positions located in TA 247 D, 226 XY, at 1800. Enemy artillery shells fell in recently abandoned positions of Division Artillery, killing one man of the 104th FA Bn who was moving ammunition to new Position.

b. Own Operations

(1) Vigorous support of Infantry's advance, climaxed by massing of fires on enemy assembly area in TA 247 D from 1308 to 1320. To continue aggressive support of our advancing Infantry, forward displacement of Division Artillery units to new positions ordered.

(2) 104th FA Bn: Night defensive fires adjusted prior to dark. Harassing fires throughout the night and ten minute preparation at 0720. Battalion

assumed responsibility for missions of 249th FA Bn during that organization's displacement. Reconnaissance of TA 213 conducted in preparation for forward displacement.

(3) 105th FA Bn: Ten concentrations fired during period. Supply dumps established in TA 176 M. Battalion alerted for forward displacement at dawn.

(4) 249th FA Bn: Began forward displacement to TA 220 S at 1605 and registered Battery "A" by 1630. Harassing fires delivered throughout the night. Nine missions during day, including destruction of enemy machine gun nests. Jap sniper killed on perimeter.

(5) 106th FA Bn: Seventeen missions fired, including harassing and interdicting fires during night. New positions reconnoitered for early forward displacement.

25. 041600 to 051600 July 1944

a. Enemy Situation

Enemy continued withdrawal to North. No enemy air activity, no counter-battery fires.

b. Own Operations

(1) Division Artillery Headquarters established new position in TA 212 T.

(2) 104th FA Bn: In general support while 106th Infantry is in reserve. Assumed responsibility for missions of 105th FA Bn from 0723 to 1100 while that battalion displaced forward. From 1400 to 1600, battalion moved forward to TA 213 PQ.

(3) 105th FA Bn: Moved forward to TA 221 U, beginning at 0730. Six concentrations fired after occupation of new area.

(4) 249th FA Bn: Displaced to TA 220 S, near Charon Danshii. Battery "A" registered at 1630. Twelve battery missions fired during period.

(5) 106th FA Bn: No night fires and only three daylight missions.

26. 051600 to 061600 July, 1944

a. Enemy Situation

(1) Large concentration of enemy along coast from TA 259 I to 272 M. Approximately 2,000 armed with rifles, grenades and machine guns, are in zone of advance of 27th Division. Jap resistance to our advance increasing. Extensive mine fields disabled eight American tanks. Enemy fights his delaying action from cover of dug-outs, concrete buildings, barges beached on shore and from ships afloat.

(2) POW states that the original three artillery units of the Jap 136th Infantry have been reduced by casualties to a total of sixty men, who have been formed into one group, possessing a single mountain piece.

b. Own Operations

(1) Completion of displacement of 106th FA Bn brings entire Division Artillery to advanced position centered about TA 213. Fires massed on enemy assembled in 259 Q at 1130.

(2) 104th FA Bn: Registered all batteries on Check Point #10, RJ #12, TA 260 B, with air observation. Preparation for attack of 106th Infantry at 0700.

(3) 105th FA Bn: Thirteen concentrations fired in direct support of 165th Infantry. All supplies now moved forward to new area.

(4) 249th FA Bn: Nine missions fired. One sniper killed on perimeter, four POW's taken and sent to Division Rear.

(5) 106th FA Bn: New area at 205 FG required considerable burial of Jap dead. Six missions fired during period.

27. 061600 to 071600 July, 1944

a. Enemy Situation

(1) Early evening reports on Division front negative. At 1930, Division OP reported enemy withdrawing Northeast in small groups. At 2030, enemy counter-attacked in front of 3rd Battalion, 105th Infantry, in TA 249 B and 260 MRV. Both attacks had terminated by 2200. POW of 55th Guard Force (Naval) captured while asleep, declared enemy planned all-out attack at 2000 6 July and that survivors were to commit suicide at 1500 7 July.

(2) At 0510, 7 July, "Sako" attack began in 105th Infantry area. Japs came down corridor to the Southwest along railroad, then South along the line TA 259 M to 258 W. Enemy moved down road and railroad bed, parallelling shore-line. Third Battalion, 105th Infantry, estimated enemy on its front (TA 249 ABC) as 1,000. By 1000 o'clock enemy strength along Division front was estimated at 1500. At noon, enemy pressure had not abated, but by 1400, intensity of attack had died down.

(3) Lieutenant (JG) C. J. Blanc, NGLO with 1st Battalion, 105th Infantry, described action on front of 1st and 2nd Battalions of that regiment: "Battalions had established perimeter in TA 259 KMPR. Action began at 0450, when hordes of Japs rushed along railroad from Makunsha, armed with firearms, clubs and knives. They were so close, that our troops hardly had to take aim. Enemy on cliff side of corridor streamed Southwest toward battalions in great numbers. By 1030, the two battalions had suffered severe casualties and the battle had become a hand-to-hand struggle."

(4) POW taken near 3rd Battalion, 105th Infantry, stated that some 20,000 men had assembled at Marpi Point on order of Lt General Saito, after Jap plane had dropped message that no help could be expected from the homeland. Japs were ordered to move South in groups of 3,000, killing all Americans possible before being killed themselves.

(5) Estimate of enemy killed during battle: 2,725.

b. Own Operations

(1) Division Artillery hampered in delivery of night harassing fires by two red alerts. All battalions fired concentrations on counter-attacking enemy troops at dawn, until mingling of enemy and friendly elements made further firing impossible.

(2) 104th FA Bn: Prior to dark, Batteries "B" and "C" were adjusted in vicinity of Check Point #10 by 105th FA Bn observer. Red alerts prevented night fires. From 0516 to 0555, battalion fired 141 rounds to repel Japs. One enlisted man killed in action.

(3) 105th FA Bn: 104th and 106th FA Bns were assigned to the control of the 105th FA Bn at beginning of period and fired on counter-attacking Japs until mixture of troops made it impossible. Seventeen concentrations fired during day.

(4) 249th FA Bn: All three firing batteries registered for night fires and normal barrage. Red alerts prevented harassing fires. Barrage fired against enemy counter-attack from 0455 to 0647. One battalion and five battery missions fired. No missions fired during day due to loss of contact with forward observers and liaison officers and confused reports of our front lines. First estimate of battalion's casualties among liaison and forward observer personnel: three officers and seven enlisted men killed; two enlisted men missing; one officer, eight enlisted men wounded.

(5) 106th FA Bn: Red alerts prevented harassing and interdicting fires during night. Battalion fired on counter-attacking Japs with good effect. Nine missions fired during period. Occupation of position complete.

28. 071600 to 081600 July 1944

a. Enemy Situation

(1) Little activity after dark until 0100, when Japs on front of 1st and 2nd Bns, 106th Infantry, which had relieved the 105th Infantry, began disorganized yelling and firing, continuing, with some attempts at infiltration, until 0430. At this time activity became general along entire front and at 0500, enemy began moving toward our lines. But the fanaticism that marked the counter-attack of 6-7 July was missing and enemy was destroyed in great numbers. By 0800, enemy resistance had subsided to defense of isolated strong points.

(2) Red alerts hampered night firing. Enemy planes dropped bombs near Division Artillery positions and strafed road in front of Division Artillery Hq.

No damage from aircraft, but friendly flak caused minor damage to paulins. Much infiltration activity near artillery positions.

b. Own Operations

(1) Our artillery asisted materially in breaking up counter-attack on 106th Infantry front. At 0630, the 104th and 249th FA Bns were assigned to reinforce fires of 2d Marine Division Artillery, and 106th FA was placed under control of XXIV Corps Artillery. The 105th FA remained in direct support of 165th Infantry.

(2) 104th FA Bn: At beginning of period, battalion in direct support of 106th Infantry, but delivered no fires as infantry moved to line, because of proximity of other friendly troops. Prior to dark, defensive fires adjusted in front of 106th Infantry. At 0615, Commanding Officer, 1st Battalion, 106th requested defensive fires to repel Jap counter-attack. Additional planned fires delivered by 249th FA Bn. Fires had good effect. Heavy enemy casualties, our losses light. Fifteen snipers killed on perimeter of battalion.

(3) 105th FA Bn: Nine missions fired in direct support of 165th Infantry.

(4) 249th FA Bn: No night fires. Normal barrage, reinforcing fires of 104th FA Bn, fired from 0530 to 0600. Four battery missions fired. Seven snipers killed on perimeter.

(5) 106th FA Bn: Night harassing fires between red alerts. Bombing and strafing by enemy planes caused no damage. Total of six missions during night. Enemy sniper and infiltration activity on perimeter. Battalion passed to control of XXIV Corps Arty at 0800.

29. 081600 to 091600 July, 1944

a. Enemy Situation

(1) Enemy driven to sea along NW & NE coast, except for extreme tip of island.

(2) No enemy air activity, but sniping and infiltration on perimeters of Division Artillery positions continued.

b. Own Operations

(1) 27th Division in reserve. Commanding General conferred with Commanding General, 27th Division on current and future plans. Troops rested, attended religious services and cleaned equipment.

(2) 104th FA Bn: Returned to Division control from 2d Marine Division at 0800. No missions fired. Two Jap snipers killed on perimeter.

(3) 105th FA Bn: No missions.

(4) 249th FA Bn: Still under control of 2d Marine Division. No missions fired.

(5) 106th FA Bn: No night fires. Ten minute preparation from 0620-0630. Released by XXIV Corps Artillery at 0630. No firing for balance of period, Battalion OP's released at 1000.

30. 091600 to 101600 July, 1944

a. Enemy Situation

(1) Saipan Island declared secured at 1615, 9 July. Mop-up of pockets of enemy and individual snipers begun.

(2) Snipers active on Artillery position perimeters. Among Japs killed by 105th FA Bn was one identified by clothing and papers as Major General Kjima who evidently was in Saipan on tour of inspection.

b. Own Operations

(1) Battalions began physical inspection of all property in preparation for securing necessary replacements. Position improvement, sanitation and care of equipment stressed.

(2) Study of Tinian maps and intelligence data begun in preparation for possible move.

31. 101600 to 111600 July, 1944

a. Enemy Situation

Sniper groups hidden in caves continued to harass our troops in night forays. Some sniper activity near Artillery positions.

b. Own Operations

(1) Infantry of 105th and 106th Regiments began anti-sniper patrolling in assigned areas. The 165th Infantry Regiment remained attached to 2d Marine Division.

(2) Anti-sniper patrolling intensified by Division Artillery units. Six snipers killed on perimeters of various battalions: 105th, one; 106th, three; 249th, two, who committed suicide when discovered.

(3) Study of Tinian, in preparation for possible move there continued in all units. At 1200, the 106th FA Bn passed to control of XXIV Corps Artillery, and was alerted for movement on 12 July.

32. 11600 to 121600 July,1944

a. Enemy Situation

(1) Public address systems used by our troops to call on enemy to surrender resulted in some civilians surrendering.

(2) Up to 1730, 11 July, Division detail had buried 3,816 Jap soldiers and sailors killed in Makunsha counter-attack of 6-7 July. Some 1,500 remained unburied.

b. Own Operations

(1) The 165th Infantry returned to Division Control at 0630, and except for 106th FA Bn, entire Division remained in reserve, engaged in anti-sniper work and care of material.

(2) Survey of vehicle status and ration was conducted by Division Artillery Hq. Plans and preparations for future operations continued. The 106th FA Bn displaced to TA 188 G, H to enable it to fire on NorthernTinian, to cover troops landing there. Battalion registration on Corps Artillery Check Point 101, Tinian, was the only firing done during the period. Seven enemy killed, two wounded on perimeters of 105th and 249th during night.

33. 121600 to 131600 July, 1944

a. Enemy Situation

Scattered sniper activity in Artillery area. No enemy activity reported by other Divisional units.

b. Own Operations

(1) Only artillery activity in 106th FA Bn, which established bilateral OP's at Agingan Point and Nafutan Point and used air observation to adjust on targets on Tinian.

(2) Troops of 106th Infantry and 102d Engineer Battalion cleaned out caves North of Division Artillery Hq area where some fifteen Japs had hidden. Four snipers killed on perimeter of 249th FA Bn. One enlisted man killed while setting up booby traps.

34. 131600 to 141600 July, 1944

a. Enemy Situation

Scattered sniper activity and infiltration of Jap soldiers and civilians. Group of twenty-three, including three soldiers, four women, sixteen children, captured on perimeter of 104th FA Bn. Five Jap soldiers killed in cave near Division Artillery Hq Battery. Japs fired on 102d Engineer Battalion water point.

b. Own Operations

(1) Commanding General, USAFICPA, visited Artillery areas.

(2) Occupation of new positions begun by all units except 106th FA, still attached to XXIV Corps Artillery.

35. 141600 to 151600 July, 1944

a. Enemy Situation

Minor sniping and infiltration. Three Japs killed, two children taken

on 249th FA Bn perimeter. Among Japs killed during period was a woman in Army uniform. Many mines found in TA 113 T, 166 A.

b. Own Operations

(1) Division Artillery attached to XXIV Corps Artillery as of 0630, 15 July 1944 and alerted for possible movement to Tinian.

(2) All elements of Artillery displaced to general area 103, 104, 110, 111. Division Artillery Hq Battery completed movement to 111 W; 104th FA Bn occupied area in TA 103, D & E; 110 L, M. 105th FA Bn in area 110 M, R; 249th FA Bn in TA 110 F. No change in 106th FA Bn.position. From these new positions, Division Artillery can support landing in Northern quarter of Tinian.

36. 151600 to 161600 July, 1944

a. Enemy Situation

(1) Anti-sniper patrols by 106th and 165th Infantry bring negative results. Two snipers killed by perimeter guards of 104th FA Bn.

(2) Little movement of any kind observed on Tinian.

b. Own Operations

(1) All elements of Division Artillery complete displacement to new positions, to support action on Tinian. Light Battalions registered on Tinian by air observation. Night harassing fires on Tinian by 106th FA Bn.

(2) 105th Infantry remains attached to Saipan Garrison Force.

37. 161600 to 171600 July, 1944

a. Enemy Situation

(1) Saipan: Scattered sniper activity, especially in areas near caves. Jap materiel captured includes some .303 cartridges, ball, Winchester, stamped 7 January 1942.

(2) Tinian: Continuous air observation throughout daylight hours fails to reveal any great amount of enemy movement, although captured documents outline defensive construction projects.

b. Own Operations

(1) Division Artillery still under control of XXIV Corps Artillery, in position to deliver fire on Northern Tinian to limit of range, all units engaged in position improvement. Artillery planes used to take liaision officers and forward observers on aerial reconnaissance over Tinian in preparation for possible movement there.

(2) Commanding General, 27th Division, accompanied by Commanding General, 27th Division Artillery, inspected Artillery positions.

(3) 105th Infantry remained attached to AGF, Saipan. 106th and 165th Infantry continue anti-sniper patrol.

171600 to 181600 July, 1944

a. Enemy Situation

(1) Saipan: Some sniper activity.

(2) Tinian: Little activity by day, but construction of defensive positions by night continued by enemy.

b. Own Operations

(1) Commanding General, Battalion Commanders, S-3's, and S-2's attended meeting with Commanding General, 27th Infantry Division to discuss forthcoming Tinian operation. S-3, XXIV Corps Artillery, visited Command Post, 27th Division Artillery, to discuss Tinian artillery plans.

(2) Battalion began firing on assigned targets on Tinian, from Saipan positions, using airplanes and ground OP's.

(a) 104th FA Bn: Set canefields on Tinian ablaze in eight missions with WP.

(b) 105th FA Bn: Four missions on Tinian.

(c) 249th FA Bn: Seven missions, including night harassing fires on Tinian.

(d) 106th FA Bn: Harassing missions on Tinian.

39. 181600 to 191600 July, 1944

a. Enemy Situation

(1) Saipan: No activity reported.

(2) Tinian: Artillery air and ground observers noted slight activity on Northern Tinian, including AA fire directed against a friendly plane.

b. Own Operations

(1) All battalions continued firing on Tinian, burning canefields with WP and delivering night harassing fires. Missions: 104th FA Bn, five, 105th FA Bn, two, 249th FA Bn, five.

(2) Commanding General, 27th Division Artillery, inspected OP's. Preparations for movement to Tinian continued.

40. From 191600 to 201600 July, 1944

a. Enemy Situation

(1) Saipan: Increased sniper activity as Japs left caves and made forays into Army and Marine positions.

(2) Tinian: Little daytime activity observed.

b. Own Operations

Division Artillery continued observation of Tinian from land, sea and air. Firing on canefields and on targets of opportunity, with good effect, continued. Experimental firing with Shell, BE, 116, w/F, TM 67, conducted by 106th FA Bn. Results good.

41. 201600 to 211600 July, 1944

a. Enemy Situation

(1) Saipan: Statistics on operation up to 20 July 1944: Japs buried, 20,212; Jap POW's, 846; Korean POW's, 828, civilians, 14,600. Total of 101 Jap tanks destroyed.

(2) Tinian: Little activity observed.

b. Own Operations

(1) Air, ground and sea observation of Tinian continued by Division Artillery. Missions fired: 104th FA Bn, one; 249th FA Bn; six; 106th FA Bn, one.

(2) Close study of plans and intelligence data for Tinian operation.

42. 211600 to 221600 July, 1944

a. Enemy Situation

(1) Saipan: Scattered sniper activity.

(2) Tinian: Some activity observed, mainly by air observers.

b. Own Situation

Considerable firing by battalions on Tinian targets. Air, ground and sea observation continued.

43. 221600 to 231600 July, 1944

a. Enemy Situation

(1) Saipan: Little sniper activity reported.

(2) Tinian: Little activity observed.

b. Own Operations

Elements of Division Artillery prepared to render maximum support within its capabilities to troops poised for Tinian attack. All preparations completed for possible move to Tinian. Twelve missions fired. Commanding General, Executive Officer, Battalion Commanders and large representation of Division Artillery attended dedication of 27th Division Cemetery.

44. 231600 to 241600 July, 1944

a. Enemy Situation

(1) Saipan: Some sniper activity.

(2) Tinian: Light resistance by Japs against Marine landings. Air bursts, probably from enemy dual purpose guns on Tinian, reported over 106th FA Bn area.

b. Own Operations

(1) Elements of 4th Marine Division landed on Tinian, White Beaches 1 and 2, at 0742, meeting little resistance from Japs. By 1400, entire 4th Division, less 3d Battalion, 23d Marines, had landed. Friendly tanks spearheaded drive toward Ushi Point Airport.

(2) Division Artillery fired preparations in support of Marine landings, from 0645 to 0737, and continued reinforcing fires of 10th Marine Artillery throughout day, while landing forces established beachhead 2600 yards along coast and up to 1400 yards inland. Air observation was continuous and Division Artillery fires were coordinated carefully for maximum effect. Light Battalions fired eleven missions after preparation. The 106th FA Bn delivered night harassing fires, preparation, and smoked Mt. Lasso, to hamper enemy observation.

45. 241600 to 251600 July, 1944

a. Enemy Situation

(1) Tinian: Japs attempted counter-attacks and infiltration from 0315, but were repulsed. Coastal defense guns in TA 510 G scored two hits on the "Colorado" and three on the destroyer "Norman Scott", killing 18 and wounding 36. The three coast guns were destroyed. Known enemy dead, 1079. Many booby-trapped souvenirs found. Enemy artillery shell fell on FDC, 1st Battalion, 14th Marines, causing nine casualties.

(2) Scattered sniper firing on Saipan.

b. Own Operations

Division Artillery delivered night harassing fires, defensive concentrations, preparation from 0945 to 1000, and missions throughout the day in support of Marines on Tinian. Observation from airplanes and ground OP's was

continuous. Defensive fires aided materially in destroying counter-attacks of enemy. Following preparation, Marines advanced without opposition. Second Marine Division less one reserve battalion landed, and beachhead was enlarged materially. Light battalions fired 45 missions. Total of 48 rounds fired by 106th FA Bn. New howitzer obtained by 249th FA Bn to replace defective piece. Scored tube caused one howitzer of 106th FA Bn to be called out of action.

46. 261600 to 261600 July, 1944

a. Enemy Situation

(1) Tinian: Enemy moving south in small groups. POW reports morale low, water scarce.

(2) Little sniper activity on Saipan.

b. Own Operations

(1) Marines on Tinian advanced rapidly behind artillery, naval gunfire, and air strikes, reaching terrain beyond Division Artillery maximum range, by early afternoon. Air observation continued by Division Artillery planes and preparations completed for movement to Tinian. Tube replaced on 106th FA Bn howitzer and piece returned to action.

(a) 104th FA Bn: Night harassing, preparation and three call missions fired.

(b) 105th FA Bn: Seven missions fired.

(c) 249th FA Bn: Six Battalion missions fired.

(d) 106th FA Bn: Registration and seventeen missions fired.

(e) Commanding General, 27th Infantry Division, and his Chief of Staff; and Commanding General, 27th Division Artillery made tour of artillery areas.

47. 261600 to 271600 July, 1944

a. Enemy Situation

(1) Tinian: Enemy offered little resistance to our troops in their sweep southward.

(2) Saipan: No enemy activity reported.

b. Own Operations

(1) Light battalions unable to fire as enemy had retreated beyond maximum range of 105mm howitzers from present position on Saipan. Total of sixty-three (63) missions fired by 106th FA Bn during period.

(2) Preparations for displacement of Division Artillery to Tinian completed. Division Artillery TQM accompanied G-4, 27th Division, on reconnaissance of Tinian beaches.

48. 271600 to 281600 July, 1944

a. Enemy Situation

(1) Tinian: Some artillery fire from Southeast of Tinian Town reported by 2d Marine Division. Known enemy dead: 2,246. POW's: 8. Enemy continued fleeing south.

(2) Saipan: No activity.

b. Own Operations

106th FA Bn began displacement to Tinian in LCT, embarking at Blue Beach, Saipan. Remainder of Division Artillery remained alerted for displacement. Executive Officer, Division Officer, flew to Tinian to confer with Commanding General, XXIV Corps Artillery on positions.

49. 281600 to 291600 July, 1944

a. Enemy Situation

(1) Tinian: Resistance light and sporadic. Enemy withdrew in orderly fashion to south, leaving multitude of booby traps behind him. Burial of their dead by Japs made count of casualties difficult.

(2) Saipan: Scattered sniper activity.

b. Own Operations

One battery of 106th FA Bn in position on Tinian in TA 618 K after landing on White Beach. Balance still afloat, unable to land because causeway was torn loose from moorings by heavy surf, which also prevented repairs. Commanding General, 27th Division Artillery made an air reconnaissance of Tinian. Fragments from ten air bursts, caused by premature bursts of friendly 155mm Shells, fell in 249th FA Bn area.

50. 291600 to 301600 July, 1944

a. Enemy Situation

(1) Tinian: Enemy retreated South as our troops advanced.

(2) Saipan: Increase in scattered sniper activity.

b. Own Operations

No change in status of Division Artillery.

51. 301600 to 311600 July, 1944

a. Enemy Situation

(1) Tinian: Japs retreated to extreme tip of Island.

(2) Saipan: Increase in sniper activity. Additional dumps of ammunition and rations found by patrols.

b. Own Operations

(1) Two batteries of 106th FA Bn returned to old positions on Saipan without having landed on Tinian. Light battalions remained in position and reported no activity.

(2) Systematic mop-up of NorthernSaipan begun by Infantry of 27th Division. Troops left LD (north of Garapan on west to Hashigoro on East) at 1030 and were to secure terrain to second phase line by 1800.

52. 311600 to 011600 August, 1944

a. Enemy Situation

(1) Tinian: Enemy confined to extreme tip of Island.

(2) Saipan: Mop-up of Northern Saipan continued. First day's toll of enemy, 158 killed and 54 captured. Prisoners declared Jap stories of American tortures prevented surrenders. Many Japs not yet aware that Saipan has been completely occupied by US troops.

b. Own Operations

(1) Division Artillery, less part of 106th FA Bn on Tinian, remained in positions on Saipan, under control of XXIV Corps Artillery. One Battery of 106th FA Bn now in position on Tinian in TA 579 F.

53. 011600 to 021600 August, 1944

a. Enemy Situation

(1) Tinian declared secured as of 1855 1 August, 1944.

(2) Saipan: Mop-up revealed many hidden groups of Jap soldiers and civilians.

b. Own Operations

(1) All elements of Division Artillery return to control of 27th Infantry Division as of 1200 2 August. Balance of 106th FA Bn enroute back to Saipan from Tinian.

54. 021600 to 031600 August, 1944

a. Enemy Situation

Pockets of resistance eliminated by 27th Division Infantry on Saipan and by Marines on Tinian.

b. Own Operations

(1) Division Artillery now completely established on Saipan. Executive Officer conferred with Division on projected occupation of new positions to the North. Artillery planes assisted Infantry in spotting enemy in mop-up operations.

(2) Employing planes and LCI as observation aids, Infantry advanced North on Saipan cleaning out remaining pockets of Jap resistance. LCI guns assisted by firing into caves along shore. Results of mop-up from 16 July to 3 August: Enemy killed, 1420, captured, 980.

55. 031600 to 041600 August, 1944

a. Enemy Situation

Resisting to the last, in mop-up activities on Saipan and Tinian, many Japs committed suicide with firearms and by casting themselves off cliffs.

b. Own Operations

No change in Artillery situation.

56. 041600 to 051600 August, 1944

a. Enemy Situation

(1) Mop-up continued on Saipan and Tinian. Increased resistance on Saipan as Infantry constricted Japs into shrinking area.

(2) Report of 20 enemy craft in Magicienne Bay at dusk on 4 August proved false.

b. Own Operations

No change in Artillery situation.

57. 051600 to 061600 August, 1944

a. Enemy Situation

Last remnants of Jap resistance on Saipan eliminated as Infantry of 27th Division completed mop-up, reaching end of Island. Results of mop-up from 16 July to 6 August: Enemy killed, 1711, captured, 1227.

b. Own Operations

(1) Our casualties for mop-up operations: Killed, two officers, 21 enlisted men; wounded six officers, 114 enlisted men.

(2) CG, 27th Division Artillery, evacuated to hospital in Oahu with aggravated back injury incurred prior to Saipan operation. Lt. Col. George P. Van Nostrand, CO, 104th FA Bn, became Executive Officer, Division Artillery, and assumed command in absence of CG. Lt. Col. William F. Wulf assigned as Executive Officer, Division Artillery. Major Dwight McCallum, CO, 249th FA Bn, assumed command of the 104th FA Bn; Lt. Col. John H. Scott became CO of the 249th FA Bn. No change of command in 105th and 106th FA Bns. All Artillery elements remain in positions on Southern Saipan.

Section III

58. Summary

a. In the execution of its mission in the "FORAGER OPERATION", the 27th Division Artillery utilized to the utmost capabilities developed during three and a half years of active service, including experience gained in two prior combat operations.

b. The preparatory period, from announcement of the mission on 1 April to the embarkation of troops completed on 1 June, was employed to the greatest possible advantage in thorough planning and training.

c. From the time advance elements landed on Saipan on 16 June, until completion of active combat, the Division Artillery spared no effort to render maximum aggressive, effective support to the Infantry. Upon completion of the Saipan phase, all battalions moved to the Southern tip of the Island to support landings on Tinian and displace there if necessary. A total of 669 missions were fired on Tinian targets. Although the entire 106th FA Bn embarked for Tinian, only one battery was landed because of heavy surf and crowded beaches. The battery landed fired thirty-three (33) missions and occupied two positions on Tinian. During the "FORAGER OPERATION", the Division Artillery fired a total of 66,072 rounds of howitzer ammunition in the execution of 1,943 missions, as indicated by the following charts:

I

Missions

Targets on	104th FA Bn	105th FA Bn	249th FA Bn	106th FA Bn	Totals
Saipan	503	252	264	255	1,274
Tinian	116	41	77	435*	669
Totals	619	293	341	690	1,943

*Note: Of these, 33 were fired while part of Battalion was occupying positions on Tinian.

Howitzer Ammunition Expended (all types)

104th FA Bn	19,122
105th FA Bn	15,687
249th FA Bn	16,544
106th FA Bn	14,719
Total	66,072

d. Through its coordination of Naval Gunfire for the Division, the Division Artillery was able to augment its support of the Infantry by directing additional vast quantities of devastating fire against the enemy and providing invaluable illumination throughout the battle nights.

e. Continuous liaison and forward observation, expedited by a comprehensive communications system, provided uninterrupted contact with supported elements.

f. Artillery must stress the placing of defensive fires as close as possible to infantry front lines at night, firing 200-300 yards in front of their lines in normal firing, and when using high angle fire, not less than 400 yards. Whenever possible, normal barrage should be so adjusted that it may also be used as the opening fire for the infantry attack.

g. The Infantry attack and Artillery preparation fires should be so highly coordinated that the attacking troops move immediately on the lifting of fires, or even a little bit before. Rolling barrage proved to be the most satisfactory.

h. In terrain like that found on Saipan, the direct fire of the light and medium weapons was highly effective in neutralizing caves which could not be reached by indirect fire of artillery, nor by the direct fire of other weapons.

i. Indirect fire of artillery against Jap tanks was very effective as they apparently are road bound and very slow in tactical employment. Good results were obtained on them by direct hits and as a result of fragmentation.

3.

Section IV

59. Recommendations

a. Recommendations contained in this section are of two types: Those which are SOP in the Division Artillery and may be applicable and desirable in other similar organizations; and those which this organization presents for consideration by higher headquarters.

b. On the basis of experience gained in the "FORAGER" and other operations, it is recommended:

(1) Rations

(a) That Expeditionary Force menus be improved and that rations be issued as indicated. Reduced amounts or complete omission of fruits, juices and

(f) That radio frequency channel separation be increased to reduce interference.

(g) That head and chest sets for executives and chiefs of sections of firing batteries be T/E.

4. Transportation

(a) That some training be conducted with less than T/O transportation to facilitate field operation when the number of vehicles is reduced by lack of cargo space and by combat losses.

(b) That spare parts and maintenance equipment carried be in proportion to reduced transportation.

(c) That the following vehicles be considered an absolute minimum:

Type	D/A Hq Btry	LIGHT BN (x3)						MEDIUM BN					
		Hq	S	A	B	C	TOT	Hq	S	A	B	C	TOT
Truck, 1/4 ton lt. recon.	9	12	1	3	3	3	22	7	1	3	3	3	17
Truck, 3/4 ton, w/o winch	5*	4					4	4		1	1	1	7
Truck, 2 1/2 ton, cargo			2				2		3				3
DUKW, 2 1/2 ton	1			5	5	5	15						
Tractor, M5				4	4	4	12			4	4	4	12
Tractor, LVT		3					3						
Tractor, R4	1		1	1	1	1	4		1	1	1	1	4
Trailer, 1/4 ton	2	6	1	2	2	2	13	2	1	1	1	1	6
Trailer, 1 ton	2	1					1						
Trailer, M10			2	2	2	2	8		3				3

*Four (4) 1 1/2 ton trucks for use as wire-laying vehicles would be a desirable substitution

Observations on vehicles recommended:

(1) The M5 tractor is undoubtedly the best vehicle for ground operation. It is adequate for drawing howitzers and ammunition trailers M10. Lack of replacement parts is a serious maintenance factor. Principal operating deficiency is in the clutch.

(2) The LVT-4 is an excellent vehicle for ship-to-shore but is limited in use after reaching land. Employment by artillery is recommended in limited quantities only for initial waves.

(3) The DUKW is a splendid vehicle in the water and generally satisfactory on land, except that it is not too good in mud and is too bulky for narrow or crowded roads. It proved an excellent vehicle for ship-to-shore movement, carrying a 105 mm howitzer complete with section equipment, and twelve (12) rounds of ammunition.

(4) Four (4) angledozers per battalion, light and medium, one per firing and service battery, and one per Division Artillery, Headquarters Battery, should be included in the TE.

d. That provision be made for replacement of motor vehicle batteries on shipboard or for recharging, using ship's equipment. If vehicles are not run at least every third day, battery recharging measures must be instituted.

(5) Loading

(a) That artillery be separately loaded as a self-sufficient unit in LST's and LSD's.

(b) That if a battalion be loaded on more than one ship, all officers and non-commissioned officers know who and what is on each vessel.

(c) That careful plans be made for assembling the battalion after landing.

(d) That Naval personnel be fully instructed concerning the importance of the equipment being taken ashore.

(e) That the following method be used to load a 155 mm howitzer and M5 tractor in an LCM: Elevate howitzer tube to maximum; tie traveling lock in close to jack and lower howitzer into stern of LCM. Build portable wood ramps for each side of trail so tractor can be placed over trail close to howitzer breech, thereby getting weight to stern.

(f) That gasoline and ammunition not be loaded on the same LST. If it is necessary to do so, gasoline should be held to the absolute minimum, sufficient only for initial resupply for vehicles on the LST. Deck-loaded gasoline should be protected by sand-bags and armor plate.

(g) That in shipping on LST's, temporary decking be built on ships not carrying LCT's to provide additional berthing facilities. An LST with LCT on weather deck will accommodate three hundred (300) men and twenty (20) officers.

(6) Ordnance

(a) That extra ordnance equipment include cal. .30 light machine guns, submachine guns and BAR's for perimeter and close-in defense and for liaison and forward observation parties.

(b) That on 155 mm howitzers, the left shield brace be relocated to obviate the necessity of moving right when reloading in high-angle fire.

(c) That two time-pieces with split second hands be issued each battalion for placing "time on target" fires.

(d) That all 155 mm howitzer ammunition be palletized, each sled containing twenty (20) complete rounds: Projectile, propellant and fuze.

(e) That 155 mm howitzer propelling charges consist of 100% M4A1 and an additional 25% of M3. Propellant M4 produces an undesirable bright flash almost every round. Shell, HE, MK107 and fuze M51A3 proved adequate.

(7) Ammunition

(a) That on 105 mm ammunition, fuze PDT80E6 be provided for ten percent (10%) of total allowance.

(b) That in ammunition procurement, emphasis be placed on securing the largest possible amount of the same powder lot to promote accurate fire.

(c) That expenditure of ammunition be controlled carefully. Use of artillery to attack targets which are primarily the mission of infantry weapons should be discouraged. In many cases, precision adjustment can be used to good advantage with great saving in ammunition.

(d) That illuminating shell similar to that fired by naval guns, be developed for Army field pieces.

(8) Perimeter

(a) That a detachment of infantry or engineers be made available to artillery battalions to clear position areas of snipers and seal caves which might harbor enemy by-passed.

(b) That sufficient barbed wire be supplied to enclose artillery position areas.

(c) That a 60 mm mortar and sufficient ammunition be provided to insure prompt illumination when required.

(d) That, in addition to T/E allowance of cal. .50 machine guns, several cal. .30 light machine guns be issued to each battery.

(e) That additional sub-machine guns and BAR's be provided for perimeter and close-in defense.

(f) That sound power telephones be provided for perimeter communication.

(g) That all personnel be trained in Infantry small unit tactics, grenade throwing, etc.

(h) That inner and outer perimeters be established, the outer to serve as warning system, the inner as the active perimeter. Three men should be in each foxhole, two awake in those on the perimeter, one man awake in those within the perimeter. Do not "shoot at anything that moves," as it causes jitters and unnecessary casualties among friendly troops.

(9) Liaison and FO Parties

(a) That liaison and forward observer parties be armed individually with the M1 rifle and that section equipment include sub-machine guns and/or BAR's.

(b) That at least one full relief be trained for each liaison and forward observation section.

(c) That even if there is no action, negative reports be required of all observes when the situation indicates the necessity. Procurement of front line information by liaison and forward observer personnel cannot be over-emphasized, as successful artillery fire is predicated on it in many cases.

(d) That all observers be trained in high angle fire.

10. General

(a) That a 110-volt generator be brought as it has many good uses.

(b) That a moving picture projector and a box of athletic equipment, games and books be carried for use in combat lulls and during rehabilitation periods and aboard ship.

(c) That fire direction center computers be given Tec. 5th ratings by T/O.

(d) That a minimum engineer drafting equipment be carried.

(e) That only one B.C. scope be taken by each firing battery.

(f) That artillery observers ship on carriers to be flown in Navy planes until L-4's can be landed and put in operation.

(g) That additional tools, including axes and shovels, be brought in sufficient quantities to expedite occupation of positions.

(h) That it be SOP in all headquarters to keep the CP and FDC tents separated to reduce congestion and minimize danger of loss from enemy counter-fire and infiltration.

ANNEX "A"

Answers to questions in Sections e, g and i of Secret Letter, Hq, V Amphibious Corps, 9 May 1944 (2295-5-25; 0189/366; Ser. 001453)

Section e. Artillery

1. Q. Was the artillery suitably loaded to execute the prescribed scheme of maneuver?

A. The Artillery was suitably loaded to execute its mission. Each of the three 105mm battalions was loaded on an LST with surplus vehicles and personnel on AKA's and APA's. The medium battalion was divided into three groups, each of which was loaded on an AKA. Surplus vehicles and personnel went on APA's.

2. Q. Comment on the ship to shore movement of artillery and artillery ammunition. What amount and type of ammunition was taken initially with each piece and was the amount satisfactory?

A. a. 105mm howitzers went ashore from LST's in DUKW's which took the pieces directly into position. LVT-4's also were used to unload artillery equipment, ammunition and supplies. Pieces were unloaded by means of "A" frames on DUKW's. The medium battalion loaded one M5 tractor and one 155mm howitzer in an LCM from the AKA's which landed on the beach from where the piece was towed into position.

b. Initially, each DUKW with a 105mm howitzer took three (3) rounds of 105mm WP with fuze M57 and nine (9) rounds of 105mm HE with fuze M48. This proved adequate for registration until ammunition in quantity came off the LST's.

c. Each of the medium battalion's prime movers, twelve (12) M5 tractors, when first landed carried.

23 rds shell HE Mk 107
1 rd shell HC BE MK 116
24 chg propelling charge M4A1
23 fuzes M51A3 w/booster M21A2
14 fuzes M55A1 w/booster M21A2
1 fuze M54
1 fuze M67 w/o booster
9 fuzes M67
26 primers

Initially this 155mm ammunition was sufficient.

3. Q. How was artillery fire controlled? Was air spot used.

A. Artillery fire was controlled through Division Artillery and Battalion Fire Direction Centers. Forward observers and liaison officers on the front lines were used to adjust and surveille pre-arranged fires and to fire on targets of opportunity. Battalion OP's were used when practicable and were valuable. Air spot was used primarily for registration.

4. Q. Comment on artillery communications.

A. Artillery communications, both wire and radio, were, almost without exception, satisfactory throughout the action. Wire communication was used exclusively in position areas and was entirely satisfactory. Lateral lines between batteries and battalions were SOP. But wire carried to front lines was cut continually by track-laying vehicles, despite all precautions, and had to be supplemented by radio, which became the principal means of communication between the Battalion CP's and forward observers and liaison officers. When maximum efficient ranges for radio sets were exceeded by rapid forward movement of infantry, wire heads were used and front line sets worked through these by remote control. Prompt forward displacement of artillery as the situation warranted kept this practice to a minimum. There was considerable radio interference at times from Navy channels, notably beach parties and control boats working along shore. In general, wire W-110 was used in preference to W-130, inasmuch as the latter has insufficient tensile strength and inadequate insulation to make it practical for use in all situations.

5. Q. What changes, if any, were necessary for the efficient functioning of fire direction centers?

A. In actual combat practice, the principles learned in training proved generally satisfactory. But TO allowance of Fire Direction Center personnel proved inadequate for sustained action, necessitating relief by personnel of other sections who had been trained for just such an emergency.

6. Q. Was any use made of sound and flash ranging?

A. Sound and flash ranging facilities were not available during the operation.

7. Q. What types of ammunition were fired? Total expended? What were normal rates of fire? Recommend proportions of each type ammunition for future operations.

A. a. The following types of 105mm ammunition were fired on the Forager Operation by the light battalions:

		Phase I Saipan	Phase III Tinian	Total
104 FA				
105mm HE, M1, fz M48A1		10432	1875	12307
105mm HE, M1, fz M54		4975	1120	6095
105mm WP, M60, fz M57		325	395	720
	Total	15732	3390	19122
105 FA				
105mm HE, M1, fz M48A1		7721	1103	8824
105mm HE, M1, fz M54		5852	330	6182
105mm WP, M60, fz M57		679	2	681
	Total	14252	1435	15687

		249 FA Phase I Saipan	Phase III Tinian	Total
105mm HE, M1, fz M48A1		9330	1713	11043
105mm HE, M1, fz M54		3698	1142	4840
105mm WP, M60, fz M57		584	77	661
	Total	13612	2932	16544

Total 105mm ammunition expended Forager Operation:

		104 FA	105 FA	249 FA	Total
105mm HE, M1, fz M48A1		12307	8824	11043	32174
105mm HE, M1, fz M54		6095	6182	4840	17117
105mm WP, M60, fz M57		720	681	661	2062
	Totals	19122	15687	16544	
Forager Operation Grand Total 105mm all types:					51353

b. The following types of 155mm howitzer ammunition were fired on the Forager Operation by the medium battalion:

		106 FA Phase I Saipan	Phase III Tinian	Total
155mm HE, Mk 107		7668	5674	13342
155mm HE, Mk 102			253	253
155mm HC, BE, Mk 116		84	1024	1108
155mm WP, Mk 110			16	16
	Total	7752	6967	14719

c. Most of the HE ammunition with fuze M54 was fired for percussion and the time element of the fuze was rarely used since targets suitable for time fire did not present themselves.

d. Normal rate of fire was two (2) rounds per gun per minute for 105mm howitzers. For the 155mm howitzers, the normal rates of fire were three (3) rounds per gun per minute for short periods and one (1) round per gun per minute for sustained firing.

e. For future operations, dependent upon the mission, the following types and proportions of ammunition are recommended:

105mm Battalion

105mm HE, M1, w/fz M48A1	50 %
105mm HE, M1, w/fz M54	30 %
105mm WP, M60, w/fz M57	9 %
105mm HC, BE, M84, w/fz M54	1 %
105mm HE, M1, unfuzed (adapted for fz Nose, CP T-105)	10 %
Fuze, Nose CP T-105	1 fuze per unfuzed round

155mm Battalion

Primers	110 %	Fuze M51A3 w/booster M21A2	95 %
155mm HE, Mk 107	90 %	Fuze M55A1 w/booster M21A2	5 %
155mm WP, Mk 110	9 %	Fuze M67 with booster M21A2	5 %
155mm HC, BE, Mk 116	1 %	Fuze M67 without booster	1 %
Propelling Charge M4A1 (zone 3-7)	100 %	Fuze M54	1 %
Propelling Charge M3 (zone 1-5)	110 %	Fuze Nose, CP T-105	10 %

Note: The amount of 105mm ammunition provided was not sufficient for a prolonged engagement. Despite conservation of ammunition per mission, the resupply was at a critical point at the cessation of hostilities. Ammunition which had been intended to be allocated among all 105mm artillery battalions, was allotted, for the major part, to the Marine Artillery.

8. Q. Comment on maintenance of artillery material during action and during lulls in action.

A. Maintenance of materiel was carried on during lulls in firing. Almost daily visits to firing batteries were made by Ordnance personnel. Howitzers stood up well.

9. Q. What materiel deficiencies, if any, were noted?

A. Very few major materiel deficiencies were noted which could not be attributed to normal wear and tear.

a. Trail spades on 105mm howitzers buckled on hard ground and had to be reinforced with 1/2" plate instead of the usual 3/16" plate.

b. The bracket supporting the left top shield segment on the 105mm howitzer snapped on four pieces during fire, allowing the metal plate to strike, and in one case, damage the sight.

c. Failure of six (6) safety latch firing mechanism plungers in 155mm howitzers was reported.

d. 155mm howitzers in some cases required replacement of jack assembly because of jack gears binding.

10. Q. Was liaison with the infantry satisfactory?

A. Liaison with the infantry was generally satisfactory. Each light artillery battalion had a command liaison officer with its supported infantry regiment at all times and each infantry battalion had a liaison section and forward observation section with it continually. Personnel of these sections had worked with the infantry battalions to which they were assigned during a long training period, and in some cases in previous combat action. The value of that close association was demonstrated throughout the action. In addition to maintaining constant contact with Army infantry, the Division Artillery also exchanged liaison officers with Marine artillery regiments to coordinate fires near division boundaries.

11. Q. Comment on any special training or artillery technique that should be stressed during the preliminary training for landing against hostile opposition.

A. Special training for landing against hostile opposition should include:

a. Naval control boat and beach marking methods for all officers, non-commissioned officers and DUKW and LVT drivers.

b. Complete training of all DUKW, LVT and other special vehicle drivers in minor repairs and maintenance of these vehicles through the second echelon.

c. Infantry tactics, scouting and patrolling and use of infantry weapons, for the effective clearing of sniper-infested areas and for the establishment of the perimeter defense and local security measures.

d. Combined training with infantry in RCT exercises.

e. Use of maps similar to those furnished for "Forager" operation as firing charts for preliminary training.

f. Complete indoctrination of all firing officers in the attack of targets: type shell and fuze best suited to the mission, number of guns and rounds necessary, etc.

g. Practice in operation with less than authorized number of vehicles during training periods, to enable troops to operate efficienctly in the field when organic transportation is reduced by limited cargo space and by loss in combat.

h. Thorough instruction of carefully chosen capable officers in the principles and practice of Transport Quartermaster operations.

12. Q. Comment on the organization for combat of the artillery with the Corps during the various phases of the operation.

A. No comment.

13. Q. Comment on the artillery survey established over the Corps sector. Was it adequate and was it established early enough to be effective?

A. On Saipan Corps survey was adequate when available, but was not carried forward quickly enough to be of maximum value and survey stations, in some cases, could have been marked more clearly. Corps survey established for Tinian operation was satisfactory.

14. Q. Comment on the counter-battery organization. Responsibility? Technique? Effectiveness?

A. Counter-battery was organized within the medium battalion only. Observation Posts were established with communication to make flash spotting possible. Very little enemy artillery was observed by elements of this Division Artillery, thus reducing the need for counter-battery.

15. Q. What displacement of artillery was necessary?

A. Battalions of the Division Artillery occupied initial beach positions and made three forward displacements on Saipan to provide aggressive, effective support of its infantry. At the conclusion of the Saipan operation, displacement to the south shore was effected to support the initial phases of the operation on Tinian. Medium battalion displaced to Tinian.

16. Q. What liaison was established by Corps Artillery?

A. A Liaison Officer from Corps Artillery was present at Division Artillery Headquarters throughout the period of artillery employment in the Saipan operation.

17. Q. To what extent was fire massed on a single target by the various artillery echelons? What was the average number of battalions used on a single target by each headquarters?

A. During the Saipan operation, on two occasions Division Artillery Headquarters conducted massing of fire on enemy infantry assembly areas. Normally, no concentrations larger than the battalion were fired on a single target. But several times during the campaign the fires of two or three battalions were placed on a single target.

Section g. Naval Gunfire

1. Q. Was the shore fire control party adequate and did it deliver requested support fires expeditiously?

A. The Shore Fire Control Party was adequate as to composition and training. When Naval gunfire was needed, the SFC personnel or the NLO party conducted the fire expeditiously and effectively.

2. Q. Were the fires adjusted quickly and properly?

A. Yes. The only delaying factor, in several cases, was poor radio communications.

3. Q. Did call fires provide the desired effect?

A. The effect on targets was usually good. There was an appreciable difference in the speed and accuracy with which the various firing ships delivered fires.

4. Q. Describe the effect of naval gunfire on various types of fortified positions.

A. Naval gunfire proved invaluable in coastal target areas that were defiladed from artillery fire. Due to it's flat trajectory, it could blast caves and fortifications in steep cliffs with excellent effect. Strong reinforced concrete emplacements were reduced. Fires delivered on targets in flat areas were less effective, and left numerous duds.

5. Q. Any recommendations for future employment of naval gunfire in support of troops landing against hostile opposition.

A. a. Naval gunfire proved a formidable and valuable weapon, whenever used. For the purposes of this Division, there were adequate firing ships, but the opportunities to use them were limited.

b. Naval star-shell illumination was of inestimable value, although the supply of these shells was limited. It is recommended that larger allowances of illuminating shell be allotted to fire support ships.

c. Radio communication would be improved if the Regt'l NLO were given an SCR - 193 to replace his SCR 284, and the SFC were given an SCR - 300 to replace his SCR - 284. The Bn NLO should keep his SCR - 284. Transportation of heavy radio equipment presented a problem that can be solved readily by giving each Bn NLO a 1/4 Ton vehicle with trailer. If the SCR - 284 were mounted in this vehicle, it would obviate the necessity of grinding the hand generator during darkness ------ a "giveaway" of position.

d. Finally, it is suggested that unit commanders be thoroughly indoctrinated in the effective use and potentialities of naval gunfire.

Section i. Supply and Transportation

1. Q. Were DUKW's able to negotiate coral reefs satisfactorily?

A. DUKW's were able to negotiate reefs satisfactorily when necessary because distances travelled over actual coral reefs were not more than 100 yards. Whenever possible, DUKW's used channels through the reefs, both natural and blasted, to save wear and tear on tires.

2. Q. What portion of supplies to be used during the assault phase should be palletized?

A. In the assault phase, all supplies that cannot be carried initially in vehicles should be palletized. All 155mm howitzer ammunition should be palletized, twenty (20) rounds per pallet, together with twenty (20) propelling charges and twenty (20) fuzes. This expedites unloading and firing by keeping together the three seperate items required for a complete round. Firing batteries should carry all primers.

3. Q. Were vehicle and tank waterproofing kits satisfactory?

A. Vehicle waterproofing kits were satisfactory, although no real tests were necessitated since the majority of the vehicles were landed in very shallow water or directly on the beach.

4. Q. Was the allowance of ammunition, including hand grenades, adequate or excessive?

A. The allowance of small arms ammunition was adequate with the exception of the signal, ground, white star parachute M17A1. These should be tripled. The number of AT rockets, 2.36" carried was excessive.

5. Q. Were various types of supplies available upon call when required?

A. The only supply not available on call when needed was 105mm ammunition from resupply ships.

6. Q. What changes should be made in the types and quantities of supplies to be embarked on APA's?

A. No changes in supplies on APA loading are recommended except that ships' store have larger quantities of candy for sale to Army troops.

7. Q. Were flame thrower and squad demolition kits effective, adequate, or excessive in quantities?

A. Engineer explosives, booby trap devices, etc., taken by artillery battalions were adequate.

8. Q. What items were carried in the combat pack? What changes should be made?

A. Items carried on combat packs were those prescribed by 27th Infantry Division.

9. Q. Were palletized equipment and supplies damaged by water or rough handling?

A. Very few pallets of ammunition were damaged by water or rough handling. The only damage incurred was when fuzes, and in some cases, propelling charges, were removed from 155mm ammunition pallets before the medium battalion could collect their pallets which were scattered at every beach. The method of banding and palletizing the artillery ammunition was excellent.

10. Q. Comment on quantity and type of rations carried ashore by individuals in assault unit.

A. Individuals carried ashore two(2) days of "K" rations which was sufficient.

11. Q. Comment on quantity of "B" rations put ashore for use of assault troops. Were "B" rations fully unloaded for the use by units after assault phase? Were ration dumps set up, rations segregated, guarded and properly issued?

A. Concerning "B" rations, the full Expeditionary Force menu was not always available, shortages being in vital juices and fruits, frequently with no substitutions.

12. Q. Were the post exchange components of "B" ration furnished with the rations? Were they adequate until regular post exchange facilities could be established?

A. Chocolate, hard candy, chewing gum, soap and tobacco were available and were greatly appreciated by all personnel.

13. Q. Was galley equipment unloaded and put into use during the assault phase? When should galley equipment be landed?

A. Field ranges were among the last items unloaded and were put into use ten (10) days after landing. This was satisfactory although if "10 in 1" rations were issued in lieu of "B" rations, field ranges would not be needed, since cooking could be done on the QM one burner cooking outfit. This would save on water and cut down loads when displacing. The "10 in 1" rations are easier to handle.

ANNEX "B" 1

Personnel

1. a. Personnel embarked for the Forager Operation and those left with the rear echelon were as follows:

	Embarked - Forager Operation			Left in Rear Ech, Fort Kam		
	Off	WO	EM	Off	WO	EM
104th FA Bn	33	1	456	2	1	62
105th FA Bn	28	1	455	2	1	40
106th FA Bn	28	1	476	2	1	39
249th FA Bn	31	1	454	1	1	38
Hq & Hq Btry D/A	20	1	100	1	0	9
Total	140	5	1941	8	4	188

b. Personnel on furlough, in hospitals and in Replacement Depots were left with the rear echelon at Fort Kamehameha, Oahu, T. H. In addition, each unit left one (1) commissioned officer, the battalion personnel officer (with service records, etc.) and a small group of enlisted men to maintain, guard and ship to the rehabilitation point all organizational equipment stored in the rear echelon.

2. Battle casualties incurred on the Forager Operation were as follows:

	KIA		WIA		MIA		INJ		Total casualties		
	Off	EM	Off	EM	Off	EM	Off	EM	Off	EM	Total
104th FA Bn	0	5	4	16	0	0	1	0	5	21	26
105th FA Bn	0	3	2	8	0	0	0	0	2	11	13
106th FA Bn	0	1	0	2	1	1	0	3	1	7	8
249th FA Bn	4	8	3	15	1	2	0	1	8	26	34
Hq & Hq Btry DA	1	1	2	4	0	0	0	2	3	7	10
Total	5	18	11	45	2	3	1	6	19	72	91

3. Recommendations:

a. If personnel are shipped by RCT's, a uniform method should be established for the handling of passenger sailing lists among Infantry Regiments.

b. Personnel Officers and service records should accompany units.

c. Unit Rosters should include middle names of all personnel for use in promotion orders and award citations.

ANNEX "B" 2

Medical Service

1. Prior Plans and Training:

a. Training:

(1) Beginning the first week of April, 1944, a fifty-hours, five weeks intensive refresher course was given to all medical personnel. Emphasis was placed on the care and treatment of wounds and fractures, field sanitation, tropical diseases and field improvization in the splinting and transportation of patients. Lectures were kept to a minimum, actual field exercises were stressed.

(2) Simultaneously, intensive training in First Aid and Field Sanitation was given to the artillery personnel. Basis for training was WD Cir # 48, 3 February 1944, "Training in Basic Medical Subjects." On completion an examination was given. Deficiencies found were corrected by additional instruction.

b. Supply:

(1) Due to restricted transportation, considerable thought was given to the choice of medical equipment and supplies. Past operations were of value in determining methods of bringing personnel and equipment ashore. Supplies were divided into three categories; these carried on the backs of personnel in the initial artillery waves; equipment and supplies carried in the vehicle; and those carried in the ship's hold.

(2) Canvas sacks, waterproofed and lined with waterproof paper, were packed with supplies and instruments which might be needed during and immediately after the landing, prior to the arrival of the medical vehicle in the position area. These sacks, carried inside the infantry haversack, contained sufficient supplies for one day of combat with moderate casualties and weighed fifteen pounds each. Since there might be difficulty in landing, a greater weight was not considered advisable.

(3) The medical vehicles, 1/4-ton trucks, converted by racks into ambulances, contained the remainder of the medical equipment, and a three days medical supply. In addition to entrenching tools carried by personnel, several larger digging implements were in the vehicles. Approximately 25 gallons of water was carried. Tent flies and paulins, which protected the equipment and supplies were used for overhead cover in the aid station.

(4) A 15 days supply was carried in the ship's hold. It was felt that the MD Chests # 1, # 2 and # 4, were too heavy and bulky for the small amount of essential supplies which they provided. They were shipped in holds with a low priority.

(5) Since there was a possibility that the artillery might be used independently of the rest of the Division, and thus higher echelon medical service might not be available for several days, plans were laid for pooling of personnel and equipment to do such work. Plans also were made for beach evacuation centers if needed.

c. Immunization: Immunization against smallpox, typhoid, typhus, tetanus and yellow fever were completed prior to embarkation.

2. Combat Operation:

a. Landing and Occupation of Position:

(1) Medical personnel and equipment of the light field artillery battalions were transported to the operation in LST's, for the main part. A few medical soldiers sailed on other ships to provide medical care during the landing of the artillery personnel from those vessels. These troops reverted to their regular jobs on arrival at the position area. In the first wave of artillery personnel was the surgeon with an advance detail to select the site and organize the battalion aid station, which would be improved and completed by additional medical personnel landing later. The first position was in the vicinity of the beach. The 249th FA Bn and 105th FA Bn landed on the morning of 17 June. Landing and occupation of position was uneventful and according to plan. The only delay was caused by the LVT bringing ashore the medical vehicle for the 105th FA Bn being held up at the reef. The delay was slight and did not inconvenience that medical section. The medical section of the 104th FA Bn, which remained afloat initially, was landed on 20 June.

(2) The medium field artillery battalion, being transported in three AKA's, had its medical personnel divided accordingly. Aid station personnel was used to augment battery aid men on other ships. The landing, started on the evening of June 16, was made in LCM's and LCT's.

(3) The advance detail of the medical section of Division Artillery Headquarters landed on the beach before daylight on 17 June with other advance elements. Due to small arms fire and enemy infiltration it was deemed inadvisable to proceed from the beach to the predetermined position. At dawn, movement afoot to the new area was accomplished, a site for the aid station was selected within the perimeter of the headquarters and station promptly opened. The remainder of the medical troops arrived with the rest of the headquarters troops, and completed construction of the aid station.

b. Subsequent occupations of new positions were according to predetermined plan. The battalion aid station moved with its headquarters, the battery aid men moved with their batteries. When necessary, battery aid men were reinforced by aid station personnel. Battalion aid station sites were always within the perimeters. Battery aid men were located near battery command posts.

c. Medical service:

(1) Because of the stench and attraction for flies, bodies of enemy dead were buried immediately. In the initial position more than 150 Jap dead were buried. Marine dead were transported to Marine cemetaries. Battalions were advised that evacuation was to naval beach parties at Charan Kanoa, from where they were evacuated directly to hospital ships. There were no higher medical installations functioning on the island at the time.

(2) Since troops had been advised previously of the importance of prompt treatment of minor lacerations and the early recognition of disease, there was a constant trickle of patients to the aid men and the aid station. The greater part of the burden was on aid men, who treated the artillery personnel at the alert stations. Cases they could not handle, or of which they were not certain, were referred to the aid station. This once again demonstrated the advisability of having competent personnel attached to the batteries. In addition to lowering the noneffective rate, this was a great morale factor. Most of the battery aid men were provided with small boxes in which they carried supplies necessary for treating the troops. Resupply was from the battalion aid station. These boxes were transported in battery prime movers.

(3) At the beginning, straddle trenches were used for latrines. Although drainage in the sandy loam was excellent, walls collapsed repeatedly, necessitating reinforcement. Fly control became important, particularly in positions near canefields. Improvised pit latrines were then used. Since digging to any great depth was impossible with the implements available, latrines were built up by the use of bulldozers and sites changed frequently.

(4) Fly control was a constant problem. Kitchens were screened with captured enemy material whenever possible. Extensive use was made of fly traps. Large fly traps were filled in a couple of days and had to be replaced. These traps kept flies at a reasonable level as compared with the surroundings, and the men derived great moral satisfaction from seeing such tremendous quantities of flies captured and killed. The most important factor in the success of fly traps is the type of bait used. Jap crabmeat, captured in impressive quantities, proved very efficacious.

(5) Diarrhea broke out a few days after landing. Vigorous early medical treatment was instituted. Paregoric, bismuth and sulfa drugs were used. Most of the cases ran a lowgrade temperature, and had five to fifteen stools per day. Such cases were treated on a duty status. The best treatment consisted of adequate doses of sulfadiazine, with paregoric given for severe cramps. Treatment continued for at least twenty-four hours after cessation of complaints. Diarrhea in practically all cases cleared up after 24 hours of treatment. A few cases ran high temperatures and had considerable prostration. These were evacuated to the field hospital for treatment. By 20 June, evacuation to the field hospital and clearing company was possible. The incidence of diarrhea dropped gradually and practically disappeared by 15 July. It is possible that a gradual self-immunization against toxic factors causing the diarrhea took place.

(6) Medical resupply through normal channels started on 20 June and the greater part of the reserve medical supply was held in reserve. Most items were available at the beginning, but were difficult to obtain at the close of the campaign. Bandaids, plain sterile gauze, absorbant cotton and multivitamines were in this category. The reserve medical supply was then utilized for the most part in the rest and rehabilitation areas.

(7) Prisoners of War revealed the presence of dengue fever on the island, and starting the first week of July such cases occurred. Most cases were mild, ran a temperature below 103 degrees and complained of "Pain between the eyes," and generalized body aches. These mild cases responded

readily to symptomatic treatment and were not evacuated. The best treatment for the mild cases consisted of codeine sulfate and a barbiturate, with small doses of antipyretics to lower the temperature when it became excessive. Fluids were forced, and cathartics given when necessary. This treatment gave the fastest and most comfortable convalescence. Severe cases were evacuated. It is estimated that at least 25% of the artillery personnel had dengue fever, most of it mild, and treated on a duty status.

(8) Most battle casualties treated resulted from sniper fire. Since aid stations were on main lines of drift, considerable numbers of infantry and Marine troops were treated. Treatment was excellent and medical troops displayed considerable bravery in evacuating wounded under hostile fire.

(9) Casualty reports were found to be practical and efficient. There was no appreciable delay in getting these reports to higher headquarters. Some delay was experienced in getting the duplicate EMT tags of artillery personnel processed through aid stations other than those of the 27th Division Artillery.

(10) The following battle casualties were experienced in the 27th Division Artillery:

Killed in action	21
Died of wounds	2
Wounded in Action	56
Injured in Action	7
Missing in Action	5
Total	91

(11) Following the securing of Tinian, aid stations remained in position at the southern tip of Saipan and provided medical service for this period of rehabilitation.

3. Summary, Conclusion and Recommendations:

a. Summary: Medical service of high calibre was provided the 27th Division Artillery for the period 1 April to 6 August, 1944. This period included preparation and loading on Oahu; transportation to the combat area; landing on beaches and occupation of positions until both Saipan and Tinian were secured; and the period of rehabilitation on Saipan.

b. Tables of Organization for medical sections proved adequate. Transportation provided medical sections was insufficient, causing loss of time in displacement.

c. Training of personnel and functioning of medical sections were good.

d. Medical supplies were adequate in quantity but the list of items could have been more complete. Provisions must be made for both the amphibious operation and the subsequent land warfare of relatively long duration.

e. Rations were inadequate because so many substitutions were provided on issued "B" rations. Sausage was generally substituted for canned chicken, turkey, pork and beef. Fruit juices and vegetables were frequently omitted. Vitamine content of the food was insufficient and supplementary vitamines were not obtainable in adequate amounts.

f. Recommendations:

(1) That each medical section be provided with a 1/4 ton ambulance and a 1/4 ton trailer.

(2) That a greater supply of those medical supplies which were lacking in the Marianas be provided in subsequent operations.

(3) That an inquiry be conducted to determine why so many items on the published menu were not available or obtainable only in limited quantities.

(4) That manufacture and issue of large nets with built-in entrance, similar in design to those captured, be expedited.

(5) That prefabricated screened kitchens be provided for the period of rehabilitation following a campaign.

(6) That some awning device be provided for protection of casualties being transported on 1/4 ton ambulances.

(7) That lightweight waterproof boxes be contructed to fit into the 1/4 ton truck to carry equipment and supplies ashore.

ANNEX "B" 3

Transport Quartermaster Operations

1. Planning and Preparation

a. Early in March 1944, Transport Quartermasters of the Division Artillery began planning an improved method of transport loading artillery for amphibious operations. The experience of previous operations in the Gilberts and Marshalls indicated that artillery battalions should be separate loaded and self-sufficient so far as possible, instead of being included in combat team loadings.

b. The plan devised provided for:

(1) Three (3) LST's, one per light battalion, combat-loaded, with materiel in DUKW's and LVT's, and combat replacement cargo to include five (5) units of fire.

(2) One (1) LSD for the medium battalion, combat-loaded, with materiel in LCM's.

(3) One (1) AP for Division Artillery Headquarters and overflow of battalion personnel and to carry vehicles, equipment and supplies for which there was no space on the other ships.

(4) One (1) AK for balance of supply, to include five (5) additional units of fire for each light battalion and seven (7) units of fire for the medium battalion.

2. Training

a. Experiments with various combinations of combat loading LVT's and DUKW's were conducted during amphibious maneuvers prior to the actual operation. Cross-section plans were drawn showing various arrangements of cargo in LST's to determine the most satisfactory method of loading.

3. Loading and Unloading

a. Scarcity of shipping resulted in the allotment of only three (3) LST's to the artillery. These were used for combat loading the light battalions. The medium battalion, Headquarters and Headquarters Battery, Division Artillery and the overflow of personnel of the light battalions were included in combat team shipping.

b. Loading: (See plans attached)

(1) The loading plan for LST's provided for stowage of a thirty (30) days supply of signal, engineer and ordnance items and cleaning and preserving materials, seven days rations and ten gallons of water per man on the tank deck, aft. Crated field ranges and other necessary organizational equipment also was stowed in this area.

(

(2) To protect this and other cargo, the entire tank deck was covered with a layer of loose dunnage.

(3) Five (5) units of artillery ammunition un-palletized, but packed for overseas shipment, next was loaded on the deck at a uniform height, three (3) to five (5) layers high, depending on packing. Spaces along sides and center of ship were left for access to hatches and "butterflies" for lashing vehicles in place. Emergency resupply of Infantry and Armored Force ammunition and Engineer demolitions was stowed with this cargo in such manner that rapid unloading of these items was possible. (See plan attached)

(4) Atop this level load of cargo was placed a solid decking of two-inch lumber. On this were set aft, eight (8) combat-loaded 1/4 ton trucks, and fifteen (15) DUKW's in three files of five (5) each. The forward DUKW of each file, equipped with "A" frame, carried a 1/4 ton truck loaded with equipment for the Battery Commander's party. The four other DUKW's in each file contained a 105mm howitzer, section equipment, and twelve (12) rounds of ammunition. All vehicles were lashed and shored to prevent movement in any direction. A portable ramp was provided to move DUKW's on and off level of cargo.

(5) On the forward quarter of the tank deck were four (4) LVT-4's, three carrying combat-loaded 1/4 ton trucks for the Battalion Commander's party. The fourth "Alligator" carried an R4 tractor less blade. (R4 blades were removed because of lack of clearance but were replaced on tractors immediately upon landing). On the LST ramp was loaded a DUKW of the Division Quartermaster DUKW platoon.

(6) Weather deck load included all inflammables (five days supply of vehicle fuel and lubricants; and pyrotechnics), protected by sand bags; and two R4 tractors.

(7) Loading of LST's was according to plan except that allocation of space for Infantry, Armored Force and Engineer items caused delay as varied sized crates required special stowage.

c. Unloading

(1) Sequence of vehicle unloading was: QM DUKW, LVT's, artillery loaded DUKW's. Upon reaching shore, the leading DUKW's set up their "A" frames and lifted 1/4 ton trucks out of each other. The balance of the DUKWs carried howitzers to initial position where "A" frames were used to lift them out. Upon completion of this mission all amphibious vehicles returned to LST's to begin unloading ammunition and other cargo. The QM DUKW was used until called for by parent organization.

(2) Much delay in unloading was caused by necessary dispersal of LST's to sea during enemy air activity.

(3) Valuable equipment in loading and unloading were gravity rollers (pipe type). These should be T/E on the basis of 150 feet per amphibious battalion.

(4) Upon arrival in the Transport area for unloading, reef and beach conditions were such that traffic was limited to one beach and then only during the time when tides would permit. The LST's however, were able to proceed with their unloading by using amphibious vehicles, as planned. Initially DUKW's and LVT's were compelled to use a single channel, which made their route extremely long. As unloading proceeded it was found that LST's could be anchored against the reef, permitting amphibious vehicles to travel in more direct lines.

d. Unloading of the AP's and the AKA's was extremely slow because of poor beach and channel conditions. This resulted in complete loss of cargo control as the Navy control was interested primarily in keeping beaches clear, rather than seeing that cargo reached its proper destination. In addition it was impossible to secure priority in boat allotments to expedite unloading of vital ammunition resupply.

4. Recommendations for future operations

a. That all artillery elements be loaded separately as self-sufficient units.

b. That cargo for elements other than artillery not be included in artillery shipping.

c. That temporary decking be provided on LST's which do not carry LCT'S for the accommodation of personnel that cannot be berthed in proper troop space.

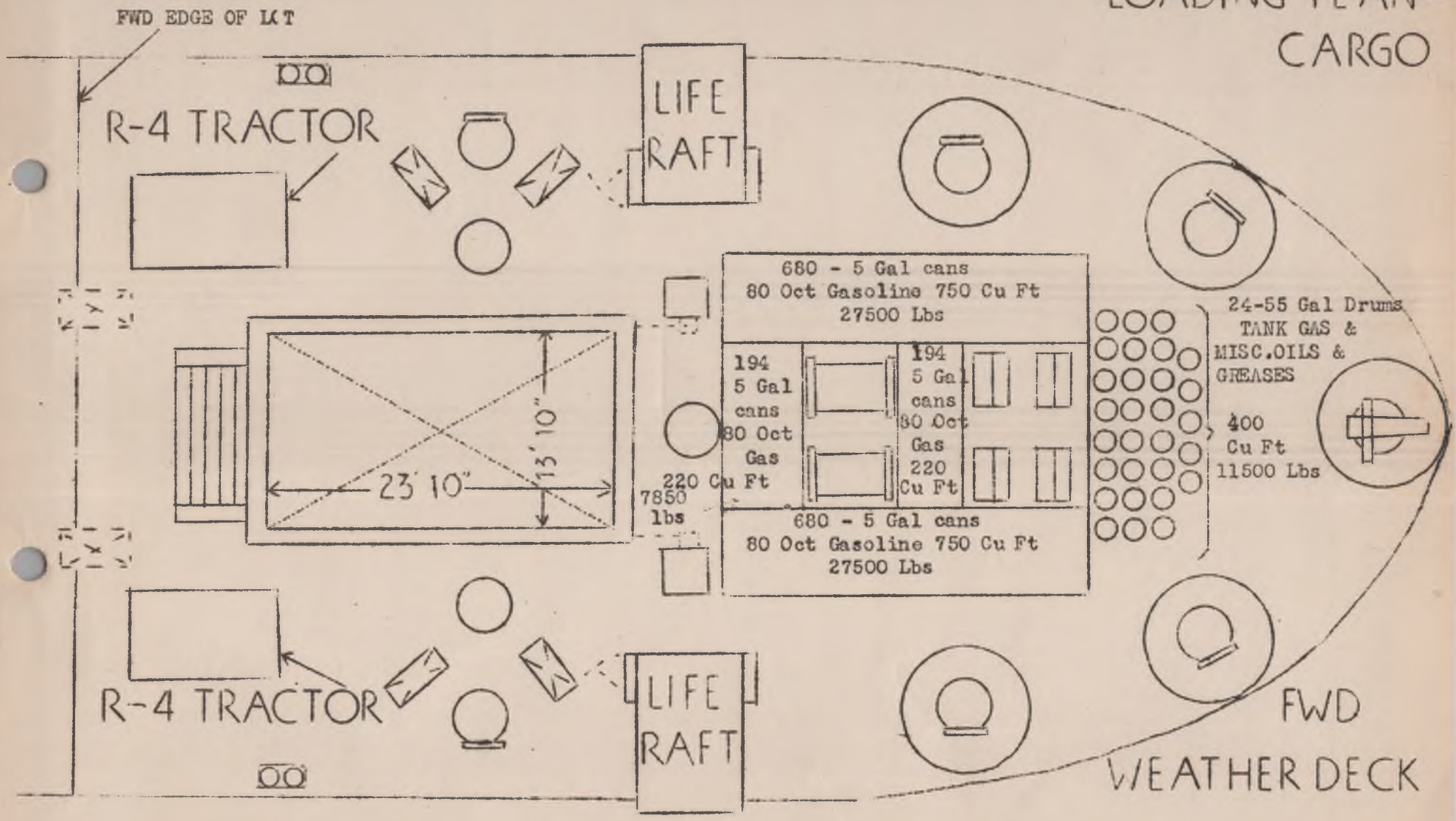
d. That gasoline and ammunition not be loaded on the same LST, if possible. If it is necessary to load them on the same ship, gasoline should be protected by armor plate on top and sides, and with sand bags.

e. That direct liaison between Army and Navy boat control officer be maintained in each Trans Division.

f. That as much extra dunnage as possible be carried for use in ammunition dumps and position areas after landing.

g. That all crates be preserved for use in moving from combat zone to rehabilitation area upon completion of operation.

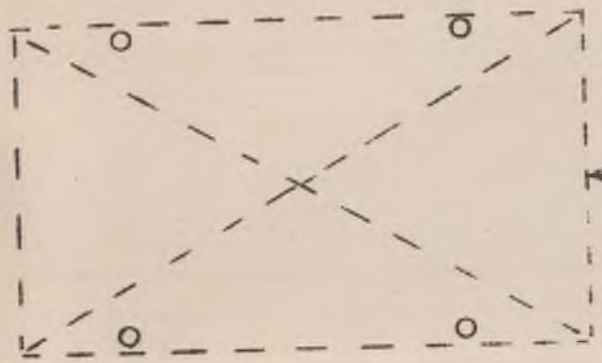
LOADING PLAN - CARGO



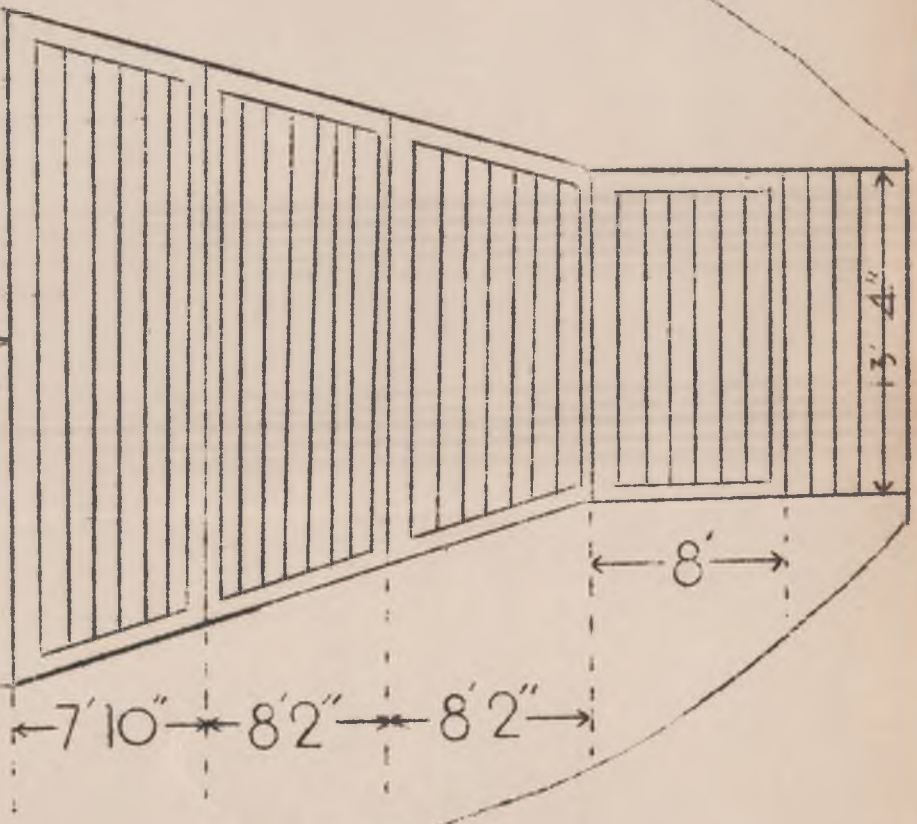
LOADING PLAN - CARGO

TANK DECK - FWD

- NO CARGO



- UNDER LVT'S



SCALE : 1/8" : 1'

LOADING PLAN-CARGO
TANK DECK-MIDSHIP

INFANTRY AMMO RESUPPLY
(9 DUKW LOADS)
982 CU.FT. 46000 LBS.

TANK AMMO RESUPPLY 320 CU Ft.
(6 DUKW LOADS) 16800 lbs.

3"

7500 RDS 105mm AMMO - M48

7754 CU FT 392500 LBS

3600 RDS 105mm M54 3159 CU FT 168400 LBS

5"

900 RDS 105MM AMMO - M57 1053 CU FT. 47100 LBS.

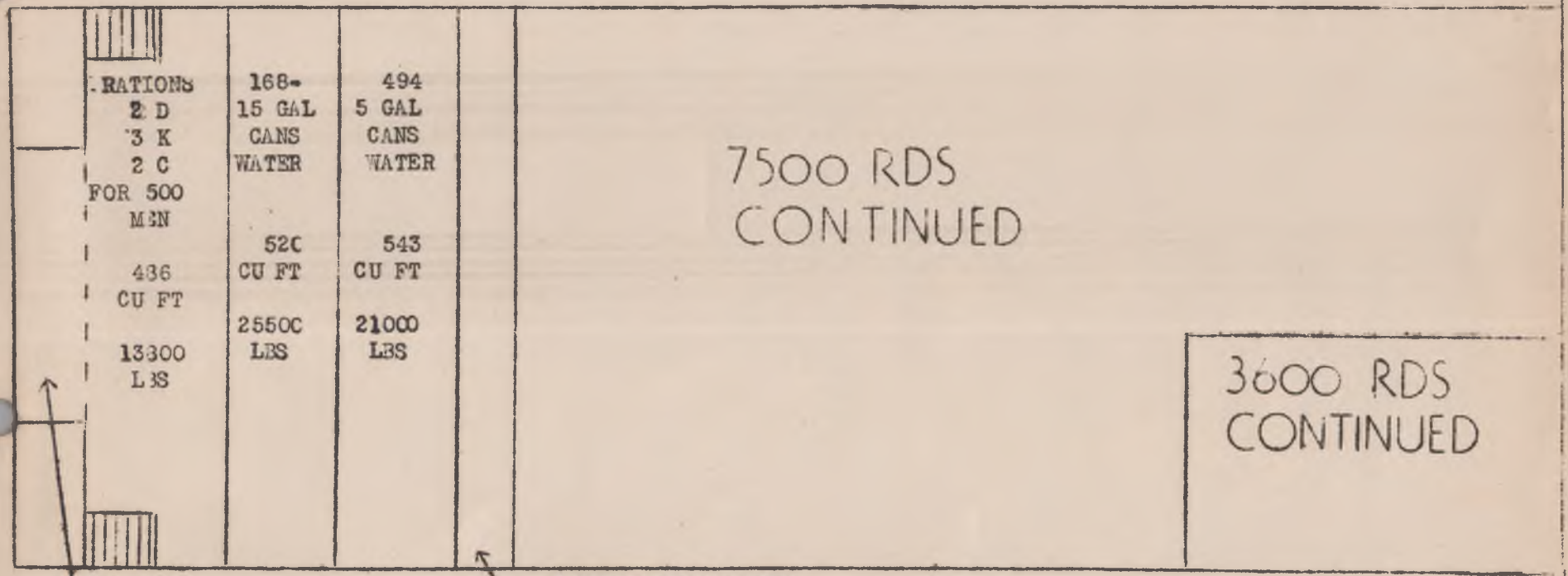
3"

ENGINEER RESUPPLY (5 DUKW LOADS)
566 CU FT. 25000 LBS.

4"

LOADING PLAN-CARGO

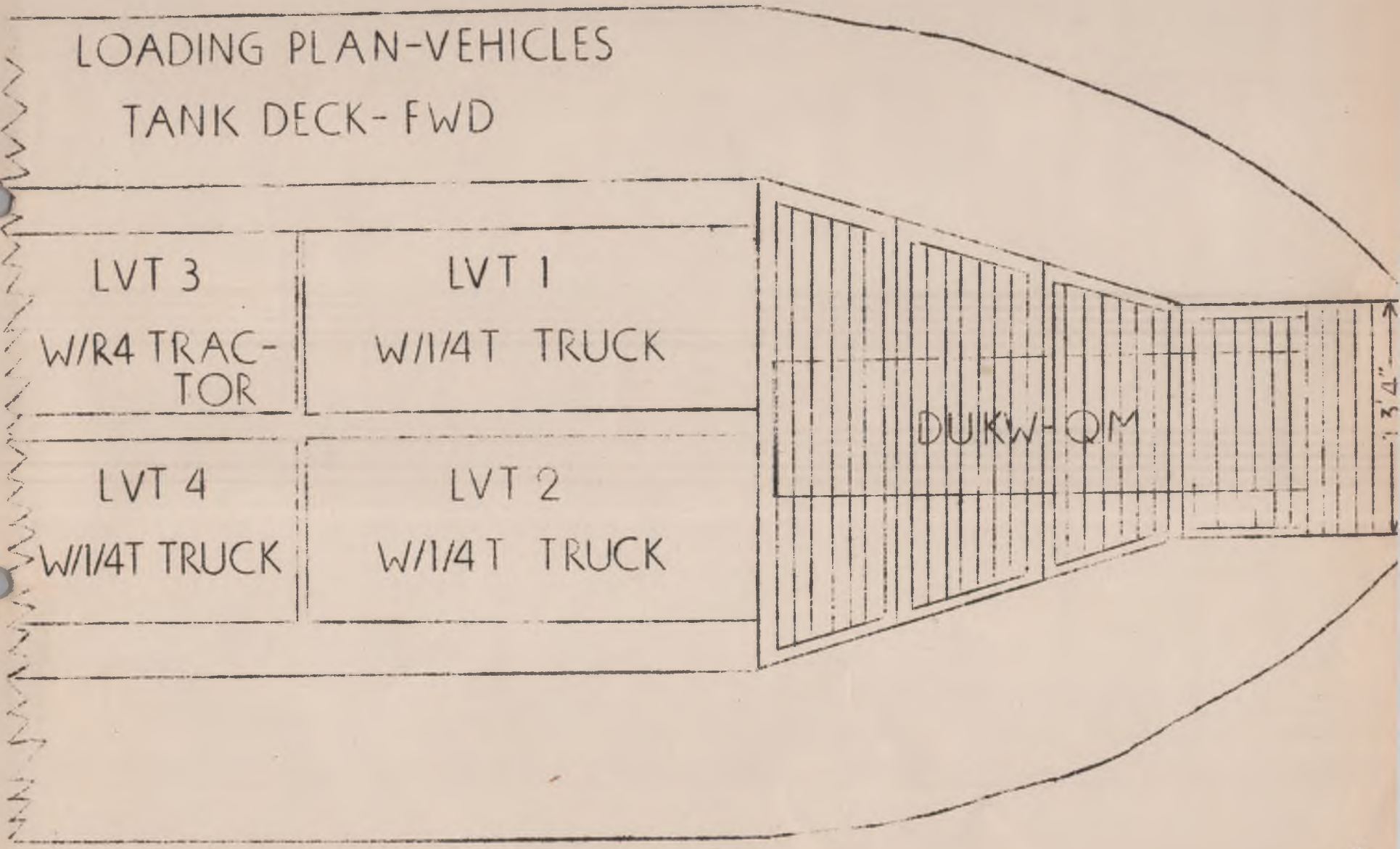
TANK DECK-AFT



SCALE - 1/8" : 1"

LOADING PLAN-VEHICLES

TANK DECK- FWD

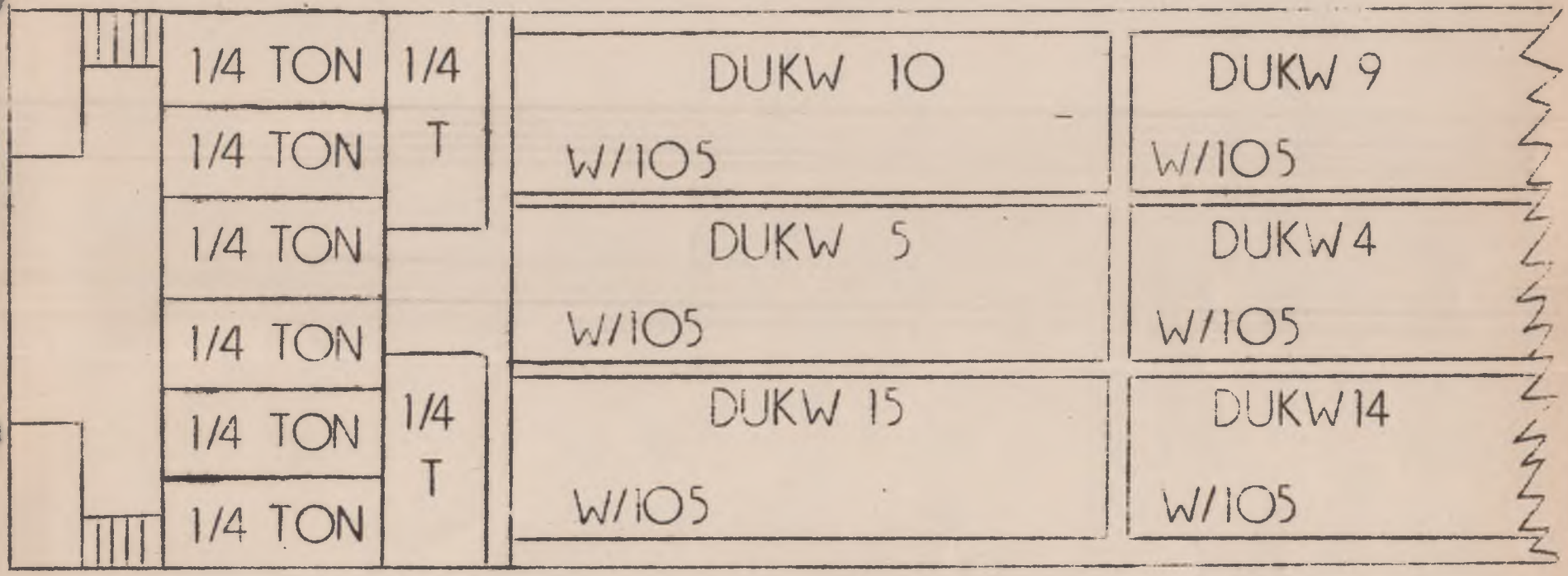


LOADING - VEHICLES
TANK DECK - MIDSHIP

DUKW 8 W/105	DUKW 7 W/105	DUKW 6 W/1/4 T
DUKW 3 W/105	DUKW 2 W/105	DUKW 1 W/1/4 T
DUKW 13 W/105	DUKW 12 W/105	DUKW 11 W/1/4 T

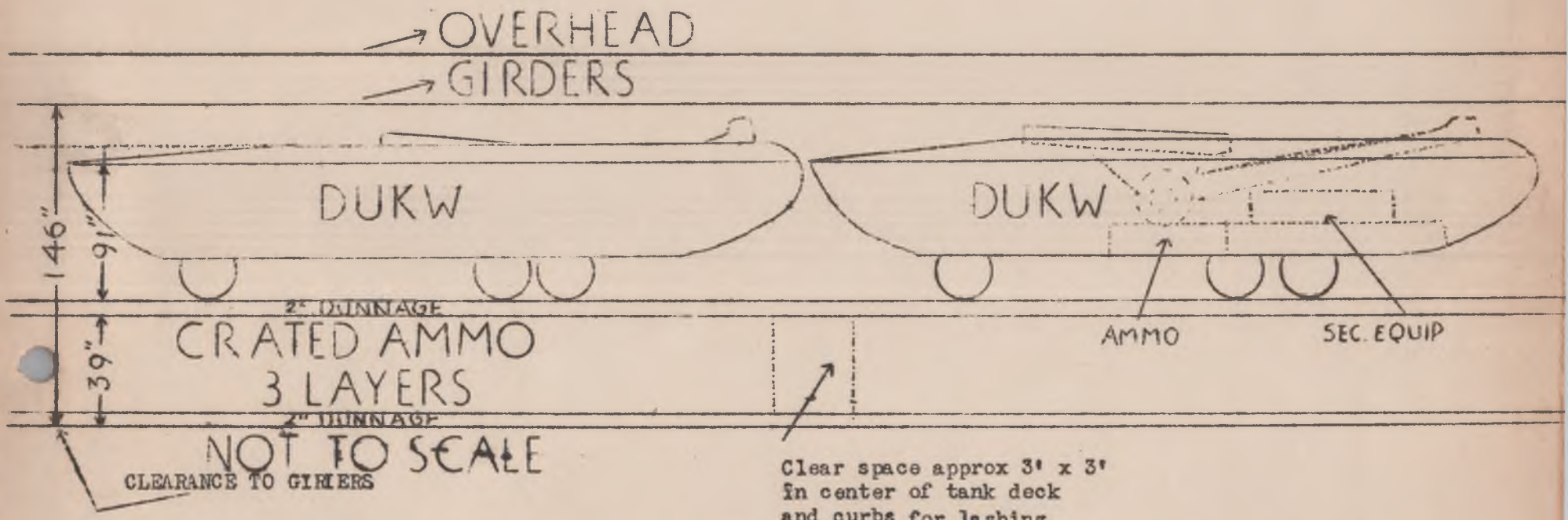
LOADING PLAN-VEHICLES

TANK DECK-AFT



SCALE : 1/8" : 1'

TANK DECK-PROFILE VIEW



COMBAT LOADED DUKWS AND CARGO

ANNEX "B" 4

Supply

1. Class I. a. Rations

a. "K" and "C" rations were satisfactory. The "10 in 1" ration should be issued instead of the "B" ration until an adequate water supply is assured.

b. The fifteen day Expeditionary Force menu for "B" rations was found adequate providing all items are issued or appropriate substitutions made. On the "FORAGER OPERATION", frequently there was no issue of fruits and juices, with no substitutions and practically all meat substitutions were Vienna Sausages. The meats in the "10 in 1" rations have excellent variety and might well be employed in the Expeditionary Force Menu in larger containers.

c. Troops indicated a preference for "Army Spread", rather than "Carter Spread" butter.

d. Artillery units brought a quantity of condiments to augment the issue items to make meals more palatable, especially when "B" rations are issued.

2. Class II. a. QM Clothing and Equipage.

a. Marine Corps HBT shirts issued to army troops were popular because they have more adequate pockets and are cut to fit better than the Army HBT. However, buttons on the Marine HBT's come off more easily than the buttons on the Army blouse. The Marine HBT pants pockets are better than those of the Army issue where pockets are placed along the outseam of each leg at the hips. Patch pockets in the normal location are preferred by troops.

b. The two-tone Marine shelter half gained quick popularity as it is easy to camouflage, has flaps on both ends offering better weather protection, and straps which make a neat horseshoe pack.

c. The poncho proved superior to the issue raincoat and frequently was used in lieu of the shelter half since the latter was in barracks bags "A", some of which never reached the owners.

d. Captured Japanese mosquito or insect netting, approximately 6' high, 16' long, by 9' wide, is highly satisfactory for kitchens, mess hall, latrines, CP's and operating rooms. This item made with a door and issued to units going into mosquito or fly infested areas, would be invaluable.

e. The camouflaged cloth helmet cover appears to remove glare from helmets as effectively as processing with paint, dirt and clay.

3. Class II. b. QM General Supplies

a. The issue "Salt Water Soap" is not satisfactory. The best such soap available is that in the "10 in 1" ration. Made in larger bars and issued for all purposes, it would be ideal.

b. The issue of the 27th Divison QM sanitary kit, an excellent item, was not quite sufficient. The number of Insecticide Freon-Aerosol bombs issued should be tripled.

c. The T/E allowance of the one burner cooking outfit, one per wire truck and 1/4 ton truck, should be on the basis of personnel strength, one (1) cooking outfit for every seven (7) men. Normally field ranges are not available for the first several weeks of battle and the one burner is an admirable substitute.

c. The T/E issue of cross-cut saws proved inadequate. Batteries could have used double the number of saws issued to clear fields of fire and construct CP's.

d. The T/E issue of the gasoline lantern, two (2) mantle, should be increased to include one for each medical detachment.

e. The Yukon pack board was not utilized as much as was expected as vehicles were able to get near front lines and troops and vehicles were landed on the beach and did not have to wade long distances to get ashore. However, each battalion should have twenty-four (24) pack boards on hand for emergency use of medical detachments, forward observer and liaison parties.

f. Each battery should bring one (1) quart of heat resistant paint for patching up field ranges which frequently are damaged in shipping and rusted with salt water.

g. The T/E issue of machetes and entrenching tools is insufficient. In a light field artillery battalion, one entrenching tool per two men is authorized. Every individual should have one. On this additional issue, the entrenching shovel should be substituted for the entrenching axe. The T/E issue of round point, "D" handled shovels should be eight (8) per headquarters battery instead of four (4). Issue of the axe, chopping, handled, single bit, four (4) pound, should be four (4) per headquarters battery instead of two (2).

h. Field Artillery battalion headquarters batteries need at least five (5) metal folding chairs for CP and FDC use. T/E at present does not allow them any.

i. A metal stamping marking outfit should be issued to each service battery. Service batteries also should carry a supply of blank dog tags.

4. Class II c. Engineer

a. What was considered an adequate supply of Engineer expendables was taken by all units on the "FORAGER OPERATION". The few items that were expended sooner than expected by some battalions were: red and blue hexagon pencils, #2 and #3 writing pencils, pads of FA Computers data sheets, sheets of white paper, gridded 1/20,000, rubber cement and rolls of Scotch Cellulose Tape.

b. With greater use of aerial photographs in field artillery work, a critical item not authorized by T/E is the Pocket Stereoscope with case. An

excellent model is the CF-8 US Army stereoscope made by the Abrams Instrument Company. These should be issued four (4) per headquarters battery and one (1) per firing battery.

c. The plastic range deflection fan protractor authorized the medium battalion by T/E is in the scale of 1/25,000. In the Pacific Theater maps are 1/20,000 and measuring equipment should be in the same range scale.

d. The R4 tractor with 7'4" blade proved most valuable. For the "FORAGER OPERATION" there were six (6) per light battalion but none in the medium battalion. Four (4) R4 tractors per battalion, light and medium, would suffice, one per firing and service battery. These tractors, on the rear, had pintles bolted to a plate which was welded on, to enable them to act as prime movers, pull pallets, etc. The length of the blade enabled these tractors to be fitted into an LCVP for landing purposes. Because of their slow speed, they were not frequently used as prime movers. Their biggest use was position improvement.

e. In the Division Artillery Headquarters Battery, two (2) FA Battalion survey equipment sets #1 should be issued to allow the Survey Section to work in two groups if necessary and so that a spare set is immediately available.

5. Class II. d. Ordnance Motor Vehicles.

a. The medium M5 tractor gave a superb performance throughout the operation

b. The 2 1/2 ton GMC DUKW also proved most valuable and were in constant use, hauling ammunition, rations, water and supplies far into the mountains over rough roads.

c. One (1) DUKW sank off the reef with a load of ammunition. One (1) 1/4 ton truck was wrecked and one (1) was stolen. These were the only losses in vehicles.

d. Battalions found that at least two (2) 2 1/2 ton cargo trucks are needed to haul supplies. Had these been available the use of DUKWs could have been held to a minimum. All 1/4 ton trucks were used to the maximum.

e. In Division Artillery Headquarters Battery 1-1/2 ton trucks should replace the three (3) 3/4 ton weapon carrier wire laying vehicles. The larger truck can haul more wire and has more flotation and drive. The Division Signal Company has the 1-1/2 ton truck as T/E issue for wire laying.

6. Class II. e. Other Ordnance.

a. All weapons and fire control instruments proved satisfactory. Several minor defects were noted:

(1) The spade on the trail of the 105mm howitzer must be reinforced by plate of 1/2" thickness instead of the usual 3/16" reinforcing plate. This was most evident when the pieces were firing charge 7 on rocky ground where it was difficult to have trail logs or soft dirt to dig the trails in.

(2) Spare perch plug bushings (recoil mechanism) should be issued with the spare parts for 105mm howitzers. These bushings had to be replaced on most of the howitzers.

(3) On 155mm howitzers, six (6) safety latch firing mechanism plungers failed.

(4) Firing pins on the 155mm howitzers broke more frequently than anticipated. A large supply of spares is needed.

(5) At least four (4) spare gas check pads should be taken for each 155mm howitzer.

(6) The left shield brace on the 155mm howitzer should be relocated so that the sight does not have to be moved when reloading for high angle fire.

(7) The safety latch pin in the 155mm howitzers became worn more often than would seem reasonable to expect.

(8) On some 155mm howitzer, jack gears bound, necessitating replacement.

(9) The pin mounting that holds the brace for the top segment of the left section of the modified shield broke on some of the 105mm howitzers when firing charge 7 because of play in hinges.

b. Large quantities of solvent, (dry cleaner in 5 gallon cans) to clean pieces until an adequate water supply is assured, were taken.

c. Watch repairs were hampered by lack of parts. But this was the only phase of Ordnance work which was slow.

d. T/E allowance of grenade launchers M8 (three (3) per battalion headquarters, one (1) per firing battery) proved insufficient. Issue should be eight (8) per headquarters, including Division Artillery, and five (5) per firing and service battery.

e. Allowance of wristwatches should be increased to include one per chaplain.

7. Class II. f. Signal.

a. Adequate signal supplies were taken on the operation and few losses occurred.

b. The T/E issue of lance poles, ten (10) per headquarters battery, is insufficient. The issue should be fifty (50) per headquarters battery. Frequently trees and poles are shot away by Naval Gunfire before the artillery lands. Tanks and LVT's quickly destroy field wire laid on the ground for lack of sufficient lance poles to elevate wire as it should be. Often wire laid on ground well off roads or cross-country is destroyed by tanks or LVT's. When displacing forward, new wire must be laid and in use before recovery of old lines and lance poles can be effected, necessitating issue of more poles.

c. Sound power phones are needed in firing batteries between the Executive and Chiefs of Sections and for perimeter defense.

d. W-110 wire was used for the most part on the "FORAGER OPERATION". W-130 wire was used but was not always satisfactory.

e. Each headquarters battery had three (3) 1/4 ton trucks equipped with "Auto-Lite" SP-4022 12 volt generators and with SCR 608 and 284 radios mounted in them. The 1/4 ton truck can go places where the large vehicles cannot, and needs less shipping space. Although SCR 608 radios are normally placed in command cars, the 1/4 ton vehicle with this 12 volt generator proved so valuable that these radios probably will be mounted in them permanently. One (1) spare SCR 608 radio was mounted, taken and used by each headquarters battery on the "FORAGER OPERATION". In several of these 1/4 ton trucks, an SCR 608 radio was mounted on the one side while a 284 radio was mounted on the other.

f. Headquarters Battery, Division Artillery, had to draw from the Division signal dump extra BD 72 switchboards and extra telephones for use during forward displacement by echelon, with communications being maintained at both forward and rear echelon. Twelve (12) EE-8A phones over TE issue were drawn making a total of thirty-three (33) phones were used as follow:

Fire Direction Center	12
Command Post (Exec, S-2, S-3, S-4)	4
Message Center	1
Battery Hqtrs	1
Radio	2
Switchboard	2
Wire vehicle testing	6
Spares (For Hq Btry or loan to Bns, also used for perimeter defense)	5
Total	33

Battalions had direct fire direction lines as well as lines through the switchboards. Frequently there were direct lines to Division, adjacent Marine Artillery units, Corps Artillery, etc.

g. For the Division Artillery metro section, all hydrogen should be taken in cylinders. Use of the generator proved impractical.

h. Each battalion and headquarters battery, Division Artillery, should have a 110 volt, AC, power plant for lighting, movie projectors and Special Service issue radio sets. An excellent model power plant is the Signal Corps Power Unit, PE-75J, or the Ordnance "Homelite", Model HRUA.

7. Class III. a. Gasoline, Oils and Greases.

a. An adequate supply of all types of class III items were taken and no difficulty encountered except in the case of 73 octane aviation gasoline for artillery liaison airplanes. Initially, sixteen-hundred (1600) gallons of aviation gasoline were shipped, sufficient for four-hundred (400) hours of flying time. However, only eight-hundred (800) gallons were recovered, all in

fifty-five (55) gallon drums, plainly marked with organization insignias. The remainder, in palletized five (5) gallon cans, was used by other organizations for motor fuel, before it could be recovered from scattered beaches.

b. LVT (4)'s were attached to the battalions for the initial phase. Class III requirements of these vehicles should be considered carefully and adequate supplies brought to care for all contingencies. The LVT company commander should be consulted personally to determine requirements.

8. Class IV. a. Medical

a. Medical jungle kits, augmented with salt tablets and anti-chap lipstick were issued one (1) per man prior to the operation. The effective mosquito repellant it contained was used extensively. A large resupply of this repellant is needed.

b. At least two-hundred (200) feet of wire screening should be taken by each unit for fly traps and kitchens.

c. Pressure pumps and sprays seemed to have little effect in controlling flies in heavily infested areas.

9. Class IV. b. Ordnance Motor Maintenance.

a. Motor maintenance was performed under difficulties in the initial phases of the battle, but as all vehicles had been inspected thoroughly prior to departure and en route, no trouble was encountered.

b. All artillery 2 1/2 ton DUKW's, prior to departure, had several modifications installed. The hull had a well put in each side to allow the 105mm howitzer to be lowered into the DUKW. Reinforcing was placed beneath floor boards where they howitzer axle rested and on the rear combing where the trail of the 105mm howitzer lay.

c. Twenty-one (21) of the DUKW's were equipped with "A" frames and slings to load and unload howitzers. Each 105mm howitzer had its own sling and there were several slings for 1/4 ton trucks.

d. Because spare parts did not arrive one M5 tractor was partially stripped to keep others going. This tractor, the only one of thirty disabled, was put out of action when a connecting rod cracked the engine block.

e. On future operations, it is recommended that artillery units carry, independent of Ordnance resupply, one (1) generator, one (1) starter, and three (3) 12 volt batteries for every twelve (12) tractors, M5. Batteries should be charged and readily available on shipboard

f. A regular system of checking vehicles on shipboard should be established with ship's officers before sailing.

g. All trucks performed well. Towards the end of the "FORAGER OPERATION", bogie wheels on several of the M5 tractors started to go and clutch trouble developed. Shortage of 1/4 ton Willy's tubes was serious.

h. A watertight door in the side of the hull of the 2 1/2 ton DUKW to facilitate loading and unloading cargo would be valuable. The door should be wide enough to easily accomodate a 55 gallon drum. It is a difficult job to load and unload supplies and drums into DUKW's since there are rarely cranes available.

i. If vehicles are to make an assault landing and be waterproofed, extra mufflers should be taken by Ordnance for installation after landing, since many get lost. Air cleaners were replaced as soon as possible and waterproofing grease removed.

10. Class IV. c. Air Corps Equipment.

Normal issue of spare parts and accessories for artillery liaison airplanes, augmented by extra propellers and landing gear proved sufficient. Losses in landing gears and propellers were not as great as expected as a captured air strip was used instead of an improvised field.

11. Class IV. d. Engineer Demolitions.

a. All units took a moderate assortment of firing devices, fuzes, caps, explosives in blocks and sticks to blast gun positions, latrines and also for booby traps and warning devices on perimeter defenses.

b. Several rolls of thin piano wire should be taken by each unit for use on perimeter defenses. These, fastened to firing devices of the pull type, make excellent trip wires for warning devices.

12. Class V. a. Ammunition.

a. For the "FORAGE OPERATION", seven (7) units of fire were taken. This was considered insufficient for 105mm and 155mm types. But lack of shipping space and assurance of resupply determined the amount. Certain types of small arms ammunition varied a little from the standard unit of fire.

b. On the 105mm battalion LST's, five (5) units of fire of 105mm ammunition and two (2) of small arms were carried. On the Trans Div of the corresponding RCT were carried two (2) units of 105mm ammunition and five (5) of small arms. The 155mm ammunition consisted of seven (7) units of fire distributed equally between three Trans Divs, almost all of it being placed aboard the AKA of each Trans Div.

c. The .50 cal ammunition was in the two-hundred and ten (210) round crate consisting of two (2) ready boxes each with one-hundred and five (105) rounds of AP, I, and T at the ratio of 2:2:1. This method of packing was satisfactory.

d. Too many rockets, AT, 2.36" M6A1 were taken, as three per launcher would have sufficed. WP Smoke rockets for use against enemy in caves should be included.

e. Too many rifle grenades were taken for the number of launchers available.

f. Hand grenades, both fragmentation and offensive, wore valuable.

g. Several M15 white star blinker parachute aircraft signals were defective, the parachute failing to open after having been fired from the hand pyrotechnic projector, M9.

h. The M17A1 white star parachute ground signal was excellent for small local area illuminating purposes. When these were expended and since there was no resupply, the less satisfactory M21A1 amber star parachute ground signal was used for illumination.

i. On the "FORAGER OPERATION", an assortment of pyrotechnic signals, for use with the grenade launcher M8 and the hand pyrotechnic projector M9 were taken. These included S.O.I. pyrotechnics as well as others of various types and colors for use on phase II or phase III operations of Forager in case of S.O.I. changes. Supply of illuminating signals proved inadequate since there was no resupply of the M17A1 white star parachute ground signal. It is recommended thattwo (2) M17A1 signals per battery per estimated day of operation be taken .

j. If units are issued the 60mm mortar for illumination, at least ten (10) illuminating 60mm shells, M83 with time fuze M65, per estimated day of operation per unit should be taken.

k. Care should be taken to insure that all pyrotechnics and rifle grenades to be fired from the grenade launcher M8 off the carbine have one (1) carbine grenade cartridge, M6. It is well to take extra cartridges because frequently resupply of pyrotechnics and rifle grenades does not include the carbine grenade cartridge.

l. Upon announcement of the operation, ammunition palletizing commenced. The 105mm ammunition was palletized forty-eight (48) rounds per sled; 155mm ammunition was loaded twenty (20) complete rounds per pallet. Since it was not known whether LST's would be made available, it was decided to palletize five (5) units of fire (thirty-six-thousand (36,000) rounds of 105mm and nine-thousand (9,000) of 155mm)initially and the remaining two (2) units if necessary. It was desired to take ten (10) units of fire but this was reduced to seven (7) by order of higher headquarters.

m. (1) The 105mm ammunition was palletized with one (1) lot number to a pallet. The sled took forty-eight (48) rounds whether it was packed in clovers of three or either of the two ways of packing in boxes of two rounds, the banding and blocking being modified. The powder lot number was painted in orange figures on a black background on the top and all four sides of the pallet. The complete round lot number was also marked on the pallet in white paint. All battalions were informed concerning lot numbers having both common weight squares and powder lot numbers. Each battalion knew the lot numbers assigned to it as well as those of the others. Initially, some hundred odd lot numbers of 105mm HE were sent to the palletizing area, a discouraging factor for units striving to get large amounts in few lots.

(2) When it became known that an LST would be available to each 105mm

battalion, plans were changed so that five (5) units of fire were to be loaded unpalletized on the tank deck and only two (2) units of palletized 105mm ammunition were to be loaded on AKA's and APA's. Larger lot numbers of the palletized ammuntion were selected for the AKA's and APA's, the balance of the palletized ammunition being turned over to the Reserve Division for its use. Ammunition depots were contacted and arrangements made to haul the five (5) units of fire with few lot numbers, direct from depots to the loading point for the LST's.

(3) The table below indicates final amounts by lot number of 105mm ammunition taken (exclusive of Infantry 105mm ammunition which was all palletized and plainly painted INF on all sides):

104 FA: Loaded loose in LST:

8076 rds	HE fz M48A1	lot # LS-1-21*
3270 rds	HE fz M54	lot # EOP 1-99
840 rds	WP fz M57	lot # 2-22568-52
12186 rds	loaded on LST.	

Loaded palletized on AKA's or APA's:

1296 rds	HE fz M48A1	lot # LS-1-18*
336 rds	HE fz M48A1	lot # LS-1-19*
384 rds	HE fz M48A1	lot # LS-1-21*
1008 rds	HE fz M48A1	lot # LS-1-23*
1440 rds	HE fz M54	lot # 3-22331-35
336 rds	WP fz M57	lot # 2-22568-52
4800 rds	loaded on Trans Div	

* same weight square; powder lot # 8826.

Total 105mm ammunition taken:

105mm HE with fuze M48A1	11100
105mm HE with fuze M54	4710
105mm WP with fuze M57	1176
Total	16986

105 FA: Loaded loose in LST:

6524 rds	HE fz M48A1	lot # LS-1-197
4702 rds	HE fz M54	lot # KN-1-5
1140 rds	WP fz M57	lot # 2-22568-52
12366 rds	loaded on LST.	

Loaded palletized on AKA's or APA's:

1488 rds	HE fz M48A1	lot # LS-1-203*
960 rds	HE fz M48A1	lot # LS-1-204*
672 rds	HE fz M48A1	lot # LS-1-205*
1440 rds	HE fz M54	lot # KN-1-5
336 rds	WP fz M57	lot # 2-22568-52
4896 rds	loaded on Trans Div	

* same weight square; powder lot # 8844.

105mm HE with fuze M48A1	9644
105mm HE with fuze M54	6142
105mm WP with fuze M57	1476
Total	17262 rds

249 FA: Loaded loose on LST:

8196 rds HE fz M48A1	lot # LS-1-8*
8070 rds HE fz M54	lot # EOP-1-103
810 rds WP fz M57	lot # 4EA
17076 rds loaded on LST.	

Loaded palletized on AKA's or APA's:

864 rds HE fz M48A1	lot # LS-1-8*
830 rds HE fz M48A1	lot # LS-1-9*
834 rds HE fz M48A1	lot # LS-1-10*
390 rds HE fz M48A1	lot # LS-1-11*
816 rds HE fz M48A1	lot # LS-1-208
1680 rds HE fz M54	lot # 3-22331-156
336 rds WP fz M57	lot # 2-22568-52
192 rds WP fz M57	lot # 4EA
5252 rds loaded on Trans Div.	

* same weight square powder; lot # 9032.

Total 105mm Ammunition taken:

105mm HE with fuze M48A1	11220
105mm HE with fuze M54	4750
105mm WP with fuze M57	1338
Total	17308 rds

Total 105mm Ammunition - All artillery units:

105mm HE with fuze M48A1	31964
105mm HE with fuze M54	15602
105mm WP with fuze M57	3990
Grand Total	51556

(4) In addition to the above, 5288 rounds of 105mm ammunition were taken for Infantry use. These rounds were of the same lot numbers loaded on the Trans Div as were common to the artillery battalion of that RCT (with the exception of 2016 rounds of HEAT M67 with fuze M62)

(5) Each DUKW bearing a 105mm howitzer carried nine (9) rounds of HE with fuze M48A1 and three (3) rounds of WP with fuze M57, for registration. Prior to palletizing, several rounds of all lot numbers were fired to test for defects. With one lot number, it was found that the steel cartridge case split frequently so this lot was eliminated.

(6) All seven (7) units of fire of the 155mm ammunition were palletized since all was to be loaded on AKA's. The pallets hold twenty (20) projectiles, nested on the floor of the pallet with a four (4) inch rail around them. Over these were placed the propelling charges, twenty-one (21) for M4 and M4A1, forty-two (42) for M3, depending upon the method in which the charges were crated. In the middle of the pallet, between the propelling charges was placed a box of fuzes also containing a smaller box of primers. The box of fuzes, which normally holds twenty-five (25) fuzes, was opened, five (5) fuzes removed, and a small taped box containing twenty-two (22) primers was inserted in the space left by the five removed fuzes. At the last minute, the primers had to be removed at one ship's officers' insistence. The weight square was painted in green on the four railings of the pallet which held the projectiles. The projectile lot number was painted in white on one corner of the pallets. This was done so that if a lot number became defective in combat, propelling charges on all pallets would not have to be removed to determine the projectile lot number. Smoke projectiles also had "SMK" painted in green on the pallet. The propelling charges type was painted in white on the sides and top of the clovers forming the pallet. On the fuze box were noted content and type. Palletizing of 155mm ammunition was delayed somewhat pending the arrival of the M4A1 propelling charges and the M51A3 fuzes. Extra M55A1 fuzes were placed on three (3) pallets, one for each AKA, extra green propelling charges, M3, not palletized with projectiles, were loaded ninety-six (96) to a pallet.

(7) The total number of 155mm pallets is indicated below. These were distributed as equally as possible between three (3) Trans Divs, each carrying one (1) firing battery on its AKA.

HE, 4 square, prop chg	M4A1, fz M51A3	394
HE, 4 square, prop chg	M4, fz M51A3	137
HE, 5 square, prop chg	M4, fz M51A3	19
HE, 4 square, prop chg	M3, fz M51A3	34
HC, BE, prop chg M4A1, fuzes M54 & M67		32
Propelling charge M3 only		18
Fuzes M55A1 only		3
		637

This, plus what was carried initially in each prime mover, totals the following:

155mm HE M107	11956
155mm HC, BE, M116	652
Propelling Charge M4A1	9234
Propelling Charge M4	3120
Propelling Charge M3	3156
Fuze, PD, M51A3	11956
Fuze, T&SQ, M54	652
Fuze, T &SQ, M55A1	1368
Fuze T Mech M67	108
Fuze T Mech M67 without booster	10

(8) All 105mm ammunition on the LST's was unloaded and reached the

respective battalion positions with the exception of one DUKW load, which sank. Of the two (2) units of fire that were palletized and unloaded from the AKA's and APA's onto various beaches, approximately eighty-three percent (83%) recovery was made by daily combing of beaches with tractors to haul pallets away as soon as they were located. It is interesting to note the amount of 105mm ammunition taken on the Forager Operation as compared to that expended:

Taken	51556 rounds
Expended	51353 rounds
Difference	203 rounds.

(9) Resupply of 105mm ammunition was inadequate and not satisfactory. Very little 105mm WP shell was available by resupply, the bulk being the HC, BE type. If the concrete piercing fuze had been available, it could have been used to good advantage. On future operations, these should comprise from five to ten percent of total. Few rounds of 105mm ammunition were damaged although some were found to lack powder increments.

(10) Approximately eighty-five percent (85%) recovery was made on the palletized 155mm ammunition on unloading. Of the missing percentage, about five (5) pallets were destroyed by fire at Green Beach dump, some pallets had fuzes and propelling charges removed while the projectiles were left on the beach; and a few pallets were broken and strewn along the road side by other units dragging them.

(11) With the 155mm ammunition, it was found that insufficient quantities of the fuze M67 both with booster (for the HE shell) and especially without booster (for the HC, BE shell) were taken. On any operation there should be as many fuzes M67 without boosters as there are HC, BE shells. No WP shell was taken either which was a mistake as it is needed for incendiary burning action. The HC, BE shell is fundamentally used for screening purposes. WP can be used for screening purposes to some degree and has the additional advantages of impact, incendiary effect for burning cane fields and buildings. A good surplus of primers were taken. The number of propelling charges damaged by water or tearing was negligible. A surplus of propelling charges, to provide flexibility in firing missions, if demanded, cushioned this loss. A flexibility in fuzes was also created. Concrete piercing fuzes were obtained from resupply. In the future these will be included as part of the original shipment.

(12) As a whole, the ammunition supply and handling was highly satisfactory. In future operations, distinguishing insignia should be placed on pallets of ammunition to readily identify owners, and these insignias should be known to all units.

ANNEX "C"

Communications

1. Thorough training of all personnel and combat experience gained by key personnel in previous operations assisted materially in maintaining communications of the 27th Division Artillery on a highly satisfactory plane throughout the Battle of Saipan, 16 June to 6 August, 1944.

2. Radio:

a. Considerable difficulty was experienced in the operation of the "600 series" F. M. radios due to station interference. In many instances, the channel seperation was 50 kcs. or less. This is due, no doubt, to the fact that the "600 series", originally designed as an artillery set, now is being used by all branches of the service including Marines and Navy. In an operation the size of the Saipan battle, the 120 channels afforded are scarcely half enough. Some slight difficulty, due to the fast moving situation, was experienced because of fading, sets being out-distanced or masked by terrain features. This was overcome by installing relay stations at high points between operating stations. Servicing and repair of this type set, both by Signal Company and Division Artillery technicians, was prompt and at no time were more than 10% out of operation. This is worthy of note because some of these sets, particularly those used by artillery forward observers, were often carried forward beyond the front lines. Most of these sets were operated by remote control, affording person to person messages. This saved much time, especially in the transmission and receipt of battle orders and the adjusting of artillery fires.

b. The A.M. sets (SCR 284 and SCR 193) worked satisfactorily and were at no time out ranged. However, in the long wave band (2000 kcs. and lower) some difficulty was experienceddue to weak signal strength, sometimes as low as Roger - Sugar Two. This was more noticeable during the hours of darkness. An antenna output of from .5 to 1 amps. was the highest obtainable on these long wave frequencies. Voice transmissions were piped into the command post by remote control with no noticeable decrease in signal strength.

3. Wire:

The 27th Division Artillery, during the Saipan operation, laid, operated and maintained over four hundred and fifty (450) miles of wire lines. This kept the wire teams on continuous 24-hour service during the entire operation. Due to limited shipping space the number of wire laying vehicles was reduced from four to two which caused unavoidable delay when two or more long lines were to be constructed. The usual difficulty was experienced in maintaining uninterrupted service due to the continual cutting of lines by track laying vehicles of all types. Even those lines raised on poles and trees were not safe if near a road. Lines laid cross-country usually were safe until they became the route of a new road over night. Ground return circuits worked remarkably well, making it possible to employ simplexing with good results. W 110 wire was used throughout and with excellent results; no manufacturing defects were noted. W 130 wire was found unsatisfactory in general, lacking tensile strength and being inadequately insulated.

4. Message Center:

Messenger service was maintained under great difficulties and much initiative was displayed by agents. Preparation of written messages was good, except that writers sometimes forgot to include "Time Signed." This oversight caused delay particularly when the Shackle code was employed, especially if the message was written close to the changing time (2200 daily).

5. Recommendations.

a. That a higher priority be given to wire laying vehicles in future operations.

b. That frequencies intended for SCR 193's be selected in the short wave bands, if possible.

c. That "300" series radios be reserved for the use of the Field Artillery exclusively, as originally intended.

ANNEX "D"

Air Observation

1. Throughout the Saipan - Tinian operation, all pilots and planes of the Division Artillery operated as a unit under direct control of Division Artillery Headquarters. This eliminated duplication of flights, as one plane was able to observe for all battalions. All planes were equipped with SCR 609 radios, carrying the K channels of the Division Artillery and of the battalion to which the plane was assigned organically. Battalion channels were used infrequently.

2. Saipan

a. Initial observation was provided by four Division Artillery liaison pilots who had shipped out of Pearl Harbor on escort carriers. These pilots flew in carrier-based Naval planes as observers, using the plane's radio to maintain good communication with an SCR 193 on the ground. This method of observation was employed from D plus 2, for initial registration, to D plus 16. Land based Naval planes were used for the final four days, with all Division Artillery pilot officers acting as observer in turn. During this period, two Division Artillery pilots were lost when the Naval planes in which they were flying were shot down by enemy anti-aircraft.

b. Organic L-4 planes were brought ashore the night of D plus 6 and by 1400 of the following day, were in operable condition. They were used for observation beginning D plus 8. During the period D plus 8 to D plus 16, L-4's were used only for registrations and specific search missions, supplementing the observation from Naval planes, which was continuous daily from 0800 to 1800. The L-4's flew twenty-four (24) missions, totalling twenty-seven and two-tenths (27.2) hours, for an average of three (3) hours per day, during the nine day period.

c. Use of Naval observation facilities was discontinued on D plus 17 and organic L-4's furnished air observation until the end of the operation on D plus 24. During this time the L-4's made twenty-seven (27) flights, totalling forty-one and one-tenth (41.1) hours, for an average of five and one-tenth (5.1) hours per day.

3. Tinian

a. During the Tinian operation, two pilots and one plane were assigned to XXIV Corps Artillery. The remainder of the section furnished observation for our light battalions firing from Saipan. Observation began on J minus 8 and continued through J plus 5. During the fourteen (14) day period, ninety-six (96) flights were made, totalling 156.4 hours for an average of eleven and two-tenths (11.2) hours per day.

b. Except for registrations, the planes conducted little firing. Flights were mostly search missions for intelligence data. Thirty-six officers of the various battalions were used as observers as an orientation measure in preparation for the scheduled Division Artillery displacement to Tinian.

c. The plane attached to XXIV Corps Artillery observed for a medium battalion and actively conducted fire during most of the time aloft. During the twenty-one (21) day period from J minus 12 through J plus 8, sixty (60) missions were flown, totalling 116.1 hours, for an average of five and six-tenths (5.6) hours per day. Fifteen ground officers were used as observers.

4. Summary

a. During the Saipan - Tinian operation, Division Artillery pilots flew the L-4's 207 flights, totalling 340.8 hours. In addition, all the pilots served as observers in Naval planes during the Saipan operation.

b. No pilots were lost in L-4's and none of the planes was damaged. Two Division Artillery pilots were lost when enemy anti-aircraft brought down the carrier-based Naval planes from which they were observing.

c. In the operation, no observing was done from above or behind our own gun positions as is recommended because the rugged terrain made this method of air observation impossible. Navy planes flew entirely over enemy territory many times in line of flight of our own artillery. The L-4's flew sometimes to the side and sometimes over enemy territory.

d. Observation from Naval planes, while satisfactory, is not as good as that from L-4's, as the former are too fast and visibility is restricted by the construction of the plane.

5. Recommendations:

a. That for a similar operation, six planes, instead of four, be taken. If landings on a larger land mass are planned, all ten planes should go.

b. That all pilots and planes operate as a unit under control of Division Artillery Headquarters.

c. That initial observation be furnished by our pilots in carrier-based planes, but that this method be discontinued as soon as organic L-4's are ashore and ready to operate.

d. That L-4's be transported to the scene of action in crates, but that they be carried on deck instead of in the hold to expedite unloading.

e. That observers with the Navy sail on one ship, the Flagship, to avoid difficulties in inter-ship communication.

ANNEX E

Naval Gun Fire

1. Prior to Operation. Period Beginning 1 April

a. Plans: The Naval Gun Fire Section of 295th JASCO, at the time of attachment to this division, had received previous training, and included personnel with combat experience. However, the personnel was inadequate for a full scale amphibious operation, and sufficient additional personnel from infantry and artillery units of the division were transferred to the 295 JASCO to bring it up to effective operating strength. Care was taken to distribute personnel and equipment so that each regimental team was self-sufficient. This done, training schedules were prepared, and needs for special equipment were made known. Close liaison was maintained with the 5th Amphibious Corps.

b. Training: Initially, emphasis was placed on the training of radio operators, who comprised the bulk of the personnel. This training included CW and Voice Procedure, setting up, calibration, tuning and care of radio equipment. All personnel were made familiar with the CSP 2156 (Shore Fire Control Code), and map reading was stressed. Lectures and demonstrations were given on the functions of the SFCP as a whole, and of the individual members. In the Schofield area, communication exercises were conducted to supplement the technical training being given. When each officer and enlisted man knew his duties perfectly, extensive training was begun at Pearl Harbor. This consisted of a complete SFCP set-up, with simulated firing being done by ships furnished by the NGF Section of 5th Amphibious Corps. Very realistic training was thus provided, and it was always supervised by the Division Naval Gunfire Liaison Officer or his assistant. To many of the fire support ships, this type of work was new. To bring out the problem of movement and situations in battle, the DNGFLO conducted mock operations in nearby areas, using various roads as beaches and objective lines. Simulated landings were effected, and natural obstacles were overcome as they would be in actual combat. To make the spotter personnel proficient in conducting fire, artillery batteries were employed to simulate fire support ships, and as many spotters, assistant spotters and radio operators as possible actually conducted firing on the artillery ranges, using prescribed SFC Code and procedure.

c. Rehearsals: During the latter part of this training period, several "dry runs" were made to Kahoolawe Island. There, the NLO and SFCP teams practiced debarking with equipment, and conducted actual naval gunfire from the OP on shore. On 24 May, the JASCO personnel participated in the final full-scale "dry run" which preceded the actual assault on Saipan.

2. Operation

a. Landing:

(1) Ship-to-Shore Support: Since the 27th Division was not in initial assault, the prearranged fires of the Navy had been lifted from beach areas and were well inland, when our SFC Parties landed with the infantry. Call fires at this time were being requested and conducted by the 2d and 4th Marine Divisions.

(2) Ship-to-Shore Movement: The SFCP's and NLO's went ashore, generally, in the 3d or 4th wave, and landed on the night of D / 1. There was light sporadic enemy mortar and artillery fire on the beach at this time. At about 0300, the 165th Inf and 105th Inf had organized, and by 0700 were in contact with the enemy.

b. Support during landing:

(1) Firing Ships - When a spotter needed a firing ship, he made his request known to the regimental NLO, who passed it on to DNGFLO at Division Artillery Headquarters. These requests were consolidated and sent to CTF 52. If they were approved, the code names of the ships, and the frequencies to be used, were given and relayed back to the spotters. In cases of poor communications, or in cases of emergency, the regimental NLO had instructions to contact CTF 52 directly.

(2) Caves and Fortifications: The flat trajectory of naval gunfire made it very effective against caves and fortifications in steep banks and cliffsides. The high velocity and penetrative power of the shells made short work of steel doors and heavy concrete. Most fires called for by our SFCP Officers were for missions of this type.

(3) Other Targets: Against targets on flatter ground, such as houses, troop concentrations and counter-battery, naval gunfire was quite effective, but was used sparingly by our infantry. In many cases where this fire could have been used with devastating effect, excessive safety limits and restrictions were imposed because of the unstable front lines, even though our spotters had excellent observation and firm control of fire. On the most level terrain there were numerous duds, due to the low angle of impact.

(4) Illumination: The firing of naval star-shell, controlled by SFC Spotters, was of inestimable value to all units of the division. Much use was made of illumination and, as a result, the supply of shells became quite low.

3. Conclusion

a. Summary:

(1) The work of the officers and men who served in the NLO and SFC teams was entirely satisfactory. They cooperated fully with the Division Naval Gunfire Liaison Officer, and with the Navy. When requests for fires were approved by the Infantry commanders, it was effectively conducted. The gunnery of the assigned ships was superior.

(2) For the purposes of this division, the number of Firing Ships assigned was usually adequate. Generally, it may be said that Naval Gunfire was of great value in the Saipan Operation. Certain changes are suggested below.

b. Recommendations:

(1) Firing Ships and Ammunition. The supply of HC and AAC was usually adequate, but allowances of illuminating shell should be increased. Otherwise, its use must be severely curtailed.

(2) Communications: Radio was the chief means of communications. Due to conditions such as excessive distances, earth masses, and other factors, communications were not always satisfactory. The necessity for SFC Spotters on the front to grind hand-generators during darkness,was, in itself, dangerous because it gave away the location of friendly troops. The following suggestions are offered to correct this condition:

(a) SFC Team - The SCR 284 is too heavy to carry and keep up with front line units, and requires too much time to set up. This set should be replaced with an SCR 300.

(b) Battalion NLO - This team should keep its SCR 284 to relay the spots to the ship, and it should be vehicle-mounted. Bn NLO should also have an SCR 300 for auxiliary contact with its spotter.

(c) Regimental NLO - Since his chief radio contacts are with DNGFLO and Headquarters Ships, he needs a set with greater range and power, both in the transmitter and in the receiver. Therefore, it is highly recommended that his SCR 284 be replaced with an SCR 193 and BC 312 Receiver. The RM 29 Remote Control units and telephones proved very practical, but the SCR 536 could not be used at all times due to its short range.

(3) (a) A system must be worked out providing for the relief every third or fourth day of the personnel of Shore Fire Control Parties operating in forward positions. This relief is particularly necessary in an operation extending over a period of several weeks. During the Saipan campaign, which lasted over three weeks, personnel of SFCP's were constantly exposed to fire in advanced positions. The resulting strain and fatigue caused considerable sickness among the personnel, with consequent impairment of their efficiency.

(b) In situations where it can be anticipated that naval gun fire will not be required for a period of time, arrangements should be made to withdraw SFCP personnel from exposed positions to comparatively protected areas, until such time as they are needed to adjust fire. Several lives were lost needlessly because SFCP's were kept in the most advanced positions when there was no longer any opportunity to use naval gun fire.

(c) Experience indicated that the Bn LNO is not absolutely necessary, and that in most cases adjustment of naval gun fire can be expedited by having the Regtl NLO work directly with the Spotter. The Bn NLO Team might be retained as organized at the present time, and used as a relief for the Spotter Team (see par 3b(3)(a) above). If Bn NLO Team is used in this manner, it might be desirable for the Bn NLO to be replaced by a Field Artillery officer.

(4) Transportation. Giving the Bn NLO a 1/4-Ton vehicle with the SCR-284 mounted therein would solve the problems presented in par 3b(2) above.

WORD FOR WORD

ARE YOU COMBAT READY?

REMEMBER THE TROJAN HORSE!

From a speech Feb. 1 at the Air Force Association Tactical Air Warfare Symposium, Orlando, Fla., recalling the 1930 remarks of Dmitry Maniulshi, a Soviet military theorist.

"War to the hilt between communism and capitalism is inevitable. Today [1930], of course, we are not strong enough to attack. Our time will come in 30 to 40 years. To win, we shall need the element of surprise. The Western world will have to be put to sleep. So we shall begin by launching the most spectacular peace movement on record. There shall be electrifying overtures and unheard of concessions. The capitalist countries, stupid and decadent, will rejoice to cooperate to their own destruction. They will leap at another chance to be friends. As soon as their guard is down, we shall smash them with a clenched fist."

Air Force Gen. Robert Russ

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