

HEADQUARTERS COMPANY D NINETY EIGHTH CHEMICAL BATTALION, MOTORIZED
OFFICE OF THE COMPANY COMMANDER

July 7, 1944

SUMMARY OF LESSONS LEARNED HURRICAN OPERATION

INTRODUCTION:

The following is an out line of the capabilities and limitations of the 4.2 mortar in this operation. All the points brought out were not fully in all operations, but are being brought out as were observed by this unit.

In many ways the terrain on Biak Island was ideal for employment of mortars. Positions were quite easy to reach. Never far from trail or from the beach. The coral ridges and caves offered cover that was difficult or impossible to reach by artillery fire. The terrain also had a very solid coral base keeping dispersion to a minimum.

TRANSPORTATION:

The initial landing and six subsequent landings were made in 4.2's permanently by attached to the Company. The four vehicles proved ideal for the movement of one platoon. In this operation these vehicles proved sufficient as one platoon held a stabilized position for almost the entire operation. It is felt that these vehicles would not have proved sufficient had both platoons been moved frequently for the following reasons:

1. Platoons are frequently separated by some distance. Poor roads cause scuttling of vehicles to be a slow process.
2. Moves to new positions in most cases take place in the late afternoon as infantry dispositions do not stabilize until late in the day. This would cause considerable conflict as both platoons would be likely to have to be moved at the same time.
3. Four two and one-half ton 6 x 6 trucks were used during the latter stages of the operation. Following advantages observed:
 - a. Will move the platoon complete with up to 240 rounds of ammunition and 11 personnel.
 - b. Can be dispersed inside the platoon perimeter where a larger number of vehicles would cause congestion.
 - c. All water quick resupply of ammunition in sufficient quantity. A 2 1/2 ton truck will carry 100 rounds with out over load.

USE OF MORTARS:

A. The manner in which the mortars were used in this operation can be classed under the following headings:

1. Close support fires: These were primarily defensive night fires pulled in close to infantry perimeters.
 - a. Usually pulled in to 150 - 200 yds.
 - b. One instance when defilade and cover was available for our troops fire was pulled in to 40 yds, with very good results. Ninety rounds were fired without a single short.
2. Preparation fires on time schedule prior to infantry attack.
 - a. Method of carrying out preparation was to fire a predetermined number of rounds into an area on a prearranged time schedule. As the 4.2's lift their fire, the infantry 81 MM Mortars take up the fire and the infantry begins closing in on the objective as they draw nearer the 81 MM fire is lifted and the 60 MM Mortars take up the fire. The 60MM Mortars lift as the infantry nears objective.

b. This method was used twice in the campaign, once with 2nd Bn, 186th Inf. and once with 3rd Bn, 186th Inf. In both cases the infantry gained their objectives with minor opposition as compared to what was met prior to the preparation. In both cases the infantry objectives were coral ridges in which the enemy was well dug in.

4. Interdiction and harrasing fires.

a. Interdiction fire on enemy supply roads was carried out with good effect. Difficulty was delay due to frequent shifts of baseplates.

b. Harrasing fire on areas, from which the enemy was dropping 81mm and 90mm mortar fire on our troops, proved very effective. A few rounds of HE dropped anywhere near the mortars silenced the enemy for a period. A few rounds at irregular intervals kept them silenced as long as we kept up the fire. Some type of fire proved ineffective against mountain guns also.

4. Targets of opportunity: Fire on these types of targets was effective, but considerable delay due to shifting of baseplates.

5. Special missions:

(1) There are several large caves on the Island, the mouths of which are from 40-75 feet in diameter and vertical. Effective fire was delivered on these caves. On the large cave up to 2/3 of the rounds were observed to land in cave. Effect was impossible to determine in these caves, as the enemy burned the caves out with gasoline and used large charges of dynamite when entering them. However we did stop mortar and machine fire coming from these areas thus permitting the infantry to approach them.

a. Air observation proved the best method of adjusting on these targets.

COMMAND LIAISON:

A. It was found that close liaison with supported unit commanders and adjacent unit commanders was necessary, particularly when fire close to our troops was needed. This situation was met by stationing a liaison officer, in our own case myself or my executive officer at the supported unit C.P. (usually a Bn C.P.) Here we had close contact with the supported unit and also wire or radio communications to units on either flank. On several occasions adjustment was made by observers from the flank unit through the liaison officer, this method increases the area covered by a platoon. It also is a definite advantage where observation is limited.

B. Liaison with Artillery:

(1) Effective coordination of fires between ourselves and the field artillery proved effective only in a stabilized defensive situation whose areas of fire can be assigned.

(2) Some liaison work in a moving situation can be obtained by contacting liaison officers of the artillery who are accompanying the infantry units.

C. Attachment directly to infantry units for supply and duty has proved to be the best method of supporting them.

(1) Administration is simplified.

(2) Makes infantry more aware of the fact that the unit is with them.

D. It is recommended that one officer per platoon be made available for liaison work. This officer to be in addition to the F.O. and platoon C.O. The company commander and executive officer can be used for this work if the situation warrants it.

OBSERVATION:

A. All NCO's should be trained in forward observation and capabilities of the weapon.

B. Observers should be rotated periodically, particularly in rough terrain.

C. Observers should have some practice at sensing by sound.

D. There should be an NCO trained in observation in each F.O. party to take notes.

E. Observers should be trained to be able to pull fire in close to them with confidence.

COMMUNICATIONS:

- A. Wire was found to be the primary means of communications.
- (1) W-130 proved to be of short life, therefore the permanent lines from mortar positions to the supported unit C.P. should be carefully laid W-110.
- (2) W-130 may be used from the supported unit C.P. to the observation post.
- (3) The above method was standard operating procedure in this unit.
- B. It is wise to have communications through the supported unit switch boards to the observer.
- C. Radio was used very little in the operation.
- (1) SCR 609's were not in working order or would have been used.
- (2) Unit was equipped with SCR 511's which would not work at a range of more than 200 or 300 yards.
- D. It is recommended that the company be provided with SCR 300 radios. The 4.2 mortar is primarily an infantry close support weapon and these radios would enable us to have radio connections with our supported units.
- (1) Ideal number of these radios would be 3 per platoon and 2 for company hq.
- (2) Some of these sets were borrowed from the infantry on several occasions and proved very satisfactory.
- E. The SCR 224 radio was only used for two messages in the entire campaign.

GUN POSITIONS:

- A. Night aiming lights are absolutely necessary.
- B. For security reasons it is recommended that enough sound power phones be provided to allow one for each mortar and one for the platoon commander.
- C. Dug in positions proved unsatisfactory due to instability. Good is necessary under the base plates for stability. Excavations around mortars offer protection if enough time is available to build them.
- D. Carry at least 1000 sand bags with each mortar on initial landing. This item is very difficult to secure after landing so it is well to have a good supply on hand.
- E. Coral makes a very stable base for a mortar position.
- F. When ammunition is available in the new three package large quantities can be prepared in advance for night fires. The primer powder charge can be prepared and then the short section of the paper container is slipped over the end to protect the powder.
- G. Usual ranges used in this campaign were from 100 to 200 yards.

AMMUNITION:

- A. The new waterproof paper cylinder package for ammunition is ideal.
- B. The delay time R9 proved unsatisfactory. In one instance 12 rounds were fired, 10 were duds. In another 3 rounds fired all 3 were duds. Part of this may be due to firing on coral rock, which does not allow penetration and probably breaks up the projectile on impact.
- C. Proper ratio of types of ammunition as indicated by this campaign is 20% WP and 80% ML.
- D. Use of smoke:
- (1) Primary use is for adjustment.
- (2) Use of smoke on line or effect on enemy should be cleared through C.P.'s of supported and adjacent units because of hindrance to observation.
- E. No appreciable difference was noted in effect of M3 and M35 ammunition.
- F. Unit of fire should be increased to 100 rounds per gun.
- G. In amphibious operations at least 20 rounds per gun should be carried

As the company was equipped with Dukov's and 2 1/2 ton trucks we were able to operate of our own resupply of ammunition. This proved to be very satisfactory and avoided a lot of confusion.

A big difficulty was in having the section chiefs keep an accurate count on ammunition expended. Recommend use of gun books for each mortar.

THE MORTAR TABLE:

- A. Delays caused by baseplate shifting is chief defect of mortar.
- B. Striking screws will bend in firing at high elevation on soft ground. Our light maintenance Ordnance Company has equipment to do a satisfactory job of straightening them.
- C. The only breakage experienced was on occasional recoil spring.
- D. Mortars should be calibrated as some of them fire short or long of adjusted range, consistently.
- E. A brass bore brush should be provided to clean out the corners of the grooves.
- F. An eight inch wire wrench should be provided for each gun section to be used in removing firing pin striker caps.

MISCELLANEOUS OBSERVATIONS:

- A. Always carry thermite grenades, M4 for destruction of material.
- B. Firing tables should be made of water proof material.
- C. We found it a great help to keep complete notes of fire missions on the platoon record sheets.
- D. It was usually possible in this campaign to find satisfactory positions inside Infantry perimeters. Usually with reserve battalions.
- E. In most cases two or more observers could have been used by each platoon. This is an indication that more 4.2 mortars would have been used to a good advantage.
- F. The second platoon of this company was in almost continuous use during the campaign. Being transferred from one regiment when it went into reserve to another. As a result numerous moves were made and personnel had little rest. F.C. parties especially were almost continually on the move.

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